

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2023

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934**

For the transition period from _____ to _____
Commission File Number: 000-56181

SmartKem, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

85-1083654

(I.R.S. Employer
Identification Number)

**Manchester Technology Centre, Hexagon Tower.
Delaunays Road, Blackley
Manchester, M9 8GQ U.K.
(Address of Principal Executive Offices)
Registrant's telephone number +44 161 721 1514**

Securities registered pursuant to Section 12(b) of the Act: **None.**

Securities registered pursuant to Section 12(g) of the Act:

Common stock, par value \$0.0001 per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the common stock held by non-affiliates of the registrant, based on the closing sale price on the OTC of \$7.70 per share, was \$3,288,895 as of June 30, 2023.

As of March 27, 2024 there were 1,355,361 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

SmartKem, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2023
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Glossary of Terms and Abbreviations

The following is a glossary of technical terms used in this Annual Report on Form 10-K (this “Report”):

10⁶ – 1,000,000 (the symbol before the number 6 indicates “raised to the power”)

AMOLED – Active Matrix OLED

AR – Augmented Reality

a-Si – Amorphous silicon (TFT)

BKM – Best-Known Method

BL – Base Layer

°C – Degrees Celsius

CoA – Certificate of Analysis

CAD – Computer Aided Design

COC – Cyclic Olefin Copolymer

CPI – Centre for Process Innovation

DLT - Digital Lithography Technology

EDA – Electronic Design Automation

EL-QD-LED – Electroluminescent Quantum Dot Light Emitting Diode

FET – Field-Effect Transistor

IC – Integrated Circuit

IGZO – Indium gallium zinc oxide TFT

IV – Current-Voltage

LTPS – Low-Temperature Polysilicon TFT (Note: Low-Temperature is relative to silicon wafer processing temperatures >300°C, however not low temperature relative to the glass transition temperature of many plastics (<150°C))

OEM – Original Equipment Manufacturer

OGI – Organic Gate Insulator

OLAE – Organic and Large Area Electronics

OLED – Organic Light Emitting Diode

OSC – Organic Semiconductor

OTFT – Organic Thin-Film Transistor

PCB – Printed Circuit Board

PDK – Process Design Kit

PEN - PolyEthylene Naphthalate

PET - PolyEthylene Terephthalate

PI - Polyimide

POR – Process of Record

PV – PassiVation layer

SAM – Self-Assembled Monolayer

SRL – Sputter Resistant Layer

TAC - Cellulose TriACetate

T_g – Glass transition temperature

TFT – Thin-Film Transistor

VR – Virtual Reality

V_{th} – Threshold Voltage

V_{to} – Turn-on Voltage

CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including the sections entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains express or implied forward-looking statements that are based on our management’s belief and assumptions and on information currently available to our management. Although we believe that the expectations reflected in forward-looking statements are reasonable, such statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by forward-looking statements. All statements other than statements of historical fact contained in this Report are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “could,” “will,” “would,” “should,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “intend,” “predict,” “seek,” “contemplate,” “project,” “continue,” “potential,” “ongoing” or the negative of these terms or other comparable terminology.

These forward-looking statements include, but are not limited to, statements about:

- the implementation of our business model and strategic plans for our business, technologies and products;
- the rate and degree of market acceptance of any of our products or organic semiconductor technology in general, including changes due to the impact of (i) new semiconductor technologies, (ii) the performance of organic semiconductor technology, whether perceived or actual, relative to competing semiconductor materials, and (iii) the performance of our products, whether perceived or actual, compared to competing silicon-based and other products;
- the timing and success of our, and our customers’, product releases;
- our ability to develop new products and technologies;
- our estimates of our expenses, ongoing losses, future revenue and capital requirements, including our needs for additional financing;
- our ability to obtain additional funds for our operations and our intended use of any such funds;
- our ability to remain eligible on an over-the-counter quotation system;
- our receipt and timing of any royalties, milestone payments or payments for products, under any current or future collaboration, license or other agreements or arrangements;
- our ability to obtain and maintain intellectual property protection for our technologies and products and our ability to operate our business without infringing the intellectual property rights of others;
- the strength and marketability of our intellectual property portfolio;
- our dependence on current and future collaborators for developing, manufacturing or otherwise bringing our products to market;
- the ability of our third-party supply and manufacturing partners to meet our current and future business needs;
- our exposure to risks related to international operations;
- our dependence on third-party fabrication facilities;
- the impact of the COVID-19 pandemic and any future communicable disease outbreak on our business and operations;
- our relationships with our executive officers, directors, and significant stockholders;
- our expectations regarding our classification as a “smaller reporting company,” as defined under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and an “emerging growth company” under the Jumpstart Our Business Startups Act (the “JOBS Act”) in future periods;
- our future financial performance;
- the competitive landscape of our industry;
- the impact of government regulation and developments relating to us, our competitors, or our industry; and
- other risks and uncertainties, including those listed under the caption “Risk Factors.”

These statements relate to future events or our future operational or financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-

looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors” and elsewhere in this Report.

Any forward-looking statement in this Report reflects our current view with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our business, results of operations, industry and future growth. Given these uncertainties, you should not place undue reliance on these forward-looking statements. No forward-looking statement is a guarantee of future performance. You should read this Report and the documents that we reference in this Report and have filed with the Securities and Exchange Commission, or the SEC as exhibits hereto completely and with the understanding that our actual future results may be materially different from any future results expressed or implied by these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

Item 1. Business

Unless otherwise stated or the context otherwise indicates, references to “SmartKem” the “Company,” “we,” “our,” “us,” or similar terms refer to SmartKem, Inc. and its subsidiaries.

Overview

We are seeking to reshape the world of electronics with our disruptive organic thin-film transistors (“OTFTs”) that we believe have the potential to drive the next generation of displays. Our patented TRUFLEX® semiconductor and dielectric inks, or electronic polymers, are used to make a new type of transistor that we believe have the capability to revolutionize the display industry. Our inks enable low temperature printing processes that are compatible with existing manufacturing infrastructure to deliver low-cost displays that outperform existing technologies. Our electronic polymer platform can be used in a range of display technologies including microLED, miniLED and AMOLED displays for next generation televisions, laptops, augmented reality (“AR”) and virtual reality (“VR”) headsets, smartwatches and smartphones.

We design and develop our materials at our research and development facility in Manchester, UK. We manufacture prototypes for prospective customers at the Centre for Process Innovation (“CPI”) in Sedgefield, UK. We also operate a field application office in Taiwan. With our collaboration partners, we are developing a commercial-scale production process and EDA tools for our materials to demonstrate the commercial viability of manufacturing a new generation of displays using our materials. We have an extensive IP portfolio including 125 granted patents across 19 patent families, 15 pending patents and 40 codified trade secrets.

Our Technology

The invention and development of OTFT devices has enabled the rapid expansion of the electronics industry, particularly with the advent of the planar process essential for integrated circuitry. This is due to the ability to create compact circuits with an ever-increasing capability, lower cost per logic function, and a higher frequency of operation. Integrated circuits are present in almost all electronic devices today and there is a constant drive to embed more smart features into a greater number of applications.

TFTs are a type of FET that can be processed on large area flat surfaces to make display screen backplanes, digital/analog electronics, and sensor arrays for a wide range of consumer and industrial applications. The manufacturing of silicon-based electronics either in wafer or thin-film form, such as a-Si on glass, requires a high temperature process (approximately 300°C). Because most polymer substrates melt at these high temperatures, TFTs are mainly manufactured on special glass that can withstand such high temperatures resulting in the production of mainly rigid products.

Our OTFT technology comprises predominantly organic materials (such as polymers and organic small molecules) that can be solution coated at low temperature (as low as 80°C) using existing manufacturing infrastructure onto a wide range of low-cost plastic substrates, as well as onto traditional substrate materials. The similarity in stretchability and coefficient of thermal expansion between the substrate and our TRUFLEX® materials permits production of robust, bendable/flexible and lightweight devices. Our OTFT performance, as measured by charge mobility, exceeds a-Si performance by a factor of four, which we believe offers product designers a significant extension of capability, by enabling them to transform flat, bulky objects into lightweight, robust, and flexible products that we expect will appeal to consumers. Our device stability under positive and negative thermal bias stress testing (60°C for 1 hour at +/-30V) achieves <2V change in threshold voltage even without device encapsulation). The current driving ability of the short channel OTFT devices has been shown to be able to drive mini and micro-LED displays at >100,000 nits, making the technology attractive for use in emissive display applications. Our recent demonstration of monolithic integration (OTFT backplane processed on top of GaN mini/microLED arrays) proved the viability of using a monolithic manufacturing process that is more efficient than existing manufacturing techniques.

Our OSC materials combine a high mobility polycrystalline small molecule with a low molecular weight semiconducting polymer. The polymer controls the morphology, phase segregation and uniformity of the

semiconducting layer and a solvent is included to deliver inks that are used to fabricate devices with mobilities of approximately 4 cm²/Vs. In addition, we have developed all the other interlayer polymers that are necessary to form the complete transistor stack.

Polymeric plastic substrates, such as PET, PEN, TAC and COC have relatively low glass transition temperatures (T_g) in the range of 100°C to 200°C. Using these plastics at temperatures above this level causes significant distortion and, in some instances, may even result in melting or thermal breakdown of the polymer. Our OTFTs can be processed at temperatures as low as 80°C, enabling the use of polymer substrates that are optically clear and low-cost. In addition, short duration processing at low temperature results in significant energy savings. Also, plastics do not have the same risk of shattering as glass and therefore less strengthening around the edge of large area plastic-based devices is necessary, such as the use of aluminum frames to support torsional rigidity in glass substrates. Plastics can also be processed in very thin sheets (tens of microns) which saves space within the final product that can be used instead for increased battery capacity. Thin plastic substrates also enable the device to conform very easily to non-planar surfaces such as the human body which makes them well suited for wearable sensor and display devices. Thin plastic sheets are also conformable, allowing electronics to be formed around irregular surfaces, for example, curved pillars in buildings.

Our BL, SAM, OSC, OGI, SRL and PV inks can be deposited using standard coating techniques such as spin-coating or slot-die coating which are widely used for the lithography processes used in TFT manufacturing. As a result, our OTFT process can be integrated into existing manufacturing lines using standard industrial techniques without the need for additional large capital investment. Furthermore, the solubility of our inks would permit customers to digitally print the features of the OTFT device, which we believe may be attractive to potential customers seeking to lower manufacturing costs.

Advantages of Our TRUFLEX® Technology

The most widespread display backplane technology currently in use is a-Si which is principally used in the manufacture of LCDs. More recent developments in inorganic semiconductors include use of the metal oxide IGZO for backplanes for large area OLED TVs and LTPS for high resolution cell phones. All these inorganic processes are operated at high temperatures and therefore require high-cost substrates, especially if they are to be processed on plastic. All are subject to failure on bending, have limited flexibility, and require additional product engineering for protection during bending to prevent failure of the display. This adds to the overall cost of production of a bendable or foldable device.

Our ability to employ TRUFLEX® materials at temperatures as low as 80°C enables manufacturers to use low-cost plastic substrates and the polymeric nature of our materials allows the transistors to be truly flexible. We believe that robust and lightweight display screens which are capable of being bent or folded would enable manufacturers of mobile devices to create products more tailored to customer demand and that our TRUFLEX® OTFTs are uniquely suited for this application. Our materials are organic and polymer-like and hence can withstand the strains experienced in severe bending such as a fold of a display. In addition, the substrate does not require the degree of protection from the edges as glass displays do which can eliminate the weight and cost associated with aluminum frames. Low temperature processing enables a wider range of plastic substrates to be used, allowing properties such as optical clarity to be optimized.

There are also opportunities to process the OTFT on top of other display elements, such as a micro-LED array since the low process temperature would not damage the emissive components. We believe this ability to pattern the backplane on top of other components could lead to alternative display or sensor design configurations with advantages such as higher aperture ratio. We also believe that our ability to build the backplane in-situ over the micro-LED array — which would eliminate the critical front and backplane hybridization step — has the potential to increase the yield of the display fabrication process. The small size of micro-LED's and tight pixel pitches makes it challenging to ensure each micro-LED aligns perfectly with the corresponding pixel driver on the backplane. Electrical connection of the micro-LEDs on top of the display backplane requires the use of eutectic bonds through a metal junction containing at least one low melting point metal. Deposition and patterning of the low melting point metal for the bumping process typically uses thermal evaporation and lift-off processes, which are not typically used in display

backplane fabs, therefore creating uncertainty over the scale up of this approach. Our chip-first integration route makes use of photolithography and/or dry etching to form vias through one of our dielectric layers and then a metal contact is deposited through the via to connect to the micro-LED pads. The metallization process uses sputtering, photolithography and wet etching, all of these are scalable techniques used in current display manufacturing.

Products and Services

We have developed in-house the materials necessary to fabricate high-performance OTFT devices except for the contact metals and substrates on which those materials are deposited. We supply our products as a set of stable liquid inks, with each ink forming a separate layer of the device. Each of the inks forming these layers has been carefully designed to result in the device performance and electrical stability specified by the customer. We supply the ink set with a detailed process of record (“POR”) for making the desired device. In addition to supplying our OTFT stack materials as a package, prospective customers also evaluate the use of our range of interlayer materials as single layers in new and existing chip and display products (in so-called Advanced Electronics packaging). The interlayer materials are being tested as redistribution layers, pixel definition layers, permanent resists and organic dielectric layers due to their favorable processability, patternability, planarity and other properties of our materials when compared with existing materials. During 2023, we began developing a range of customized dielectric inks for customers’ Advanced Electronics packaging applications.

Products have been scaled up for formulated ink supply to customers in package sizes ranging from 100mL to several liters. These are supplied with certificate of analysis CoA and POR alongside device and design consultancy to ensure successful technology transfer.

We intend to offer foundry services to customers who wish to have electronic circuits manufactured for them. Through our agreement with the United Kingdom’s CPI, we have access to a 300mm x 300mm foundry that we use for creating prototypes for evaluation by potential customers. In 2022 we began process characterization using a maskless aligner at CPI to reduce the time from CAD layout to prototype for new designs. Additionally, in partnership with The Industrial Technology Research Institute of Taiwan (“ITRI”), we successfully demonstrated the direct patterning of one of our interlayer dielectric materials using digital lithography technology (“DLT”). In 2023, we entered into a transfer technology agreement with ITRI pursuant to which ITRI is developing Gen 2.5 scale (370mm x 470mm) commercial manufacturing processes for a range of our OTFT materials. The goal of our agreement with ITRI is to develop robust commercial scale manufacturing processes that will enable potential customers to develop prototypes on ITRI’s Gen2.5 line using our OTFT technology before transferring the manufacturing process to their own lines or to a third-party foundry, including ITRI. We believe that the successful development of commercial manufacturing processes will help to accelerate the adoption of our technology by display manufacturers in Taiwan and other areas of Asia.

We do not have the in-house capability to produce our flexible transistors at commercial scale and intend to seek relationships with existing foundries to provide us with the ability to meet full production orders for customers that do not have their own facilities. We use product prototyping services to demonstrate applications enabled by OTFT to prospective customers. This allows potential customers to evaluate physical samples of our materials prior to committing to purchase.

During 2023, we announced the successful creation of the first monolithic micro-LED display using OTFTs, which was the result of our collaboration with Prof. Xiaojun Guo’s group at Shanghai Jiao Tong University, China. This break-through was published in November 2023 in the peer-reviewed journal, *Nature Communications*. We believe that this new method of processing our thin-film transistor backplane on top of Gallium Nitride LEDs has the potential to accelerate the commercialization of micro-LED displays by demonstrating the ability to efficiently manufacture micro-LED displays by simplifying the process of connecting transistors to LEDs. Consumer electronics companies are actively developing micro-LED displays because such displays promise higher brightness, lower power consumption and longer lifetime. The existing manufacturing processes for creating micro-LED displays use physical transfer of LEDs from the wafer upon which they are manufactured to the TFT display backplane, where they must be laser welded to the contact pad of the transistor to make an electrical connection. Because millions of tiny LEDs

need to be transferred from one place to another and welded into place, error rates from misplacement reduce the efficiency of these processes.

Our low temperature process makes it possible for OTFT transistors to be processed directly on top of the micro-LEDs. This eliminates the mass transfer and laser welding process, and the fabrication of OTFTs can use existing low-cost manufacturing tools currently used for LCD backplane manufacturing. We believe that the improvements available through the adoption of our process will be particularly important for portable powered displays such as smartwatches and AR/VR displays which cannot readily accommodate large, heavy batteries.

Market Opportunity

According to Precedence Research, the global display market size was estimated at \$158 billion in 2022 and is expected to grow to around \$315 billion by 2032, an expected compound annual growth rate of 7.20% during the forecast period. Growth in the display market is driven primarily by increasing demand for consumer electronics, including smart phones, automotive products, wearables, e-readers and flat panel displays. We believe that display manufacturers continue to seek product differentiation as a part of their marketing strategies.

Our TRUFLEX® materials enable customers to make backlight units and direct emissive displays that are both flexible and can drive stable currents. Over the last two years several manufacturers have launched TVs with mini-LED backlight units, and a number of companies are developing a new generation of direct emission micro-LED displays, flexible OLED displays, and transparent OLED displays. These new formats are supported by a variety of different backplanes using tiled versions of existing technologies or PCB backplanes. We believe that TRUFLEX® materials can be used to provide active-matrix transistor arrays that can address these new product categories using low-cost, flexible substrates. As products become more sophisticated and smart technology is implemented in wider use cases, we expect that manufacturers will seek technology solutions, such as our TRUFLEX® technology that enable them to implement the product designs that consumers will demand.

In addition, we believe that our OTFTs are suitable for applications where a relatively low number of transistors are required over a wide area such as chemical/biological sensors or distributed logic circuits. We believe that the low cost of prototyping and our ability to rapidly transition from design to device will help drive the development of these technologies.

Commercialization Strategy

Our commercialization strategy rests on three pillars: continuous improvement of our polymer materials, development of EDA tools, and development of robust commercial manufacturing processes.

Continued Development of Our Materials

We design and develop our materials at our research and development facility in Manchester, UK. As described in more detail below under “Research and Development,” we continue to develop new OTFTs in response to customer feedback and market trends. During 2023, in response to requests from potential customers, our chemistry team has focused on the development of a range of specialized dielectric polymer interlayers. Additional specialty dielectric polymer formulations are being designed for use in advanced mobile communications operating at frequencies in excess of 5GigaHz (5G applications and beyond). Interlayer inks are also being provided to potential customers for evaluation across a wide range of advanced electronics packaging applications. We believe that our knowledge base and experience in the design and characterization of OTFTs gives us the ability to respond rapidly to customer preferences and emerging market trends.

Development of EDA Tools

We have developed an initial PDK for our process that is designed to be used by third parties in EDA software to allow them to design digital logic devices. The PDK contains information such as design rules that are specific to our process equipment, and it will also incorporate models of OTFTs made using our materials set. This will be used for

digital device simulation and layout of circuit designs. We continue to characterize the electrical performance of our materials and to use that data to improve the correlation between simulations produced using those tools and actual devices. As part of this development, we expect to populate a library of reference designs for common gates used in digital electronic circuits to further simplify third party design processes. At this time, our circuit layout work is done by hand by skilled engineers.

Once we have identified a specific application requirement, we expect to proceed with development work through an understanding of the product specifications and engineering work to calculate the size and capabilities of pixel TFTs and storage capacitors. For digital logic applications, the situation is more complex, and circuits cannot be designed without access to supporting simulation, design, and layout software. In silicon IC design, EDA tools are used to predict the behavior of circuits made using foundry services. This allows designers to simulate the behavior of prototype circuits and check their functionality ahead of the fabrication, therefore saving time and money.

We believe that the development of proprietary EDA tools that permit customers to efficiently design circuits using our processes and materials is an important requirement for our commercial success. We have identified a potential partner and are currently in negotiations with Flexible Integrated Circuits S.L. (FlexiIC) with the aim to configure open-source EDA tools for our OTFTs.

Development of Robust Commercial Manufacturing Processes

Our BL, SAM, OSC, OGI, SRL and PV inks can be deposited using standard coating techniques such as spin-coating or slot-die coating which are widely used for the lithography processes used in TFT manufacturing. As a result, our OTFT process can be integrated into existing manufacturing lines using standard industrial techniques without the need for additional large capital investment. Furthermore, the solubility of our inks would permit customers to digitally print the features of the OTFT device, which we believe may be attractive to potential customers seeking to lower manufacturing costs.

While we can provide prototype foundry services for potential customers through our access to CPI, we do not have the capability to provide commercial-scale foundry services. We believe that many customers will produce circuits using our OTFT materials either directly or through their existing third-party foundry arrangements. Accordingly, we believe the development of robust commercial manufacturing processes that use existing foundry equipment and that can be easily transferred to commercial foundries is an important part of our commercialization strategy.

Through our relationship with ITRI, we have successfully demonstrated the direct patterning of one of our interlayer dielectric materials using DLT, a common commercial manufacturing technology. In 2023, we entered into a transfer technology agreement with ITRI pursuant to which ITRI is developing Gen 2.5 scale (370mm x 470mm) commercial manufacturing processes for a range of our OTFT materials. The goal of our agreement with ITRI is to develop robust commercial scale manufacturing processes that will enable potential customers to develop prototypes on ITRI's Gen2.5 line using our OTFT technology before transferring the manufacturing process to their own lines or to a third-party foundry, including ITRI. We believe that the successful development of commercial manufacturing processes will help to accelerate the adoption of our technology by display manufacturers in Taiwan and other areas of Asia.

Sales and Marketing

A large sector of our target customers are large consumer electronics companies based in Asia (Taiwan, South Korea, Japan and China) that already own or have access to display backplane manufacturing lines and engage in large scale production of display products for TV or mobile/tablet markets using a-Si process lines. We believe that these companies are continually seeking to create novel, higher added value electronics products that cannot be manufactured using a-Si glass backplanes. We believe these potential customers will be attracted to our TRUFLEX® technology which would enable them to create novel, plastic-based products with improved robustness, higher flexibility and lighter weight using their existing production lines.

We have a direct sales force consisting of three employees located in Taiwan, and sales representation in China. Our CEO and management team are also actively engaged in developing customer and partner relationships. We believe

that our initial customers will be located in Taiwan, Japan and China but we are also directly working with OEMs located in North America, Europe and Asia who have the ability to require their suppliers to use our materials. Our sales team is supported by engineers and product specialists located at our headquarters in the U.K. We intend to seek third-party distribution or sale-agent agreements with potential partners where we believe such agreements are justified by the potential market opportunity.

Our marketing efforts include attendance at significant industry tradeshows at which we demonstrate the capabilities of our TRUFLEX® technology and responding to requests for proposals and other inquiries from potential customers. We publish technical papers that explain our products and technology to inform and engage with potential customers. We also have entered into a number of joint development agreements to demonstrate the capabilities of our materials and to show the feasibility of utilizing our products in specific applications. In addition, we make presentations at trade events to showcase our technology and familiarize potential customers with the value we believe our technology adds to various applications. We also publish press releases and other announcements relating to our technical capabilities or achievements and include product information and related technical materials on our website.

We expect that the time between the identification of a potential customer and the receipt of a purchase order or agreement for the sale of our products will be relatively long. In certain instances, a potential customer may contact us seeking a generic sample of our materials for evaluation. In other instances, a customer may come to us with specific performance specifications and inquire about our ability to provide products meeting their specifications after which we provide samples of materials or specific data for evaluation. After the initial evaluation, the prospective customer may request a prototype of a specific design as proof-of-concept. We fabricate prototypes using the foundry access we have through our arrangement with CPI. In 2023 we also commissioned ITRI to establish our OTFT process on their Gen 2.5 line in Taiwan to undertake prototype development in Taiwan. A significant proportion of all work done during this phase of our sales cycle would be done at our expense, with customers making a contribution in some cases.

Assuming successful prototyping is completed, we expect that we would negotiate and enter into a development agreement with an interested customer under which we would, in collaboration with the potential customer, engage in further engineering and design work. We expect that we will receive compensation for those services. We could also engage in a pilot-scale level of manufacturing for the products developed for the customer as part of that process.

After the satisfactory completion of development work and any related pilot project, an interested customer would then enter into a sales agreement with us under which we would either agree to manufacture products to the customer's specifications from time to time as requested by the customer, including potential minimum quantity requirements, or we would agree to license our process to the customer for a fee based on a royalty of sales and enter into a supply agreement for our proprietary inks, utilizing a process developed by ITRI and owned and qualified by us, formulated into inks either in our own facilities or by third-party formulators and shipped directly to customers.

We expect that the sales cycle described above will take approximately 12-24 months. During that period, we will be required to incur significant expenses without any assurance that a customer order will be obtained. Accordingly, we will have a significant risk that we will incur those expenses without ever making a sale.

Research and Development

Prior to 2023, we focused our technical resources on the development of improved performance organic semiconductors which have high charge mobility, enable excellent layer uniformity, device stability and robustly satisfy the TFT performance specifications defined by potential customers. Our portfolio of available organic semiconductors was extended as a result of these efforts to include newly synthesized small OSC molecules. Our chemistry team, led by our Chief Scientist, has in-depth knowledge of structure-property relationships for organic materials. Dielectric and passivation interlayer materials are also critical to enabling the OTFT device current to be maximized while ensuring stability during extended operation under voltage or current bias stress. Some of the critical parameters for performance of an OTFT device include:

- Charge mobility – the ability of the material to conduct charge under an electric field. The higher the charge mobility number the greater the current that can be driven through the device for a given size. Also, in circuits mobility determines the maximum switching frequency of a device from one logic state to another. a-Si has a mobility of $\sim 0.5 \text{ cm}^2/\text{Vs}$, LTPS typically has mobility $>50 \text{ cm}^2/\text{Vs}$ and crystalline silicon has a mobility of near $1000 \text{ cm}^2/\text{Vs}$. SmartKem’s OTFTs can achieve $>3 \text{ cm}^2/\text{Vs}$ at channel length of 4 microns and $>4 \text{ cm}^2$ at 10 microns.
- On/off ratio – the ratio of the current driven by the transistor during its on state to the current passed during biasing in its off state. On/off ratios of $>10^6$ are typically required for TFTs used in display pixels so that the programmed voltage does not decay during the frame time. Our OTFTs have on/off ratios in the order of 10^7 and have even demonstrated 10^9 on/off ratios in devices having large W/L.
- Turn on voltage (“ V_{to} ”) – the gate voltage at which the TFT starts to increase its current output. Values close to zero volts are considered desirable for low power consumption products. The device should also achieve its transition from off to on over as small a range of gate voltages as possible since this can reduce energy consumption and hence is desirable in battery powered devices.
- Threshold voltage (“ V_{th} ”) – gate-source voltage at which the magnitude of the drain current reaches a specified low value (e.g., 10^{-9} A).
- Threshold voltage stability – The ability of device to maintain a defined threshold or turn on voltage following a period of electrical stress (either at room temperature or elevated temperature). Bias voltage shifts of $<2 \text{ V}$ after 1 hour voltage stress at 60°C and $+30 \text{ V}$ or -30 V is a typical specification required for display applications. We have demonstrated $<1 \text{ V}$ V_{th} bias stress shift for NBTS and $<2 \text{ V}$ for PBTS in R&D tests.

During 2023, in response to requests from potential customers, our chemistry team has focused on the development of a range of specialized dielectric polymer interlayers. Some of these materials are intended for use in the display industry as redistribution layers, interlayer dielectrics and as pixel definition layers. Additional specialty dielectric polymer formulations are being designed for use in advanced mobile communications operating at frequencies in excess of 5GigaHz (5G applications and beyond). We believe our novel dielectric polymer should enable manufacturers to offer higher bandwidth and faster speed with lower power consumption. Interlayer inks are also being provided to potential customers for evaluation across a wide range of advanced electronics packaging applications.

Once new dielectric materials have been characterized, our materials development team customizes the formulations and process parameters to allow integration into the fabrication processes at CPI. This team establishes the BKMs for each material and generates an understanding of the parameters that can influence the performance. Customers frequently request detailed materials data packages for our customized dielectric materials which once approved by them should enable them to quickly process our polymer inks at their in-house facilities. Our dielectric inks are currently being evaluated by six end users. Initial work is also being done to scale up routes and identify potential supply chains for our materials in anticipation of customer needs.

The generation of fabrication processes and the integration of new materials is carried out at CPI under the direction of our Chief Technology Officer. The toolsets at this site provide a rapid feedback loop between our chemistry R&D and industry relevant device performance data sets. Additionally, the equipment sets can be used to generate demonstrator OTFT backplane devices on plastic, OTFT driven displays, sensors or circuits and a wide range of other device prototypes. Technology transfer to customers’ pilot lines can also be supported by this team and they can help to diagnose and rectify process problems. Process engineers also travel to customers’ sites to assist technology transfer alongside our field application engineering team in Taiwan. Through this work, we believe we have developed a novel method for integration of OTFT backplanes and micro-LED devices. We believe this process is feasible due to the low temperature processing of OTFT. We believe that the use of higher temperature materials, such as a-Si, LTPS and IGZO, would damage the LED devices. As a result, current practice is to attach the micro-LEDs after the backplane is fabricated. Using our process, we have demonstrated active-matrix backplanes driving micro-LEDs using

OTFT at high brightness (>100,000 nits). We have sought patent protection for our processes. In addition, the Company has successfully integrated OTFT and OLED (AMOLED) in a 200ppi display. We are working to integrate our process into the ITRI facility in Taiwan at Gen 2.5 scale, which should permit commercial-scale processing compared with CPI at a lower defectivity. The ITRI line running our OTFT process is located close to a number of our current and potential future customers and is expected to simplify the process of transferring the technology into manufacturing.

CPI Agreement

We perform prototyping with our own employees using foundry equipment made available to us by CPI. We use the CPI facility to produce test samples for internal evaluation and for the supply of demonstrators to potential customers and for general market development. CPI is funded through a combination of U.K. government grants, collaborative research and development projects funded by the private and public sector and contracts funded by businesses. CPI provides services to companies engaged in translating ideas and inventions into commercially successful products and processes. It operates seven national facilities in the Northeast of England and Scotland and provides relevant industry expertise and assets to its customers.

We have entered into a framework services agreement with CPI Innovation Services Limited (“CPIIS”), the commercial trading company for CPI, pursuant to which we purchase services consisting primarily of access to CPI process equipment required for fabrication as well as access to CPI staff with specific skills, to the extent required, at specified costs, including a minimum annual spending requirement. We have 14 employees at the CPI facility who operate or support operations and OTFT developments using the CPI equipment on our behalf. Pursuant to the terms of this agreement, we utilize an online booking system to book equipment for immediate use, subject to availability. For critical equipment that other CPI customers may seek to use, we may book up to two weeks in advance to guarantee availability. CPIIS has agreed to use its reasonable commercial endeavors to supply the requested services.

The latest agreement with CPIIS has a fixed term and will be completed at the end of March 2024. On March 22, 2024 we executed a new Framework Agreement with CPIIS for a twelve-month term commencing on April 1, 2024. The agreement may be terminated by either party in the event of a breach by the other party. We also lease office space at CPI’s facility in Sedgefield, England.

Collaboration Agreements

In October 2021, we entered into a joint development agreement with RiTdisplay, a Taiwan based developer of displays. Under this agreement the two parties are collaborating on the production of a full color demonstration AMOLED display. In 2023, we entered into a technology transfer with RiTdisplay commencing a joint project to develop the world’s first commercially ready active-matrix OLED display using OTFT technology. If successful, we believe the project with RiTdisplay will result in the development of the world’s first commercially ready active-matrix OLED display using OTFT technology.

In 2022, we entered into a joint development agreement with a Taiwan-based company for the development of a new generation of miniLEDs signage. This collaboration is expected to lead to the development of a roll-to-roll process for the manufacture of large format LED displays.

In 2023, we entered into a joint development agreement with a company in Taiwan for the development of a microLED-based display using our OTFT backplane.

In 2024, we entered into a joint development agreement with Tianma Microelectronics, Co, Ltd. to integrate Smartkem’s organic thin-film transistor technology with Tianma’s oxide transistors to develop OTFT-based microarray biochips.

In July 2023, we entered into a three-year technical services agreement with ITRI. Pursuant to this technical services agreement, ITRI is developing Gen 2.5 scale (370mm x 470mm) commercial manufacturing processes for a range of our OTFT materials. The goal of our agreement with ITRI is to develop robust commercial scale manufacturing

processes that will enable potential customers to develop prototypes on ITRI's Gen2.5 line using our OTFT technology before transferring the manufacturing process to their own lines or to a third-party foundry, including ITRI. We believe that the successful development of commercial manufacturing processes will help to accelerate the adoption of our technology by display manufacturers in Taiwan and other areas of Asia. We have three employees supporting this work in Taiwan in addition to support from SmartKem staff in the UK.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain intellectual property protection for our active organic semiconductors, formulated OSC and passive dielectric interlayer inks, processes and know-how that collectively comprise our TRUFLEX® technology, to operate without infringing the proprietary rights of third parties, and to prevent others from infringing our proprietary rights. Over the past 10 years, we have been building and are continuing to build the intellectual property portfolio relating to our TRUFLEX® technology. Our policy is to seek to protect our proprietary position by, among other methods, filing U.S. and certain foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development and implementation of our business. We also rely on trade secrets, know-how, and technological innovation to develop and maintain our proprietary position. We cannot be certain that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our technology.

Our strategy for the protection of our proprietary technology is to file international (Patent Cooperation Treaty) patent applications and pursue these in national jurisdictions that represent significant market opportunities. However, we assess on a case-by-case basis whether it is strategically more favorable to maintain trade secret protection for our inventions and "know-how" rather than pursue patent protection the latter of which documents will ultimately be in the public domain. Generally, patents have a term of twenty years from the earliest priority date, assuming that all maintenance fees are paid, no portion of the patent has been terminally disclaimed, and the patent has not been invalidated. In certain jurisdictions, and in certain circumstances, patent terms can be extended or reduced.

We believe that we are a technology leader in the design, development, and production of active and passive electronic materials for use in organic electronic applications. Excluding licensed-in IP, our patent portfolio comprises 19 patent families with 125 granted patents, 15 pending patents and 40 codified trade secrets. Our patents cover the active organic semiconductor materials, passive interlayer formulations, and deposition processes comprising our TRUFLEX® technology. We also have numerous patent claims and pending patent applications covering a variety of electronic devices including a novel dual gate application that enables enhanced V_{to} control and recent applications include Micro-LED devices and improved processes. Because our patent portfolio covers all material aspects of our TRUFLEX® technology, we believe we have strong protection for our technology and a competitive advantage over potential competitors who may seek to duplicate our ability to create flexible transistors.

We also rely on trade-secret protection for our confidential and proprietary information, and we typically use non-disclosure agreements when commencing a relationship with a potential customer or partner. We have an internal program to document our trade secrets for each major area of our technology and operations. We cannot be sure that we can meaningfully protect our trade secrets on a continuing basis. Others may independently develop substantially equivalent confidential and proprietary information or otherwise gain access to our trade secrets. The TRUFLEX® trademark is granted and registered to the Company in its 10 commercially interesting jurisdictions including USA, China, Korea, Taiwan, Japan, and Europe.

We own substantive rights to the chemistry, process, and stack design rules necessary to implement our technology in all jurisdictions of commercial interest.

Manufacturing and Supply

We obtain strategic intermediates and final products from multiple sources who produce our active semiconductor materials to our specifications. Our TRUFLEX® materials fall into two main categories, "active" organic

semiconductor materials and “passive” interlayer materials. Our active materials generally require high levels of process and product control, and therefore these are synthesized from start to end by us or a third party that has met certain certification requirements and then formulated by us into the organic semiconductor inks. We validate active components internally before use. Our passive interlayers inks use a range of commercially available intermediates, formulated to our specifications to meet differing end-use performance parameters depending on the intended use. Our active and passive inks are proprietary to us.

We synthesize the active materials either internally or using third-party suppliers that meet specific certification requirements. The raw materials used to produce the formulated passive interlayers are purchased from multiple suppliers and tested and validated internally before use. The passive and active interlayer inks are presently manufactured internally in our formulation facility located in Manchester in the U.K. We are also evaluating a base layer material manufactured on a larger scale by a third-party contractor. Initial results have been promising and we are continuing our testing and evaluation.

We use our U.K.-based formulation activity to enable customers to validate our materials on their Gen 1- Gen 2.5 pilot lines. Our TRUFLEX® inks typically comprise between 1.2% up to 25% by weight of solids with the remainder being made up by electronic grade solvents. For commercial supply quantities, to avoid the shipping costs associated with large quantities of locally available solvents, we expect to supply fully formulated ink to customers from a formulation facility located close to the customer’s manufacturing facility. We may also outsource the ink manufacture to an accredited third-party local formulator subject to our final QC testing of the formulated inks.

We have not experienced any supply shortages with respect to the materials used to formulate our proprietary inks. In addition, we have not experienced scheduling delays in obtaining access to CPI’s foundry equipment.

Competition

We believe that competition in our targeted markets is based on a variety of factors, including capability, functionality, performance, reliability, ease of use and ability to supply in sufficient quantities. We believe we can, or will be able to, compete effectively based on these factors.

a-Si technology is an inorganic process widely used in the manufacture of backplanes for LCDs. More recent developments in inorganic semiconductors include use of the metal oxide IGZO for backplanes for large area OLED TVs and LTPS for high resolution cell phones. All these inorganic processes are operated at high temperatures and therefore require high-cost substrates, especially if they are to be processed on plastic. We believe that integration of TFTs with temperature sensitive devices will be made easier with our OTFT inks due to their lower temperature requirements. In addition, we believe all inorganic TFT based active-matrix technologies face challenges in bending compared with organic TFTs resulting in higher manufacturing costs.

A number of competitors have engaged in the development of organic inks. However, these competitors either opt to use polymeric semiconductors (BASF SE, Merck KGaA and Sumitomo Chemical Co., Ltd.) that process well but have a lower mobility than the polycrystalline organic materials in our TRUFLEX® materials, or polycrystalline semiconductors that have high mobility but relatively poor uniformity when processed. We believe our proprietary technology, which combines a polycrystalline molecule with a matched semiconducting polymer, provides higher mobility, particularly at short channel lengths and better processability over these technologies.

Many of our potential competitors could have substantial competitive advantages such as greater name recognition, longer operating histories, broader and deeper product portfolios, larger customer bases, substantially greater financial and other resources, and larger scale manufacturing operations. However, we believe our products have the potential to compete with many of our competitors’ offerings through product performance, product reliability and satisfaction of customer qualifications and standards.

Government Regulation

In addition to customer specific requirements for safety health and the environment, our formulated materials also may be subject to government regulation during their use in the country of device manufacture and from regulations covering the materials in the finished device. These could include the toxicity (potential for Carcinogenicity, Mutagenicity, and Teratogenicity) and restrictions from the environmental protection agencies in the countries of manufacture.

All new chemicals we obtain are evaluated at the time of order and a Control of Substances Hazardous to Health (“COSHH”) assessment is performed prior to commencement of any practical work with these materials. The COSHH assessment considers chemical hazards associated with the material, its physical properties, the scale of the planned work and the nature of that work e.g., temperature and containment. This process provides the first opportunity to screen out any materials that may be prohibited by the ultimate customer. Any use of material in Health and Safety Executive COSHH hazard category E, all but gram scale uses of non-volatile material in hazard category D and use of material in hazard category C in quantities of more than 1kg would trigger a management review. While it is possible that management authorization may be given to conduct research using materials in categories D & E, their use in a potentially formulated product would be discouraged and an alternative sought at an early stage. Materials are also screened against lists of banned and restricted materials provided by display manufacturers. Any material present on the display manufacturers banned list would not be used in formulated product.

We work with a third-party service provider to create safety data sheets for our formulated products that are shipped to customers and other end users. Our formulated products contain no materials that are restricted in the U.K. and no permissions or exemptions are required.

Our OGI material is fluorinated and spun from a fluorosolvent listed under regulation (EC) No 428/2009 of 5 May 2009 under section 1C006d. Export of formulations may require a Standard individual export license to be applied for and end use declaration made by the customer. These can be obtained through the U.K.’s SPIRE system.

To the extent our products are or become subject to U.K. export controls and regulations, these regulations may limit the export of our products and technology, and provision of our services outside of the U.K., or may require export authorizations, including by license, a license exception, or other appropriate government authorizations and conditions, including annual or semi-annual reporting. Export control and economic sanctions laws may also include prohibitions on the sale or supply of certain of our products to embargoed or sanctioned countries, regions, governments, persons, and entities. In addition, various countries regulate the importation of certain products, through import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our products. The exportation, re-exportation, and importation of our products and technology and the provision of services, including by our partners, must comply with these laws or else we may be adversely affected, through reputational harm, government investigations, penalties, and a denial or curtailment of our ability to export our products and technology. Complying with export control and sanctions laws may be time-consuming and may result in the delay or loss of sales opportunities. Although we take precautions to prevent our products and technology from being provided in violation of such laws, our products and technology may have previously been, and could in the future be, provided inadvertently in violation of such laws, despite the precautions we take. If we are found to be in violation of U.K. sanctions or export control laws, it could result in substantial fines and penalties for us and for the individuals working for us. Export or import laws or sanctions policies are subject to rapid change and have been the subject of recent U.K. and non-U.K. government actions. Changes in export or import laws or sanctions policies, may adversely impact our operations, delay the introduction and sale of our products in international markets, or, in some cases, prevent the export or import of our products and technology to certain countries, regions, governments, persons, or entities altogether, which could adversely affect our business, financial condition and results of operations.

Employees

As of December 31, 2023, we had 29 full-time employees and two part-time employees of which 26 are based in the United Kingdom. 21 of our employees hold advanced degrees, including 7 Ph.Ds. We believe that our scientists and technical experts are significant assets of our business, and we value and support hiring exceptional talent to further develop our TRUFLEX® technology and drive our business growth.

Corporate History

We were originally incorporated as Parasol Investments Corporation (“Parasol”) in the State of Delaware in May 2020. Prior to the acquisition of SmartKem Limited in February 2021, we were a “shell” company registered under the Exchange Act, with no specific business plan or purpose. In accordance with “reverse merger” accounting treatment, our historical financial statements at period ends, and for periods ended, prior to our acquisition of SmartKem Limited were replaced with the historic financial statements of SmartKem Limited in our SEC filings made after the acquisition.

Our principal executive offices are located at Manchester Technology Centre, Hexagon Tower, Delaunays Road, Blackley Manchester, M9 8GQ U.K. Our telephone number is +44 161 721 1514.

Additional Information

We maintain a website at www.smartkem.com. On our website, investors can obtain, free of charge, a copy of our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, other reports and any amendments thereto filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we file such material electronically with, or furnish it to, the SEC. None of the information posted on our website is incorporated by reference into this Report. The SEC also maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding us and other companies that file materials with the SEC electronically.

Item 1A. Risk Factors

An investment in our securities is highly speculative and involves a high degree of risk. We face a variety of risks that may affect our operations or financial results and many of those risks are driven by factors that we cannot control or predict. You should carefully consider the risks described below together with all of the other information in this Report, including our consolidated financial statements and the related notes and the information described in the section entitled “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and in our other filings with the SEC. If any of the risks described below occur, our business, financial condition, results of operations and prospects could be materially adversely affected. In that case, the market price of our common stock would likely decline, and investors could lose all or a part of their investment. Only those investors who can bear the risk of loss of their entire investment should consider an investment in our securities. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our operations.

Summary of Risk Factors

- We have a history of losses, anticipate continued operating losses in the future, and may not be able to achieve or maintain profitability. If we cannot achieve or maintain profitability, stockholders could lose all or part of their investment.
- Our quarterly results of operations are likely to vary from period to period, which could cause the market price of our common stock to fluctuate or decline.
- We may not be able to develop technologies and products to satisfy changes in customer demand or industry standards, and our competitors could develop products that decrease the demand for our products.
- We compete in highly competitive markets characterized by rapid technological changes, and existing and new companies may introduce products that compete with ours, which may adversely affect our business and operating results.
- If we are unable to establish sales capabilities on our own or through third parties, we may not be able to market and sell our existing or future products - or generate product revenue.
- We rely on the CPI and ITRI for access to fabrication and expect to enter into arrangements with third-party fabricators to produce our products at commercial scale. The loss of access to the CPI and/or the ITRI facilities, or our inability to enter into agreements with third-party fabricators could have a material adverse effect on our business development.
- Because we will depend on third-party fabricators to manufacture products for us, we will be susceptible to manufacturing delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales, income and customers.
- We rely on our management team and other key employees and will need additional personnel to grow our business. The loss of one or more key employees or our inability to attract and retain qualified personnel could harm our business.
- Any failure by us to protect our proprietary technologies or maintain the right to use certain technologies may negatively affect our ability to compete.
- We incur significant costs as a result of operating as a public company.
- If we fail to maintain effective internal controls, we may not be able to report financial results accurately or on a timely basis, or to detect fraud, which could have a material adverse effect on our business or share price.
- An active trading market for our common stock may not develop or be sustained, which may make it difficult for investors to sell shares of our common stock and may make it difficult for us to raise capital.
- We do not anticipate paying dividends on our common stock, and investors may lose the entire amount of their investment.

Risks Related to our Business and the Industry in Which We Operate

We have a history of losses, anticipate continued operating losses in the future, and may not be able to achieve or maintain profitability. If we cannot achieve or maintain profitability, stockholders could lose all or part of their investment.

Since our inception, we have generated substantial net losses as we have devoted our resources to the development of our technology, and our business model has not been proven. As of December 31, 2023, we had an accumulated deficit of \$95.1 million. For the years ended December 31, 2023 and December 31, 2022 our total comprehensive loss was \$9.6 million and \$10.6 million, respectively. We expect our operating losses to continue for the foreseeable future as we continue to invest in our infrastructure and research and development of our technologies. These efforts may be more costly than we expect, and we may not be able to generate revenue to offset our increased operating expenses. If we are unable to generate substantial revenue, we may never become profitable or be able to maintain any future profitability. If this were to occur, our stockholders could lose all or part of their investment.

We have recorded recurring losses from operations and will likely require additional capital to support our business and objectives.

We have incurred recurring losses since inception and, as of December 31, 2023, had an accumulated deficit of \$95.1 million. We anticipate operating losses to continue for the foreseeable future due to, among other things, costs related to research funding, further development of our technology and products and expenses related to the commercialization of our products, and it is possible we will never achieve profitability.

We believe that our existing cash will be sufficient to fund our operations through the end of April 2025 and that we will require additional capital to continue our operations and research and development activity thereafter. There can be no assurance, however, that such financing will be available by the end of April 2025, if at all, or on acceptable terms and conditions. The precise amount and timing of the funding needs cannot be determined accurately at this time, and will depend on a number of factors, including our ability to generate significant revenue, the market demand for our products, the quality of product development efforts including potential joint collaborations, management of working capital, and the continuation of normal payment terms and conditions for purchase of services.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our working capital requirements through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or products, or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate commercialization, our research and product development, or grant rights to develop and market our products that we would otherwise prefer to develop and market ourselves, it may also impact our ability to continue as a going concern. The perception that we may not be able to continue as a going concern may cause others to choose not to deal with us due to concerns about our ability to meet our contractual obligations.

Our quarterly results of operations are likely to vary from period to period, which could cause the market price of our common stock to fluctuate or decline.

Our results of operations have varied from period to period, and we expect that our quarterly results of operations will continue to vary as a result of a number of factors, many of which are outside of our control and may be difficult to predict, including:

- our ability to attract existing customers, including due to our perceived or actual financial condition;
- the budgeting cycles and purchasing practices of customers;
- the timing and length of our sales cycles, including the ability of our customers to design-in successfully with our technology;
- changes in customer requirements or market needs, including market acceptance of our technology;
- the timing and impact of new product introductions by us or our competitors or any other change in the competitive landscape of the semiconductor industry, including consolidation among our customers or competitors;
- deferral of orders from customers in anticipation of new products or product enhancements announced by us or our competitors;
- our ability to execute our growth strategy and operating plans;
- our ability to successfully expand our business domestically and internationally;
- our ability to successfully compete with other companies in our market;
- changes in our pricing policies or those of our competitors;
- any disruption in, or termination of, our relationship with channel partners;
- insolvency or credit difficulties confronting our customers, affecting their ability to purchase or pay for our products, or confronting our key suppliers, which could disrupt our supply chain;
- the cost and potential outcomes of potential future litigation;
- general economic conditions; and
- the amount and timing of operating costs and capital expenditures related to the expansion of our business.

Any of the above factors, individually or in the aggregate, may result in significant fluctuations in our quarterly operating results. As a result of this variability, our historical results of operations should not be relied upon as an indication of future performance. Moreover, this variability and unpredictability could result in our failure to follow through on our operating plans or meet the expectations of investors for any period. If we fail to follow through on our operating plans or meet such expectations for these or other reasons, the market price of our common stock could fall substantially.

We may not be able to develop technologies and products to satisfy changes in customer demand or industry standards, and our competitors could develop products that decrease the demand for our products.

Rapidly changing technologies and industry standards, along with frequent new product introductions, characterize the industries of many of our customers and potential customers. Our financial performance depends, in part, on our ability to design, develop, manufacture, assemble, test, market and support new products and enhancements on a timely and cost-effective basis.

We have not commercialized any of our products. Our principal focus has been on research and development activities to improve our technology and make our product offerings more attractive to potential customers. These projects are subject to various risks and uncertainties we are not able to control, including changes in customer demand or industry standards and the introduction of new or superior technologies by others. Moreover, any failure by us in the future to develop new technologies or timely react to changes in existing technologies could materially delay our development of new products, which could result in product obsolescence, decreased revenues and a loss of our market share to our competitors. In addition, products or technologies developed by others may render our products or technologies obsolete or non-competitive. Further, if our products are not in compliance with prevailing industry standards, such non-compliance could materially and adversely affect our financial condition, cash flows and results of operations.

We compete in highly competitive markets characterized by rapid technological changes, and existing and new companies may introduce products that compete with ours, which may adversely affect our business and operating results.

The markets in which we compete are highly competitive. We expect competition to intensify in the future as existing competitors and new market entrants introduce new products into our markets. This competition could result in increased pricing pressure, reduced profit margins, increased sales and marketing expenses, and the loss of market share, any of which could seriously harm our business, financial condition, and results of operations. Additionally, our competitors may develop technology that would make ours non-competitive or obsolete. If we do not keep pace with product and technology advances and otherwise keep our product offerings competitive, there could be a material and adverse effect on our competitive position, revenue and prospects for growth. Many of our existing competitors, have, and some of our potential competitors could have, substantial competitive advantages such as:

- greater name recognition, longer operating histories and larger customer bases;
- larger sales and marketing budgets and resources;
- broader distribution and established relationships with channel partners and customers;
- broader and deeper product lines;
- greater customer support resources;
- greater resources to make acquisitions;
- lower labor and research and development costs;
- substantially greater financial and other resources; and
- larger scale manufacturing operations.

Some of our larger competitors have substantially broader product offerings and may be able to leverage their relationships with channel partners and customers based on other products to gain business in a manner that discourages users from purchasing our products, including by selling at zero or negative margins or product bundling. Potential customers may also prefer to purchase from their existing suppliers rather than a new supplier regardless of product performance or features. As a result, even if the features of our products are superior, customers may not purchase our products. In addition, innovative start-up companies, and larger companies that are making significant investments in research and development, may invent similar or superior products and technologies that compete with our products. Our current and potential competitors may also establish cooperative relationships among themselves or with third parties that may further enhance their resources. If we are unable to compete successfully, or if competing successfully requires us to take costly actions in response to the actions of our competitors, our business, financial condition, and results of operations could be adversely affected.

If we are unable to establish sales capabilities on our own or through third parties, we may not be able to market and sell our existing or future products or generate product revenue.

We do not currently have a fully staffed sales organization. We intend to commercialize our products with a direct sales force. To achieve this, we will be required to build a direct sales organization. We also will have to build our marketing, sales, managerial and other non-technical capabilities or make arrangements with third parties for distribution and to perform certain of these other services, and we may not be successful in doing so. Building an internal sales organization is time-consuming and expensive and will significantly increase our compensation expense. We may be unable to secure contracts with distributors on favorable terms or at all. We have no prior experience in the marketing, sale and distribution of our products and there are significant risks involved in building and managing a sales organization, including our ability to hire, retain and motivate qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, and effectively oversee a geographically dispersed sales and marketing team. If we are unable to build an effective sales organization and/or if we are unable to secure relationships with third-party distributors, we will not be able to successfully commercialize our products, our future product revenue will suffer, and we would incur significant additional losses.

We rely on CPI and ITRI for access to fabrication and expect to enter into arrangements with third-party fabricators to produce our products at commercial scale. The loss of access to the CPI facility and/or the ITRI facilities, or our inability to enter into agreements with third-party fabricators could have a material adverse effect on our business development.

We do not have our own fabrication facility and rely on CPI and ITRI for access to its facility for fabrication of prototypes and demonstration products. If we lost access to CPI's fabrication facility and/or ITRI's fabrication facility, it could materially and adversely affect our ability to manufacture prototypes and demonstrate products for potential customers. The loss of access may also significantly impede our ability to engage in product development and process improvement activities. We expect to enter into arrangements with third-party fabricators to produce products for customers for demonstration products or for commercial product sale, other than for our formulated materials. The third-party fabricators are often located in Asia but could also be in the United States. No assurance can be given that we will be able to negotiate agreements with third-party fabricators on terms that are acceptable to us. Third-party fabricators may not have the ability to provide us with access to adequate capacity for our needs and our customers' needs. We will also have less control over delivery schedules and overall support compared to competitors who have commercial fabrication operations. If the fabricators we use are unable or unwilling to manufacture our products in our required volumes, or at specified times, we may have to identify and qualify acceptable additional or alternative fabricators. This qualification process could typically take three to six months and we may not find sufficient capacity in a timely manner or at an acceptable cost to satisfy our production requirements. Some companies that supply products to our customers are similarly dependent on a limited number of suppliers. These other companies' products may represent important components of the displays into which our products are designed. If these companies are unable to produce the volumes demanded by our customers, our customers may be forced to slow down or halt production on the equipment for which our products are designed, which could materially impact our order levels and our results of operations.

The transfer of our technology and manufacturing know-how to a third-party commercial manufacturer may result in unanticipated costs and delays that could have a material and adverse effect our business, financial condition and results of operations.

We do not have the ability to produce our flexible transistors at commercial scale. We have engaged ITRI, a third-party foundry service in Taiwan, to assist us in developing a commercial manufacturing process for our products with the ultimate goal of enabling one or more third parties to manufacture our products at commercial scale for customers that do not have their own facilities. While we believe that display products utilizing our proprietary OTFTs can be made using existing commercial processes, we expect that transferring our technology and manufacturing know-how to a third-party manufacturer will be a time-intensive and costly process. We may also be required to adapt our manufacturing processes to enable our display products to be made at commercial scale. Any contract manufacturer will be required to manufacture products to our customers' specifications. We may be required to expend significant management and financial resources to enable contract manufacturers to meet those specifications. In addition, any contract manufacturer may not be able to manufacture products meeting the required specifications at the cost, in the volume or on the schedule that we expect. As a result, we may be subject to unanticipated costs and delays that could have a material adverse effect on our business, financial condition and results of operations

Because we will depend on third-party fabricators to manufacture products for us, we will be susceptible to manufacturing delays and pricing fluctuations that could prevent us from shipping customer orders on time, if at all, or on a cost-effective basis, which may result in the loss of sales, income and customers.

We expect to rely on third-party fabricators to manufacture products containing our proprietary inks for certain of our future customers. Our reliance on these third-party fabricators reduces our control over the manufacturing process and exposes us to risks, including reduced control over quality assurance, product costs, and product supply and timing. Any manufacturing disruption by these third-party fabricators could severely impair our ability to fulfill orders. Our reliance on third-party fabricators also creates the potential for infringement or misappropriation of our intellectual property. If we are unable to manage our relationships with third-party fabricators effectively, or if our third-party fabricators experience delays or disruptions for any reason, increased manufacturing lead-times, capacity constraints or quality control problems in their fabrication operations, or if they otherwise fail to meet our future requirements for

timely delivery, our ability to ship products to our customers would be severely impaired, and our business and results of operations would be seriously harmed.

We expect that our sales cycles will be long and unpredictable, and our sales efforts will require considerable time and expense. As a result, our revenue is difficult to predict and may vary substantially from period to period, which may cause our results of operations to fluctuate significantly.

Our results of operations may fluctuate, in part, because of the resource intensive nature of our sales efforts, the length and variability of our expected sales cycle and the short-term difficulty in adjusting our operating expenses. We provide reference designs and prototypes intended to demonstrate our ability to satisfy customer requirements and we expect that we will be required to continue to do so before receiving sales orders, which will result in a relatively long sales cycle. Because we expect that the length of time required to close a sale will vary substantially from customer to customer and each customer has its own requirements, it is difficult to predict exactly when, or even if, we will make a sale with a potential customer after significant work has been put in to create a model or prototype. As a result, we expect that individual sales will, in some cases, occur in quarters subsequent to or in advance of those we anticipated, or will not occur at all, which makes it difficult for us to forecast our revenue accurately in any quarter. Because a substantial portion of our expenses are relatively fixed in the short term, our results of operations will suffer if our revenue falls below expectations in a particular quarter, which could cause the market price of our common stock to decline. Additionally, to the extent our competitors develop products that our prospective customers view as equivalent or superior to ours, the average duration of our sales cycles may increase, and our sales efforts may be less successful.

Our current operations are concentrated, and in the event of an earthquake, terrorist attack or other disaster affecting these locations or those of our major suppliers, our operations may be interrupted, and our business may be harmed.

Our principal executive offices and primary operating facilities are situated in England and Asia, and most of our major suppliers, which are wafer foundries and assembly houses, are located in areas that have been subject to severe earthquakes and are susceptible to other disasters such as tropical storms, typhoons or tsunamis. In the event of a disaster, such as an earthquake and tsunami in Japan, we or one or more of our major suppliers may be temporarily unable to continue operations and may suffer significant property damage. Any interruption in our ability, or that of our major suppliers, to continue operations could delay the development and shipment of our products and have a substantial negative impact on our financial results. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts or coverage of insurance will be sufficient to satisfy any damages and losses.

We rely on our management team and other key employees and will need additional personnel to grow our business. The loss of one or more key employees or our inability to attract and retain qualified personnel could harm our business.

Our future success is substantially dependent on our ability to attract, retain and motivate the members of our management team and other key employees throughout our organization. The loss of one or more members of our management team or other key employees could materially impact our sales or our research and development programs and materially harm our business, financial condition, results of operations and prospects. We do not maintain key person life insurance policies on any of our management team members or key employees. Competition for highly skilled personnel is intense. We may not be successful in attracting or retaining qualified personnel to fulfill our current or future needs. Our competitors may be successful in recruiting and hiring members of our management team or other key employees, and it may be difficult for us to find suitable replacements on a timely basis, on competitive terms, or at all.

If we fail to effectively manage our growth, our business, financial condition and results of operations would be harmed.

We are a development stage company and are subject to the strains of ongoing development and growth, which has placed significant demands on our management and our operational and financial infrastructure. To manage any growth effectively, we must continue to improve our operational, financial and management systems and controls by, among other things:

- effectively attracting, training and integrating new employees, particularly members of our sales, applications and research and development teams;
- further improving our key business applications, processes and IT infrastructure to support our business needs;
- enhancing our information and communication systems to ensure that our employees and offices around the world are well coordinated and can effectively communicate with each other and our channel partners and customers; and
- appropriately documenting and testing our IT systems and business processes.

These and other improvements in our systems and controls will require significant capital expenditures and the allocation of valuable management and employee resources. If we fail to implement these improvements effectively, our ability to manage growth and ensure ongoing operation of key business systems would be impaired, and our business, financial condition and results of operations would be harmed.

The COVID-19 global pandemic and resulting adverse economic conditions adversely impacted our business. Future pandemics or similar events could also have a material adverse impact on our business, financial condition, and results of operations.

The COVID-19 global pandemic adversely impacted us by disrupting our operations and increasing our costs as a result of, among other things, measures to address the health and safety of our employees, government work from home directives, quarantines, worker absenteeism as a result of illness, social distancing and travel restrictions that prevented face to face meetings with joint development partners, prospects and suppliers. Future pandemics and similar events could also materially and adversely affect our business, financial condition and results of operations.

The COVID-19 global pandemic also resulted in severe disruptions and volatility in the global economy and financial markets. At various times during the outbreak, the countries in which we operate and do business took dramatic action including, without limitation, ordering all nonessential workers to stay home, mandating the closure of schools and nonessential business premises and imposing isolation measures on large portions of the population.

Future pandemics and similar events could materially increase our costs, severely negatively impact business development and commercialization, net income, and other results of operations, and impact our liquidity position. The duration of any such impacts cannot be predicted, and such impacts may also have the effect of heightening many of the other material risks we face.

The COVID-19 pandemic and a supply shortage experienced by the semiconductor industry disrupted normal business activity and similar events may have an adverse effect on our results of operations.

The global spread of COVID-19 and the efforts to control disrupted, and reduced the efficiency of, normal business activities in much of the world. The pandemic resulted in authorities around the world implementing numerous unprecedented measures such as travel restrictions, quarantines, shelter in place orders, factory and office shutdowns and vaccine mandates. COVID-19 measures adversely impacted our operations and those of our customers, contract manufacturers, suppliers and logistics providers. At the same time, and to some extent relatedly, the global silicon semiconductor industry is experiencing a shortage in supply and difficulties in ability to meet customer demand and led to an increase in lead-times of the production of semiconductor chips and components.

In 2023 we experienced, and expect to continue to experience, disruption to parts of our semiconductor supply chain, including procuring necessary components and inputs, such as wafers and substrates, in a timely fashion, with suppliers increasing lead times or placing products on allocation and raising prices. We have also incurred higher costs to secure available inventory or have extended our purchase commitments or placed non-cancellable orders with suppliers, which introduces inventory risk if our forecasts and assumptions are inaccurate. In addition, disruptions to commercial transportation infrastructure have increased delivery times for materials and components to our facilities and, in some cases, our ability to timely ship our products to customers.

We believe the global supply chain challenges and their adverse impact on our business will persist and the degree to which the future pandemics and similar events ultimately impact our business and results of operations will depend on future developments beyond our control.

We are subject to a number of risks associated with international sales and operations.

We have small teams that are engaged in marketing, selling and supporting our products internationally. As a result, we must hire and train experienced personnel to staff and manage our foreign operations. To the extent that we experience difficulties in recruiting, training, managing and retaining international employees, particularly managers and other members of our international sales team, we may experience difficulties in sales productivity in, or market penetration of, foreign markets. We also enter into strategic distributor and reseller relationships with companies in certain international markets where we do not have a local presence. If we are not able to maintain successful strategic distributor and reseller relationships with our international channel partners or recruit additional channel partners, our future success in these international markets could be limited.

We are subject to risks associated with international operations.

We have operations in the United Kingdom and Asia and expect that most of our sales revenue will result from sales to customers in Asia. A number of risks inherent in international operations could have a material adverse effect on our results of operations, including:

- fluctuations in U.S. dollar/U.K. pound value arising from transactions denominated in foreign currencies and the translation of certain foreign currency subsidiaries balances;
- difficulties in staffing and managing multi-national operations;
- adverse changes in economic and political conditions resulting from political instability, acts of terrorism, armed conflict, social unrest, and other circumstances impacting countries in which we or our customers operate, including as a result of any escalation of the current tensions between Taiwan and China;
- limitations on our ability to enforce legal rights and remedies;
- restrictions on the repatriation of funds;
- changes in trade policies, laws, regulations, political leadership and environment, and/or security risks;
- tariff regulations;
- difficulties in obtaining export and import licenses and compliance with export/import controls and regulations;
- the risk of government financed competition;
- compliance with a variety of international laws as well as U.K. regulations, rules and practices affecting the activities of companies abroad; and
- difficulties in managing and staffing international operations and the required infrastructure costs, including legal, tax, accounting, and information technology.

We face political and other risks conducting business in Taiwan, particularly due to its tense relationships with China.

Certain of our partners are located in Taiwan, including ITRI, and we expect many of our customers will be located in Taiwan. Therefore, our business, financial condition and results of operations may be affected by changes in governmental and economic policies in Taiwan, social instability, and diplomatic and social developments in or

affecting Taiwan due to its international political status, including current tensions with China. Any deterioration in the relations between Taiwan and China, and other factors affecting military, political or economic conditions in Taiwan, could disrupt our business operations and materially and adversely affect our results of operations.

The ongoing conflict between Russia and Ukraine has negatively impacted and may continue to negatively impact the global economy and economic markets, which could have a materially adverse effect on our business, financial condition, and results of operations.

Russia's military invasion of Ukraine had an immediate impact on the global economy and economic markets. Financial and economic sanctions imposed on certain industry sectors and parties in Russia by the U.S., U.K. and European Union, as well as potential retaliatory actions by Russia, could also have a negative impact on the global economy. There can be no certainty regarding the impacts stemming from the conflict, including the imposition of additional sanctions, embargoes, asset freezes or other economic or military measures resulting from the invasion. The impact of these developments, and additional events that may occur as a result could adversely affect our business, supply chain, suppliers and customers and potential customers. It is not possible to predict the broader consequences of this conflict, which could include further sanctions, embargoes, regional instability, geopolitical shifts and adverse effects on macroeconomic conditions, the availability and cost of materials, supplies, labor, currency exchange rates and financial markets, all of which could negatively impact our business, financial condition and results of operations.

Failure to comply with anti-bribery, anti-corruption and anti-money laundering laws as well as export control laws, import and customs laws, trade and economic sanctions laws and other laws governing our operations could subject us to penalties and other adverse consequences.

We are subject to anti-bribery, anti-corruption and anti-money laundering laws and regulations including the U.K. Bribery Act 2010 ("Bribery Act"), the U.S. Foreign Corrupt Practices Act ("FCPA") and other anti-corruption, anti-bribery, and anti-money laundering laws in the jurisdictions in which we do business from time to time, both domestic and abroad. These laws generally prohibit us and our employees from improperly influencing government officials or commercial parties in order to obtain or retain business, direct business to any person or gain any improper advantage. The Bribery Act, FCPA and similar applicable anti-bribery and anti-corruption laws also prohibit our third-party business partners, representatives and agents from engaging in corruption and bribery. We and our third-party business partners, representatives and agents may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We may be held liable for the corrupt or other illegal activities of these third-party business partners and intermediaries, our employees, representatives, contractors, channel partners and agents, even if we do not explicitly authorize such activities. These laws also require that we keep accurate books and records and maintain internal controls and compliance procedures designed to prevent any such actions.

We are also subject to other laws and regulations governing international operations, including regulations administered by the governments of the U.K and the U.S., and authorities in the European Union, including applicable export control regulations, economic sanctions and embargoes on certain countries and persons, anti-money laundering laws, import and customs requirements and currency exchange regulations, collectively referred to as the Trade Control laws.

Any violation of the Bribery Act, FCPA or other applicable anti-bribery, anti-corruption laws and anti-money laundering laws including Trade Control laws could result in whistleblower complaints, adverse media coverage, investigations, imposition of significant legal fees, loss of export privileges, severe criminal or civil sanctions or suspension or debarment from government contracts, substantial diversion of management's attention, drop in stock price or overall adverse consequences to our business, all of which may have an adverse effect on our reputation, business, financial condition, and results of operations.

In order to comply with environmental laws and regulations, we may need to modify our activities or incur substantial costs, and such laws and regulations, including any failure to comply with such laws and regulations, could subject us to substantial costs, liabilities, obligations and fines.

We must comply with federal, state, local and foreign governmental regulations related to the use, storage, discharge and disposal of materials used in our products and manufacturing processes. Our failure to comply with such regulations could result in significant fines, suspension of production, cessation of operations or future liabilities. Such regulations could also require us in the future to incur significant expenses to comply with such regulations. Our use of potentially hazardous materials could also restrict our ability to manufacture or sell our products to certain countries, require us to modify our logistics, or require us to incur other significant costs and expenses. For example, in February 2023 the Member States Committee of the European Chemicals Agency, or the ECHA, published a report and supporting annexes related to a proposal to ban the manufacturing, placing on the market, and use of per-and polyfluoroalkyl substances (“PFAS”) in the European Union. In this regulatory process, more than 10,000 substances, including chemicals we use, are being considered for potential broad regulatory action. We submitted evidence in September 2023 supporting requests to be exempt from the ban for specific uses of PFAS, both in materials formulations and packaging materials for chemicals. If the PFAS ban in the EU is ultimately enacted, and our derogation requests are not granted, we will not be able to manufacture and sell our products in the EU as they are currently manufactured, and our business would be adversely affected. In addition, any exemptions may be limited in time, and in such case, we would eventually be required to eliminate the use of PFAS in our products, which may make it more expensive for us to manufacture, sell and ship our products. Environmental laws and regulations continue to expand with a focus on reducing or eliminating hazardous substances in electronic products and it may be difficult for us to timely comply with any future environmental laws applicable to us. In addition, we may have to write off inventory if we hold unsaleable inventory as a result of changes to regulations. These requirements may increase our own costs, as well as those passed on to us by our supply chain

Our business may be affected by litigation and government investigations.

We may from time to time receive inquiries and subpoenas and other types of information requests from government authorities and others and we may become subject to claims and other actions related to our business activities. While the ultimate outcome of investigations, inquiries, information requests and legal proceedings is difficult to predict, defense of litigation claims can be expensive, time-consuming, and distracting, and adverse resolutions or settlements of those matters may result in, among other things, modification of our business practices, costs and significant payments, any of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Security breaches, computer malware, computer hacking attacks and other security incidents could harm our business, reputation, brand and operating results.

Security incidents have become more prevalent across industries and may occur on our systems. Security incidents may be caused by, or result in but are not limited to, security breaches, computer malware or malicious software, computer hacking, unauthorized access to confidential information, denial of service attacks, security system control failures in our own systems or from vendors we use, email phishing, software vulnerabilities, social engineering, sabotage and drive-by downloads. Such security incidents, whether intentional or otherwise, may result from actions of hackers, criminals, nation states, vendors, employees or customers.

We rely on our internal technology systems for development, marketing, operational, support and sales activities. A disruption or failure of these systems or in those of our external service providers, in the event of a major storm, earthquake, fire, telecommunications failure, cyber-attack, terrorist attack or other catastrophic event could cause system interruptions, reputational harm, delays in our product development and loss of critical data and could materially and adversely affect our ability to operate our business.

We may experience disruptions, data loss, outages and other performance problems on our systems due to service attacks, unauthorized access or other security related incidents. Any security breach or loss of system control caused by hacking, which involves efforts to gain unauthorized access to information or systems, or to cause intentional malfunctions or loss, modification or corruption of data, software, hardware or other computer equipment and the inadvertent transmission of computer malware could harm our business.

In addition, our software stores and transmits customers’ confidential business information in our facilities and on our equipment, networks, corporate systems and in the cloud. Security incidents could expose us to litigation, remediation

costs, increased costs for security measures, loss of revenue, damage to our reputation and potential liability. Our customer data and corporate systems and security measures may be compromised due to the actions of outside parties, employee error, malfeasance, capacity constraints, a combination of these or otherwise and, as a result, an unauthorized party may obtain access to our data or our customers' data. Outside parties may attempt to fraudulently induce our employees to disclose sensitive information in order to gain access to our customers' data or our information. We must continuously examine and modify our security controls and business policies to address new threats, the use of new devices and technologies, and these efforts may be costly or distracting.

Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently or may be designed to remain dormant until a predetermined event and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement sufficient control measures to defend against these techniques. Though it is difficult to determine what harm may directly result from any specific incident or breach, any failure to maintain confidentiality, availability, integrity, performance and reliability of our systems and infrastructure may harm our reputation and our ability to retain existing customers and attract new customers. If an actual or perceived security incident occurs, the market perception of the effectiveness of our security controls could be harmed, our brand and reputation could be damaged, we could lose customers, and we could suffer financial exposure due to such events or in connection with remediation efforts, investigation costs, regulatory fines and changed security control, system architecture and system protection measures.

Risks Related to our Intellectual Property

Any failure by us to protect our proprietary technologies or maintain the right to use certain technologies may negatively affect our ability to compete.

To compete effectively, we must protect our intellectual property. We rely on a combination of patents, trademarks, copyrights, trade secret laws, confidentiality procedures and licensing arrangements to protect our intellectual property rights. We hold numerous patents and have a number of pending patent applications. However, our portfolio of patents evolves as new patents are issued and older patents expire, and the expiration of patents could have a negative effect on our ability to prevent competitors from duplicating certain or all of our products.

We might not succeed in obtaining patents from any of our pending applications. Even if we are awarded patents, they may not provide any meaningful protection or commercial advantage to us, as they may not be of sufficient scope or strength or may not be issued in all countries where our products can be sold. In addition, our competitors may be able to design around our patents.

There can be no assurance that an issued patent will remain valid and enforceable in a court of law through the entire patent term. Should the validity of a patent be challenged, the legal process associated with defending the patent can be costly and time consuming. Issued patents can be subject to oppositions, interferences and other third-party challenges that can result in the revocation of the patent or limit patent claims such that patent coverage lacks sufficient breadth to protect subject matter that is commercially relevant. Competitors may be able to circumvent our patents. In cases where market ramp of our products may encounter delays it is possible that some patents or licensed patents covering the product has expired or will be in force for only a short period of time following such market ramp. We cannot predict with any certainty if any third-party patent rights, or other proprietary rights, will be deemed infringed by the use of our technology. Nor can we predict with certainty which, if any, of these rights will or may be asserted against us by third parties.

To protect our product technology, documentation and other proprietary information, we enter into confidentiality agreements with our employees, customers, consultants and strategic partners. We require our employees to acknowledge their obligation to maintain confidentiality with respect to our products. Despite these efforts, we cannot guarantee that these parties will maintain the confidentiality of our proprietary information in the course of future employment or working with other business partners. We develop, manufacture and sell our products in Asia and other countries that may not protect our intellectual property rights to the same extent as the laws of the U.K. and the U.S. This makes piracy of our technology and products more likely. Steps we take to protect our proprietary

information may not be adequate to prevent theft of our technology. We may not be able to prevent our competitors from independently developing technologies and products that are similar to or better than ours.

Vigorous protection and pursuit of intellectual property rights or positions characterize the semiconductor industry. This often results in expensive and lengthy litigation. We, and our customers or suppliers, may be accused of infringing patents or other intellectual property rights owned by third parties in the future. An adverse result in any litigation against us or a customer or supplier could force us to pay substantial damages, stop manufacturing, using, and selling the infringing products, spend significant resources to develop non-infringing technology, discontinue using certain processes or obtain licenses to use the infringing technology. In addition, we may not be able to develop non-infringing technology or find appropriate licenses on reasonable terms or at all.

Patent disputes in the semiconductor industry between industry participants are often settled through cross-licensing arrangements. Our portfolio of patents may not have the breadth to enable us to settle an alleged patent infringement claim through a cross-licensing arrangement, especially for patent disputes brought by non-practicing entities (patent holders who do not manufacture products but only seek to monetize patent rights) that cannot be settled through cross-licensing and cannot be avoided through cross-licensing with industry practitioners. We may therefore be more exposed to third-party claims than some of our larger competitors and customers.

Customers may make claims against us in connection with infringement claims made against them that are alleged to relate to our products or components included in our products, even where we obtain the components from a supplier. In such cases, we may incur monetary losses due to the cost of defense, settlement or damage award and non-monetary losses as a result of diverting valuable internal resources to litigation support. To the extent that claims against us, or our customers relate to third-party intellectual property integrated into our products, there is no assurance that we will be fully or even partially indemnified by our suppliers against any losses.

Furthermore, we may initiate claims or litigation against third parties for infringing our proprietary rights or to establish the validity of our proprietary rights. This could consume significant resources and divert the efforts of our technical and management personnel, regardless of the litigation's outcome.

Risks Related to our Financial Control Environment

We incur significant costs as a result of operating as a public company.

As a public company, we incur significant legal, accounting and other expenses. For example, we are subject to the information and reporting requirements of the Securities Act of 1933, as amended (the "Securities Act"), the Exchange Act and other federal securities laws, rules and regulations related thereto, including compliance with the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), and the Dodd-Frank Wall Street Reform and Consumer Protection Act. In addition, the Nasdaq Stock Market ("Nasdaq") listing requirements and other applicable securities rules and regulations impose various requirements on public companies. Our management and other personnel are required to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations significantly increase our legal and financial compliance costs and make some activities more time-consuming and costly. Among other things, we are required to:

- maintain and evaluate a system of internal controls over financial reporting in compliance with the requirements of Section 404(a) of the Sarbanes-Oxley Act and the related rules and regulations of the Securities and Exchange Commission (the "SEC") and the Public Company Accounting Oversight Board;
- maintain policies relating to disclosure controls and procedures;
- prepare and distribute periodic reports in compliance with our obligations under federal securities laws;
- institute a more comprehensive compliance function, including with respect to corporate governance; and
- involve, to a greater degree, our outside legal counsel, and accountants in the above activities.

The costs of preparing and filing annual and quarterly reports, proxy statements and other information with the SEC and furnishing audited reports to stockholders is expensive and compliance with these rules and regulations involves a material increase in regulatory, legal and accounting expenses and the attention of our board of directors and

management. In addition, being a public company makes it more expensive for us to obtain director and officer liability insurance. In the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain this coverage. These factors could also make it more difficult for us to attract and retain qualified executives and members of our board of directors. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to fines, sanctions and other regulatory action and potentially civil litigation.

If we fail to maintain effective internal controls, we may not be able to report financial results accurately or on a timely basis, or to detect fraud, which could have a material adverse effect on our business or share price.

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in those controls. A material weakness is defined as a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected and corrected on a timely basis.

In connection with our preparation of our financial statements for the second quarter of 2023, a material weakness in our internal control over financial reporting was identified relating to the complex financial reporting and accounting associated with the June 2023 PIPE (as defined below), a non-cash item. None of our filed financial statements were impacted. Management implemented measures designed to ensure that the control deficiency contributing to the material weakness was remediated, such that the controls are designed, implemented, and operating effectively. The remediation actions included the enhancement of control activity evidence, improvement of management review controls, and recording of the fair value of the warrant liability.

Our management evaluated the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15 and 15d-15(e) under the Exchange Act, as of December 31, 2023. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of December 31, 2023. See “Item 9A Controls and Procedures.”

Effective internal controls are necessary for us to provide reasonable assurance with respect to our financial reports and to effectively prevent financial fraud. Pursuant to the Sarbanes-Oxley Act, we are required to periodically evaluate the effectiveness of the design and operation of our internal controls. Internal controls over financial reporting may not prevent or detect misstatements because of inherent limitations, including the possibility of human error or collusion, the circumvention or overriding of controls, or fraud. If we fail to maintain an effective system of internal controls, our business and operating results could be harmed, and we could fail to meet our reporting obligations, which could have a material adverse effect on our business and our share price. Additionally, for as long as we are a “smaller reporting company” under the U.S. securities laws, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act. An independent assessment of the effectiveness of internal control over financial reporting could detect problems that management’s assessment might not. Undetected material weaknesses in our internal control over financial reporting could lead to further financial statement restatements and require us to incur the expense of remediation.

If we fail to maintain proper disclosure controls and procedures or have additional material weaknesses in our internal control over financial reporting, we may be unable to accurately report our financial results or report them within the timeframes required by law or any stock exchange regulations, and we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline. Failure to maintain effective internal control over financial reporting also could potentially subject us to sanctions or investigations by the SEC or other regulatory authorities or stockholder lawsuits, which could require additional financial and management resources.

The terms of the June 2023 PIPE contain restrictions on our operations and on our ability to raise additional capital that may have an adverse effect on us.

The terms of the June 2023 PIPE include a number of restrictions on our operations and on our ability to raise additional capital. The Purchase Agreement (as defined below), among other things, provides that, for a period ending

on June 14, 2024, we may not use cash from operating activities (as defined under U.S. generally accepted accounting principles) of more than an average of \$2.8 million for any consecutive three-month period (subject to certain exceptions). This provision may cause us to delay certain actions that may benefit our business and may prevent us from pursuing potentially favorable business opportunities, even if a majority of our board of directors believes such actions or opportunities are in the best interest of our company and our stockholders.

Under the terms of the Purchase Agreement, as amended, for a period ending on December 15, 2025, in the event that we issue common stock or common stock equivalents in a subsequent financing (as defined in the Purchase Agreement), the significant purchasers (defined in the Purchase Agreement as a purchaser acquiring at least 1,000 shares of Series A-1 Preferred Stock) will have the right to purchase up to 40% of the securities sold in the subsequent financing. This provision may make it more difficult for us to raise additional capital because other investors may want to provide all, or a larger portion of the capital provided in the subsequent financing or may be unwilling to co-invest with one or more of the significant purchasers or may be unwilling to commit to provide financing without knowing how much of the subsequent financing will be provided by the significant purchasers.

In addition, during such period, we may not issue common stock or common stock equivalents in a subsequent financing with an effective price per share of common stock that is or may become lower than the then-effective conversion price of the Series A-1 Preferred Stock without the consent of the significant purchasers, which must include AIGH Investment Partners LP and its affiliates for so long as they are holding at least \$1,500,000 in aggregate stated value of Series A-1 Preferred Stock acquired pursuant to the Purchase Agreement. This provision may prevent us from obtaining additional capital on market terms even if a majority of our board of directors believes that the terms of the subsequent financing are in the best interests of our company and our stockholders. This provision may also have the effect of increasing the cost of obtaining additional capital either because the significant purchasers refuse to consent to any such subsequent financing unless provided by them on terms approved by them or because we are required to provide additional consideration to such significant purchasers in exchange for their consent.

In the event that we issue common stock or common stock equivalents in a subsequent financing prior to the time our common stock is listed on a national securities exchange, the Purchase Agreement provides that if a significant purchaser reasonably believes that any of the terms and conditions of the subsequent financing are more favorable to an investor in the subsequent financing than the terms of the June 2023 PIPE, such significant purchaser has the right to require us to amend the terms of the June 2023 PIPE to include such more favorable term for such significant purchaser. This provision may make it more expensive to obtain additional capital prior to an uplisting because it permits any significant purchaser to “cherry pick” the terms of the subsequent financing and to require any term deemed to be more favorable to be included retroactively in the terms of the June 2023 PIPE. This provision also potentially creates uncertainty around the terms of a subsequent financing because the significant purchasers have the right to review terms of a completed subsequent financing before deciding which, if any, of the terms thereof they find more favorable to them.

The Purchase Agreement provides that, until June 14, 2025, a significant purchaser may participate in a subsequent transaction by exchanging some or all of its Series A-1 Preferred Stock having a stated value equal to its subscription amount in the subsequent financing. This provision may adversely affect the amount of capital we raise in a subsequent financing, as it permits a significant purchaser to roll its existing investment into the new financing rather than being required to invest cash. This provision also has the potential to make it more difficult for us to raise additional capital as other investors may want to provide all or a larger portion of the capital provided in the subsequent financing or may require us to raise a minimum amount of new capital or may be unwilling to commit to provide financing without knowing how much of the subsequent financing will be provided by the significant purchasers in cash.

If we are unable to raise additional capital when needed, we may be required to delay, limit, reduce or terminate commercialization, our research and product development, or grant rights to develop and market our products that we would otherwise prefer to develop and market ourselves and may have a material adverse effect on our business, financial condition and results of operations.

The Series A-1 Preferred Stock contains certain terms and restrictions that may have a material adverse effect on our business, financial condition and results of operations.

The Series A-1 Preferred Stock provides that if the volume weighted average price of our common stock for the 30-day period ending on December 14, 2024 is less than the then-current conversion price of the Series A-1 Preferred Stock, the Series A-1 Preferred Stock will accrue dividends at an annual rate of 19.99% of the stated value thereof. Those dividends must be paid in cash unless certain equity conditions are met, in which case we may pay such dividends by issuing shares of common stock having a per share value equal to 90% of the volume weighted average price of our common stock for the 10-day period ending on the date of payment. No assurance can be given that we would satisfy the conditions permitting us to pay dividends on the Series A-1 Preferred Stock in shares of common stock. Any cash dividends required to be paid would materially and adversely affect our financial condition. Even if we are able to pay such dividends in shares of common stock, the issuance of such shares would have a dilutive effect on the ownership interests of the holders of our common stock.

Among other things, the Series A-1 Preferred Stock prohibits us from (i) issuing additional shares of preferred stock ranking on a parity as to dividends or upon liquidation, (ii) incurring more than \$1,000,000 in new debt, (iii) granting liens and security interests on our assets (subject to certain exceptions), or (iv) repurchasing shares of common stock, common stock equivalents or junior securities (as defined in the certificate of designation) subject to certain exceptions, or paying dividends on junior securities debt, without the vote or consent of the holders of a majority of the then outstanding shares of Series A-1 Preferred Stock which must include AIGH Investment Partners LP and its affiliates for so long as they are holding at least \$1,500,000 in aggregate stated value of Series A-1 Preferred Stock acquired pursuant to the Purchase Agreement. These restrictions have the potential to limit our ability to issue shares of preferred stock to raise capital as investors are unlikely to invest in preferred stock which is structurally subordinated to the Series A-1 Preferred Stock or to make the use of preferred stock more expensive as investors are likely to demand premium terms to invest in a series of junior preferred stock. These provisions may also have the effect of increasing the cost of obtaining additional capital either because the holders of the Series A-1 Preferred Stock refuse to consent to the issuance of a parity series of preferred stock unless issued to them on terms approved by them or because we are required to provide additional consideration to such holders in exchange for their consent. The restrictions on our ability to incur debt or grant liens on our assets may prevent us from acquiring equipment or other assets using purchase price financing or leasing even if the acquisition of such equipment or other assets is in the best interests of our stockholders.

The terms and restrictions summarized above may have a material adverse effect on our business, financial condition and results of operations.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operations could fall below the expectations of investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (“US GAAP”) requires management to make estimates and assumptions that affect the amounts reported in our financial statements. Significant assumptions and estimates used in preparing our financial statements include those related to assets, liabilities, revenue, expenses, and related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Our results of operations may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of investors, resulting in a decline in the market price of our common stock.

Changes in accounting rules and regulations, or interpretations thereof, could result in unfavorable accounting charges or require us to change our compensation policies.

Accounting methods and policies for companies such as ours, including policies governing revenue recognition, leases, research and development and related expenses, and accounting for stock-based compensation, are subject to review, interpretation and guidance from our auditors and relevant accounting authorities, including the SEC. Changes to accounting methods or policies, or interpretations thereof, may require us to reclassify, restate or otherwise change or revise our historical financial statements, including those contained in this Report.

Risks Related to Our Common Stock

We are an “emerging growth company” and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an “emerging growth company” as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including (1) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, (2) reduced disclosure obligations regarding executive compensation in this Report and our periodic reports and proxy statements, and (3) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. In addition, as a smaller reporting company, we are only required to provide two years of audited financial statements and two years of selected financial data in this Report. We could be an emerging growth company until the fifth anniversary of the first sale of our common stock pursuant to a registration statement occurs, although circumstances could cause us to lose that status earlier, including if the market value of our common stock held by non-affiliates exceeds \$700.0 million as of June 30 of any year or if we have total annual gross revenue of \$1.235 billion or more during any fiscal year, in which cases we would no longer be an emerging growth company as of the following December 31, or if we issue more than \$1.0 billion in nonconvertible debt during any three-year period, in which case we would no longer be an emerging growth company immediately. Even after we no longer qualify as an emerging growth company, we may still qualify as a “smaller reporting company” which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this Report and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our share price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use the extended transition period under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We are a smaller reporting company, and we cannot be certain if the reduced disclosure requirements applicable to smaller reporting companies will make our common stock less attractive to investors.

We are currently a “smaller reporting company,” meaning that we are not an investment company, an asset-backed issuer, or a majority-owned subsidiary of a parent company that is not a smaller reporting company, and we have a public float of less than \$250 million and annual revenues of less than \$100 million during our most recently completed fiscal year. In the event that we are still considered a smaller reporting company at such time as we cease being an “emerging growth company,” we will be required to provide additional disclosure in our SEC filings. However, similar to emerging growth companies, smaller reporting companies are able to provide simplified executive compensation disclosures in their filings; are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control

over financial reporting; and have certain other decreased disclosure obligations in their SEC filings, including, among other things, only being required to provide two years of audited financial statements in annual reports and in a registration statement under the Exchange Act on Form 10. Decreased disclosures in our SEC filings due to our status as a smaller reporting company may make it harder for investors to analyze our results of our operations and financial prospects.

An active trading market for our common stock may not develop or be sustained, which may make it difficult for investors to sell shares of our common stock and may make it difficult for us to raise capital.

An active trading market for our common stock may not develop or be sustained. Because of the lack of an active trading market, shares of our common stock trade infrequently and in low volumes, meaning that the number of persons interested in purchasing our common stock at or near bid prices at any given time may be relatively small or non-existent and the trading price of our common stock may be extremely volatile. The lack of an active market for our common stock may impair investors' ability to sell their common stock at the time they wish to sell them or at a price that they consider reasonable, may reduce the fair market value of their shares of common stock and may impair our ability to raise capital to continue to fund operations by selling securities. No assurance can be given that an active trading market for our common stock will develop or be sustained. The lack of an active market for our common stock may make it difficult for investors to sell shares of our common stock and may make it difficult for us to raise capital.

We may never be able to satisfy the listing requirements for our common stock to be listed on a national securities exchange, which may cause the trading of our common stock to suffer, cause the trading market for our common stock to be less liquid and subject our common stock price to increased volatility.

We may not ever be able to satisfy the listing requirements for our common stock to be listed on a national securities exchange, which is often a more widely traded and liquid market. Some, but not all, of the factors which may delay or prevent the listing of our common stock on a more widely-traded and liquid market include the following: our stockholders' equity may be insufficient; the market value of our outstanding securities may be too low; our net income from operations may be too low; our common stock may not be sufficiently widely held; we may not be able to secure market makers for our common stock; and we may fail to meet the rules and requirements mandated by the several exchanges and markets to have our common stock listed. Should we fail to satisfy the initial listing standards of the national exchanges, or our common stock is otherwise rejected for listing, the trading price of our common stock could suffer, the trading market for our common stock may be less liquid and our common stock price may be subject to increased volatility.

The designation of our common stock as a "penny stock" limits the liquidity of our common stock.

Our common stock is deemed a "penny stock" (as that term is defined under Rule 3a51-1 of the Exchange Act). Generally, "penny stock" is common stock that is not listed on a securities exchange and trades for less than \$5.00 a share. Prices often are not available to buyers and sellers and the market may be very limited. Penny stocks in start-up companies are among the riskiest equity investments. Broker-dealers who sell penny stocks must provide purchasers of these stocks with a standardized risk-disclosure document prepared by the SEC. The document provides information about penny stocks and the nature and level of risks involved in investing in the penny stock market. A broker must also provide purchasers with bid and offer quotations and information regarding broker and salesperson compensation and make a written determination that the penny stock is a suitable investment for the purchaser and obtain the purchaser's written agreement to the purchase. Many brokers and investors choose not to participate in penny stock transactions, which may result in further liquidity constraints and declines in the trading price of our common stock. Because of the penny stock rules, there may be less trading activity in penny stocks in any market that develops for our common stock in the future and stockholders are likely to have difficulty selling their shares of our common stock.

We do not anticipate paying dividends on our common stock, and investors may lose the entire amount of their investment.

Cash dividends have never been declared or paid on our common stock, and we do not anticipate such a declaration or payment for the foreseeable future. Any future determination about the payment of dividends will be made at the

discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions, contractual restrictions, including any loan or debt financing agreements, and on such other factors as our board of directors deems relevant. In addition, we may enter into agreements in the future that could contain restrictions on payments of cash dividends. We expect to use future earnings, if any, to fund business growth. Therefore, stockholders will not receive any funds absent a sale of their shares of our common stock. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if our stock price appreciates. We cannot assure stockholders of a positive return on their investment when they sell their shares of our common stock, nor can we assure that stockholders will not lose the entire amount of their investment.

FINRA sales practice requirements may limit a stockholder's ability to buy and sell our stock.

The Financial Industry Regulatory Authority ("FINRA") has adopted rules requiring that, in recommending an investment to a customer, a broker-dealer must have reasonable grounds for believing that the investment is suitable for that customer. Prior to recommending speculative or low-priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer's financial status, tax status, investment objectives and other information. Under interpretations of these rules, FINRA has indicated its belief that there is a high probability that speculative or low-priced securities will not be suitable for at least some customers. If these FINRA requirements are applicable to us or our securities, they may make it more difficult for broker-dealers to recommend that at least some of their customers buy our common stock, which may limit the ability of our stockholders to buy and sell our common stock and could have an adverse effect on the market for and price of our common stock.

Substantial future sales of shares of our common stock could cause the market price of our common stock to decline.

A substantial portion of outstanding shares of our common stock has been registered for resale by the holders thereof. The resale, or expected or potential resale, of a substantial number of shares of our common stock in the public market could adversely affect the market price for our common stock and make it more difficult for you to sell shares of our common stock at times and prices that you feel are appropriate. Furthermore, we expect that selling stockholders holding shares that have been registered by us for resale will continue to offer such shares of our common stock for a significant period of time, the precise duration of which cannot be predicted. Accordingly, the adverse market and price pressures resulting from these sales may continue for an extended period of time and continued negative pressure on the market price of our common stock could have a material adverse effect on our ability to raise additional equity capital.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. In addition, because we did not become a reporting company by conducting an underwritten initial public offering of our common stock, security analysts of brokerage firms may not provide coverage of our company. We cannot assure you that brokerage firms will provide analyst coverage of our company in the future or continue such coverage if started. In addition, investment banks may be less likely to agree to underwrite secondary offerings on our behalf than they might if we became a public reporting company by means of an underwritten initial public offering, because they may be less familiar with our company as a result of more limited coverage by analysts and the media, which could harm our ability to raise additional funding in the future. The failure to receive research coverage or support in the market for shares of our common stock will have an adverse effect on our ability to develop a liquid market for our common stock, which will negatively impact the trading price of our common stock.

In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, or if our operating results fail to meet the expectations of analysts, our stock price

would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Our principal stockholders and management have substantial control over us and could delay or prevent a change in corporate control.

Our executive officers and directors, together with holders of 5% or more of our outstanding common stock and their respective affiliates, beneficially own 58.4% of our common stock. As a result, these stockholders, acting together have the ability to significantly impact the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation, or sale of all or substantially all of our assets. In addition, these stockholders, acting together, have the ability to significantly impact the management and affairs of our company. The interests of these stockholders may not be the same as or may even conflict with your interests. The concentration of ownership might decrease the market price of our common stock by:

- delaying, deferring, or preventing a change in control of the Company, which could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company or our assets and might affect the prevailing market price of our common stock;
- impeding a merger, consolidation, takeover, or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of the Company.

The significant concentration of stock ownership may also adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

Provisions in our certificate of incorporation and bylaws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Our certificate of incorporation and bylaws contain provisions that could depress the trading price of our common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions:

- establish a classified board of directors so that not all members of our board are elected at one time;
- provide that directors may only be removed "for cause";
- authorize the issuance of "blank check" preferred stock that our board of directors could issue from time to time to increase the number of outstanding shares and discourage a takeover attempt;
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which has the effect of requiring all stockholder actions to be taken at a meeting of stockholders;
- provide that the board of directors is expressly authorized to make, alter, or repeal our bylaws;
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- require supermajority approvals to remove the protective provisions in our certificate of incorporation and bylaws listed above or to amend our bylaws.

Such provisions could impede any merger, consolidation, takeover or other business combination involving the Company or discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of the Company.

Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit the ability of our stockholders to obtain a favorable judicial forum for disputes with us or our directors, officers or other employees.

Our amended and restated certificate of incorporation requires that, unless we consent in writing to the selection of an alternative forum:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of any fiduciary duty owed by any current or former director, officer, other employee, or stockholder of ours to our company or our stockholders;
- any action asserting a claim arising pursuant to any provision of the Delaware General Corporate Law (the “DGCL”), our certificate of incorporation or bylaws or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware; or
- any action asserting a claim governed by the internal affairs doctrine;

The Court of Chancery of the State of Delaware will, to the fullest extent permitted by law, be the exclusive forum or if the Court of Chancery of the State of Delaware does not have subject matter jurisdiction thereof, the federal district court of the State of Delaware.

Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation provides that the federal district courts of the United States of America are the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

The exclusive forum provisions described above do not apply to claims arising under the Exchange Act.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring such a claim arising under the Securities Act against us, our directors, officers, or other employees in a venue other than in the federal district courts of the United States of America. In such an instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our certificate of incorporation. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, this provision may limit or discourage a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in the amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

We note that there is uncertainty as to whether a court would enforce the provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Although we believe this provision will benefit us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

Because we became a reporting company under the Exchange Act by means other than a traditional underwritten initial public offering, we may not be able to attract the attention of research analysts at major brokerage firms.

Because we did not become a reporting company by conducting an underwritten initial public offering of our common stock, security analysts of brokerage firms may not provide coverage of our company. In addition, investment banks may be less likely to agree to underwrite secondary offerings on our behalf than they might if we became a public reporting company by means of an underwritten initial public offering, because they may be less familiar with our company as a result of more limited coverage by analysts and the media, and because we became public at an early

stage in our development. The failure to receive research coverage or support in the market for shares of our common stock will have an adverse effect on our ability to develop a liquid market for our common stock.

Item 1B. Unresolved Staff Comments

Not Applicable.

Item 1C. Cybersecurity

We rely on our information technology to operate our business. As such, we have policies and processes designed to protect our information technology systems, some of which are managed by third parties, and resolve issues in a timely manner in the event of a cybersecurity threat or incident.

We have designed our business applications and hosting services to minimize the impact that cybersecurity incidents could have on our business and have identified back-up systems where appropriate. We seek to further mitigate cybersecurity risks through a combination of monitoring and detection activities, use of anti-malware applications, employee training, quality audits and communication and reporting structures, among other processes. We engage a third-party consultant to assist us with our cybersecurity risk management framework, including the monitoring and detection of cybersecurity threats and responding to any cybersecurity threats or incidents. . Our third-party consultant team is managed by our Chief Financial Officer who reports to the Audit Committee at the board-level, as appropriate.

As of December 31, 2023, we have not identified an indication of a cybersecurity incident that would have a material impact on our business and consolidated financial statements.

Item 2. Properties

Our headquarters are located in Manchester, England, where we lease approximately 10,000 square feet of commercial space for research and development, engineering, testing and corporate offices pursuant to a lease that expires in 2025. We also have a leased office in Hsinchu City Taiwan where we lease approximately 1,000 square feet of office space pursuant to a lease which expires in 2025. We use the CPI facility in Sedgefield, England for virtually all of our fabrication activities. In addition, we lease two offices at CPI pursuant to leases which expire in 2024 and two offices at NetPark, Sedgefield pursuant to leases which expire in March 2024. On March 22, 2024 we executed a new Framework Agreement with CPIIS for a twelve-month term commencing on April 1, 2024. We also maintain access to additional office space on a temporary or as-needed basis. We believe that our facilities are suitable to meet our current needs and that suitable space will be available on acceptable terms as may be required to support the expected growth in our business.

Item 3. Legal Proceedings

From time to time, we may become involved in litigation or other legal proceedings. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

Item 5. Market For Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases Of Equity Securities

Market Information

Our common stock is traded on the OTC Market Group’s OTCQB® Market (“OTCQB”) under the ticker symbol “SMTK.”

Holders of Record

As of March 27, 2024, there were 1,355,361 shares of our common stock outstanding which were held by 210 stockholders of record as reported by our transfer agent. This number does not include beneficial owners whose shares are held in street name. The actual number of holders of our common stock is greater than this number of record holders and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers or held by other nominees.

Dividend Policy

Cash dividends have never been declared or paid on our common stock, and we do not anticipate such a declaration or payment for the foreseeable future. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions, contractual restrictions, including any loan or debt financing agreements, and on such other factors as our board of directors deems relevant. In addition, we may enter into agreements in the future that could contain restrictions on payments of cash dividends. We expect to use future earnings, if any, to fund business growth.

Item 6. [Reserved]

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Our Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is provided in addition to the accompanying consolidated financial statements and notes to assist readers in understanding our results of operations, financial condition, and cash flows. The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and the related notes and other financial information included in this Report. Some of the information contained in this discussion and analysis or set forth elsewhere in this Report, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties as described under the heading “Cautionary Note on Forward-Looking Statements” above. You should review the disclosure under the heading “Item 1A. Risk Factors” in this Report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statement.

Overview

We are seeking to reshape the world of electronics with our disruptive organic thin-film transistors (“OTFTs”) that we believe have the potential to drive the next generation of displays. Our patented TRUFLEX® semiconductor and dielectric inks, or electronic polymers, are used to make a new type of transistor that we believe have the capability to potentially revolutionize the display industry. Our inks enable low temperature printing processes that are compatible with existing manufacturing infrastructure to deliver low-cost displays that outperform existing technologies. Our electronic polymer platform can be used in a range of display technologies including microLED, miniLED and AMOLED displays for next generation televisions, laptops, augmented reality (“AR”) and virtual reality (“VR”) headsets, smartwatches and smartphones.

Our loss before income taxes was \$8.5 million and \$11.5 million for the year ended December 31, 2023, and 2022, respectively. As of December 31, 2023, our accumulated deficit was \$95.1 million. Substantially all our operating losses have resulted from expenses incurred in connection with research and development activities and from general and administrative costs associated with our operations.

Key Factors Affecting Our Performance

There are a number of industry factors that affect our business which include, among others:

Overall Demand for Products and Applications using Organic thin film transistors

Our potential for growth depends significantly on the adoption of OTFT materials in the display and sensor markets and our ability to capture a significant share of any market that does develop. We expect that demand for our technology will also fluctuate based on various market cycles, continuously evolving industry supply chains, trade and tariff terms, as well as evolving competitive dynamics in each of the respective markets. These uncertainties make demand difficult to forecast for us and our customers.

Intense and Constantly Evolving Competitive Environment

Competition in the industries we serve is intense. Many companies have made significant investments in product development and production equipment. To remain competitive, market participants must continuously increase product performance, reduce costs, and develop improved ways to serve their customers. To address these competitive pressures, we have invested in research and development activities to support new product development, improve ease of use, lower product costs and deliver higher levels of performance to differentiate our products in the market.

Governmental Trade and Regulatory Conditions

Our potential for growth depends on a balanced and stable trade, political, economic and regulatory environment among the countries where we do business. Changes in trade policy such as the imposition of tariffs or export bans to specific customers or countries could reduce or limit demand for our products in certain markets.

Technological Innovation and Advancement

Innovations and advancements in organic materials continue to expand the potential commercial application for our products. However, new technologies or standards could emerge, or improvements could be made in existing technologies that could reduce or limit the demand for our products in certain markets.

Intellectual Property Issues

We rely on patented and non-patented proprietary information relating to product development, manufacturing capabilities and other core competencies of our business. Protection of intellectual property is critical. Therefore, steps such as additional patent applications, confidentiality, and non-disclosure agreements, as well as other security measures are important. While we believe we have a strong patent portfolio and there is no actual or, to our knowledge,

threatened litigation against us for patent-related matters, litigation or threatened litigation is a common method to effectively enforce or protect intellectual property rights. Such action may be initiated by or against us and would require significant management time and expenses.

Components of Results of Operations

Revenue

Revenue. Our revenue consists of revenue from the sale of TRUFLEX® inks and demonstration products.

Cost of Revenues. Cost of revenues consists of (1) direct product costs incurred for the raw materials and manufacturing services for our products, (2) fixed product costs primarily relating to production, manufacturing and personnel and (3) depreciation consisting primarily of expenses related to our fixed assets. We expect our cost of goods sold attributable to direct product costs to increase proportionately with increases in revenue, and our cost of goods sold attributable to fixed product costs to remain substantially flat or moderately increase in connection with increases in revenue.

Other Operating Income. Our Other Operating Income includes government grants received for qualifying research and development projects, and research and development tax credits related to the United Kingdom's Research and Development tax relief for small and medium-sized enterprises, which is a government tax incentive designed to reward innovative companies for investing in research and development. The income associated with these items is recognized in the period which the research and development expenses occurred.

Operating Expenses

Research and Development. Research and development expenses consist primarily of compensation and related costs for personnel, including share-based compensation and employee benefits as well as costs associated with design, fabrication and testing of OTFT devices. In addition, research and development expenses include depreciation expenses related to our fixed assets. We expense research and development expenses as incurred. As we continue to invest in developing our technology for new products, we expect research and development expenses to remain flat or moderately increase in absolute dollars but to decline as a percentage of revenue. We do not believe that it is possible at this time to accurately project total program-specific expenses through commercialization. There are numerous factors associated with the successful commercialization of our technology, many of which cannot be determined with accuracy at this time based on our stage of development. Additionally, future commercial and other factors beyond our control will impact our development programs and plans.

Selling, General and Administrative. Selling, general and administrative expenses consist primarily of allocated compensation and related costs for personnel, including share-based compensation, employee benefits and travel. In addition, general and administrative expenses include third-party consulting, legal, audit, accounting services, allocations of overhead costs, such as rent, facilities and information technology. We expect general and administrative expenses to increase in absolute dollars in future periods due to additional legal, accounting, insurance, investor relations and other costs associated with being a public company, as well as other costs associated with growing our business.

Non-Operating Income (Expense)

Non-operating income/expense aggregates the following amounts:

Foreign Currency Translation. Foreign currency translation reflects adjustments made due to currency fluctuations.

Transaction Costs. Costs for equity contracts that are classified as a liability.

Fair Value of Warrant Liability. The fair value of equity contracts that are classified as a liability.

Interest Income. Interest income is interest on our cash deposits.

Income Tax Expense. Income tax expense consists primarily of income taxes in jurisdictions in which we conduct business.

Results of Operations

Twelve months ended December 31, 2023 compared with the twelve months ended December 31, 2022

Revenue and Cost of Revenue

Our revenue and cost of revenue reflects sales of TRUFLEX® inks and demonstration products and the direct costs associated with those sales.

Revenues were \$27.0 thousand for the year ended December 31, 2023, compared to \$40.0 thousand for the same period of 2022. Cost of revenue was \$23.0 thousand for the twelve months ended December 31, 2023, compared to \$33.0 thousand for the same period of 2022. The decrease is mainly the results of less unit sales in 2023 compared to 2022, reflecting the largely one-off nature of these sales, consistent with our current stage of commercialization.

Other Operating Income

Other operating income was \$0.8 million and \$1.2 million for the years ended December 31, 2023 and 2022, respectively. The primary sources of the other operating income in these periods were a research grant and research and development tax credits. The decrease is mostly attributable to a reduction in the allowable research and development expenses and a lowering of the tax credit rate to be applied to the allowable expenses of which both went into effect in 2023.

Operating Expenses

Operating expenses decreased by \$0.1 million to \$10.8 million for the year ended December 31, 2023, compared to \$10.9 million for the comparable period of 2022.

Research and development expense, which represents 51.3% and 53.4% of our total operating expenses for the twelve months ended December 31, 2023 and 2022, respectively, decreased by \$0.2 million to \$5.6 million for the year ended December 31, 2023, compared to \$5.8 million for the same period of 2022. The decrease is mainly due to lower personnel costs related to reductions in force effected in December 2022 and September 2023 and lower technical research and development costs, including consulting, testing and lab supplies.

Selling, general and administrative expense, which represents 47.9% and 46.6% of our total operating expenses for the twelve months ended December 31, 2023 and 2022, respectively, increased by \$0.1 million to \$5.2 million for year ended December 31, 2023 as compared to \$5.1 million for the same period in 2022. There was an increase in personnel costs due to severance costs and the accrual of bonus payments in 2023. This was offset by a reduction in investor relations cost and other professional service fees.

Non-Operating Income/(Expenses) and Net Loss

The increase of \$3.0 million in gain on foreign currency transactions was due to fluctuations in U.S. dollar/U.K. pound value arising from transactions denominated in foreign currencies and the translation of foreign currency denominated balances on intra-group loans.

Issuance costs of \$0.2 million allocated to the warrant liability were expensed in full during the year ended December 31, 2023. The majority of costs were legal, placement and consulting fees specifically related to the private placement transaction. There were no similar gains or losses recorded during the prior year.

A gain of \$0.5 million related to the valuation of the warrant liability was recorded during the year ended December 31, 2023. There were no similar gains or losses recorded during the prior year.

The loss before income taxes was \$8.5 million for the year ended December 31, 2023, a decrease of \$3.0 million, compared to a loss before income taxes of \$11.5 million for the year ended December 31, 2022. The decrease in the 2023 period was attributable increases in gains on foreign currency transactions and lower operating expenses as described in the preceding paragraphs.

Liquidity and Capital Resources

As of December 31, 2023, our cash and cash equivalents were \$8.8 million compared with \$4.2 million as of December 31, 2022. We believe this will be sufficient to fund our operating expenses and capital expenditure requirements through the end of April 2025. It is possible this period could be shortened if there are any significant increases in planned spending or development programs or more rapid progress of development programs than anticipated.

Our future viability is dependent on our ability to raise additional capital to fund our operations. We will need to obtain additional funds to satisfy our operational needs and to fund our sales and marketing efforts, research and development expenditures, and business development activities. Until such time, if ever, as we can generate sufficient cash through revenue, management's plans are to finance our working capital requirements through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. If we raise additional funds by issuing equity securities, our existing security holders will likely experience dilution. If we borrow money, the incurrence of indebtedness would result in increased debt service obligations and could require us to agree to operating and financial covenants that could restrict our operations. If we enter into a collaboration, strategic alliance or other similar arrangement, we may be forced to give up valuable rights. There can be no assurance however that such financing will be available in sufficient amounts, when and if needed, on acceptable terms or at all. The precise amount and timing of the funding needs cannot be determined accurately at this time, and will depend on a number of factors, including the market demand for the Company's products and services, the quality of product development efforts, management of working capital, and continuation of normal payment terms and conditions for purchase of services. If the Company is unable to substantially increase revenues, reduce expenditures, or otherwise generate cash flows for operations, then the Company will need to raise additional funding.

Cash Flow from Operating Activities

Net cash used in operating activities was \$8.0 million for the year ended December 31, 2023, compared to \$9.0 million for the year ended December 31, 2022, a decrease of \$1.0 million. The decrease resulted primarily from a decrease in our net loss of \$3.0 million, partially offset by an increase of non-cash activities of \$3.3 million and a net increase in operating assets and liabilities of \$1.3 million.

Cash Flow from Investing Activities

Net cash used in investing activities was \$18.0 thousand for the year ended December 31, 2023, compared to \$79.0 thousand for the year ended December 31, 2022, a decrease of \$61.0 thousand. The decrease resulted from a reduced level of investment in laboratory and capital equipment purchases in 2023.

Cash Flow from Financing Activities

Net cash flows provided by financing activities was \$12.7 million for the year ended December 31, 2023, compared to \$1.8 million for the year ended December 31, 2022, an increase of \$10.9 million. In June 2023, we completed a private placement of our preferred stock and warrants resulting in net proceeds of \$12.4 million with an additional \$1.8 million related to the issuance of warrants. We incurred \$1.5 million in issuance costs in connection with this private placement.

Contractual Payment Obligations

Our principal commitments primarily consist of obligations under leases for office space and purchase commitments in the normal course of business for research & development facilities and services, communications infrastructure, and administrative services. We expect to fund these commitments from our cash balances and working capital.

Recently Issued Accounting Pronouncements

For recently issued accounting announcements, see “Recently Issued Accounting Pronouncements” in Note 2, Significant Accounting Policies and Recent Accounting Pronouncements, in the Notes to our Consolidated Financial Statements included in this Annual Report on Form 10-K.

Critical Accounting Estimates

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles, which require our management to make estimates that affect the reported amounts of assets, liabilities and disclosures of contingent assets and liabilities at the balance sheet dates, as well as the reported amounts of revenues and expenses during the reporting periods. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations would be affected. We base our estimates on our own historical experience and other assumptions that we believe are reasonable after taking account of our circumstances and expectations for the future based on available information. We evaluate these estimates on an ongoing basis.

We consider an accounting estimate to be critical if: (i) the accounting estimate requires us to make assumptions about matters that were highly uncertain at the time the accounting estimate was made, and (ii) changes in the estimate that are reasonably likely to occur from period to period or use of different estimates that we reasonably could have used in the current period, would have a material impact on our financial condition or results of operations.

Management has discussed the development and selection of these critical accounting estimates with the Audit Committee of our Board of Directors. In addition, there are other items within our financial statements that require estimation but are not deemed critical as defined above. Changes in estimates used in these and other items could have a material impact on our financial statements.

Share-Based Compensation

The Company determines the fair value of certain share-based awards using the Black-Scholes option-pricing model which uses both historical and current market data to estimate the fair value. This method incorporates various assumptions such as the risk-free interest rate, expected volatility, expected dividend yield, and expected life of the options. Prior to February 2022, the Company’s common stock was not traded on an over the counter or national securities exchange and consequently the Company developed estimates for the inputs to the option-pricing model.

Warrant Liability

The valuation of the warrant liability was determined using an option pricing model. This model uses inputs such as the underlying price of the shares issued at the measurement date, expected volatility, risk free interest rate and expected life of the instrument. Since our common stock was not publicly traded until February 2022 there has been insufficient volatility data available. Accordingly, we have used an expected volatility based on historical common stock volatility of our peers. In addition, we used the probability of uplisting as an input in the model to determine the fair value of the warrant liability.

JOBS Act Accounting Election

We are an emerging growth company, as defined in the JOBS Act. The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to either early adopt or delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period under the JOBS Act until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our consolidated financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

We are a smaller reporting company as defined in Rule 12b-2 of the Exchange Act; therefore, pursuant to Item 301(c) of Regulation S-K, we are not required to provide the information required by this Item.

Item 8. Financial Statements and Supplementary Data

**SmartKem, Inc.
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of
SmartKem, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of SmartKem, Inc. and subsidiaries (the “Company”) as of December 31, 2023, the related consolidated statements of operations and comprehensive loss, stockholders’ equity, and cash flows for the year ended December 31, 2023, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023, and the results of its operations and its cash flows for the year ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Marcum LLP

Marcum LLP

We have served as the Company’s auditor since 2023.

New York, NY
March 27, 2024

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
SmartKem, Inc.
Manchester, United Kingdom

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheet of SmartKem, Inc. (the “Company”) as of December 31, 2022, the related consolidated statements of operations and comprehensive loss, stockholders’ equity, and cash flows for the year ended December 31, 2022, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022, and the results of its operations and its cash flows for the year ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has suffered recurring losses from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management’s plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ BDO LLP

BDO LLP

We have served as the Company’s auditor from 2020 through to 2023.

Manchester, United Kingdom

March 30, 2023, except for the effects of the reverse stock split as described in Notes 2 and 8, which is dated March 27, 2024

SMARTKEM, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
(in thousands, except number of shares and per share data)

	December 31, 2023	December 31, 2022
Assets		
Current assets		
Cash and cash equivalents	\$ 8,836	\$ 4,235
Accounts receivable	268	30
Research and development tax credit receivable	610	1,121
Prepaid expenses and other current assets	811	1,056
Total current assets	10,525	6,442
Property, plant and equipment, net.	455	602
Right-of-use assets, net.	285	475
Other assets, non-current	7	6
Total assets	\$ 11,272	\$ 7,525
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable and accrued expenses	\$ 1,178	\$ 931
Lease liabilities, current	230	206
Income tax payable.	—	22
Other current liabilities.	360	244
Total current liabilities.	1,768	1,403
Lease liabilities, non-current	19	239
Warrant liability	1,372	—
Total liabilities	3,159	1,642
Commitments and contingencies (Note 7).	—	—
Stockholders' equity:		
Preferred stock, par value \$0.0001 per share, 10,000,000 shares authorized, 13,765 and zero shares issued and outstanding, at December 31, 2023 and December 31, 2022, respectively	—	—
Common stock, par value \$0.0001 per share, 300,000,000 shares authorized, 889,668 and 771,054 shares issued and outstanding, at December 31, 2023 and December 31, 2022, respectively *	—	—
Additional paid-in capital.	104,757	92,933
Accumulated other comprehensive loss	(1,578)	(483)
Accumulated deficit	(95,066)	(86,567)
Total stockholders' equity	8,113	5,883
Total liabilities and stockholders' equity	\$ 11,272	\$ 7,525

* reflects a one-for-thirty-five (1:35) reverse stock split effected on September 21, 2023

The accompanying notes are an integral part of these consolidated financial statements.

SMARTKEM, INC. AND SUBSIDIARIES
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except number of shares and per share data)

	Year Ended December 31,	
	2023	2022
Revenue	\$ 27	\$ 40
Cost of revenue	23	33
Gross profit	4	7
Other operating income	836	1,172
Operating expenses		
Research and development	5,556	5,802
Selling, general and administrative	5,188	5,071
Loss on foreign currency transactions	87	—
Total operating expenses	10,831	10,873
Loss from operations	(9,991)	(9,694)
Non-operating income/(expense)		
Gain/(loss) on foreign currency transactions	1,213	(1,782)
Transaction costs allocable to warrants	(198)	—
Change in fair value of the warrant liability, net	465	—
Interest income	12	5
Total non-operating income/(expense)	1,492	(1,777)
Loss before income taxes	(8,499)	(11,471)
Income tax expense	—	(24)
Net loss	\$ (8,499)	\$ (11,495)
Net loss	\$ (8,499)	\$ (11,495)
Other comprehensive loss:		
Foreign currency translation	(1,095)	880
Total comprehensive loss	\$ (9,594)	\$ (10,615)
Basic and diluted net loss per common share *	\$ (6.32)	\$ (13.88)
Basic and diluted weighted average shares outstanding *	1,344,892	827,906

* reflects a one-for-thirty-five (1:35) reverse stock split effected on September 21, 2023

The accompanying notes are an integral part of these consolidated financial statements.

SMARTKEM, INC. AND SUBSIDIARIES
Consolidated Statements of Stockholders' Equity
(in thousands, except share data)

	Preferred Stock \$0.0001 par value		Common stock * \$0.0001 par value		Additional paid-in capital	Accumulated other comprehensive income / (loss)	Accumulated deficit	Total Stockholders' equity
	Shares	Amount	Shares	Amount				
Balance at January 1, 2023	—	\$ —	771,054	\$ —	\$ 92,933	\$ (483)	\$ (86,567)	\$ 5,883
Stock-based compensation expense	—	—	—	—	717	—	—	717
Issuance of common stock to vendor	—	—	2,937	—	55	—	—	55
Issuance of preferred stock, net of issuance costs	14,149	—	—	—	11,027	—	—	11,027
Conversion of preferred stock into common stock	(384)	—	43,891	—	—	—	—	—
Exercise of warrants into common stock	—	—	71,786	—	25	—	—	25
Foreign currency translation adjustment	—	—	—	—	—	(1,095)	—	(1,095)
Net loss	—	—	—	—	—	—	(8,499)	(8,499)
Balance at December 31, 2023	<u>13,765</u>	<u>\$ —</u>	<u>889,668</u>	<u>\$ —</u>	<u>\$ 104,757</u>	<u>\$ (1,578)</u>	<u>\$ (95,066)</u>	<u>\$ 8,113</u>

	Preferred Stock \$0.0001 par value		Common stock * \$0.0001 par value		Additional paid-in capital	Accumulated other comprehensive income / (loss)	Accumulated deficit	Total Stockholders' equity
	Shares	Amount	Shares	Amount				
Balance at January 1, 2022	—	\$ —	730,176	\$ —	\$ 89,957	\$ (1,363)	\$ (75,072)	\$ 13,522
Stock-based compensation expense	—	—	—	—	488	—	—	488
Issuance of common stock to vendor	—	—	12,308	—	658	—	—	658
Issuance of common stock in private placement	—	—	28,573	—	2,000	—	—	2,000
Issuance costs related to common stock in private placement	—	—	—	—	(170)	—	—	(170)
Reverse stock split rounding	—	—	(3)	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	880	—	880
Net loss	—	—	—	—	—	—	(11,495)	(11,495)
Balance at December 31, 2022	<u>—</u>	<u>\$ —</u>	<u>771,054</u>	<u>\$ —</u>	<u>\$ 92,933</u>	<u>\$ (483)</u>	<u>\$ (86,567)</u>	<u>\$ 5,883</u>

* reflects a one-for-thirty-five (1:35) reverse stock split effected on September 21, 2023

The accompanying notes are an integral part of these consolidated financial statements.

SMARTKEM, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,	
	2023	2022
Cash flow from operating activities:		
Net loss	\$ (8,499)	\$ (11,495)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	145	198
Stock-based compensation expense	717	488
Issuance of common stock to vendor	55	391
Right-of-use asset amortization	263	264
Gain/(loss) on foreign currency transactions	(1,120)	1,782
Transaction costs allocable to warrants	198	—
Change in fair value of the warrant liability, net	(465)	—
Change in operating assets and liabilities:		
Accounts receivable	(231)	(32)
Research and development tax credit receivable	562	(213)
Prepaid expenses and other current assets	70	(42)
Accounts payable and accrued expenses	459	(385)
Lease liabilities.	(266)	(265)
Income tax payable.	(23)	22
Other current liabilities.	98	238
Net cash used in operating activities	(8,037)	(9,049)
Cash flows from investing activities:		
Purchases of property, plant and equipment	(18)	(79)
Net cash used by investing activities	(18)	(79)
Cash flow from financing activities:		
Proceeds from the issuance of preferred stock in private placement	12,386	—
Proceeds from the issuance of warrants in private placement	1,763	—
Proceeds from the issuance of common stock in private placement.	—	2,000
Payment of issuance costs	(1,483)	(170)
Proceeds from the exercise of warrants	25	—
Net cash provided by financing activities	12,691	1,830
Effect of exchange rate changes on cash	(35)	(693)
Net change in cash.	4,601	(7,991)
Cash, beginning of period	4,235	12,226
Cash, end of period	\$ 8,836	\$ 4,235
Supplemental disclosure of cash and non-cash investing and financing activities		
Initial classification of fair value of warrants	\$ 1,837	\$ —
Right-of-use asset and lease liability additions	\$ 50	\$ 583
Issuance of common shares for consulting services.	\$ —	\$ 633

The accompanying notes are an integral part of these consolidated financial statements.

SMARTKEM, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements

1. ORGANIZATION & BUSINESS

Organization & Reverse Recapitalization

SmartKem, Inc. (“SmartKem” or the “Company”) a Delaware corporation, formerly known as Parasol Investments Corporation (“Parasol”), was formed on May 13, 2020, and is the successor, as discussed below, of SmartKem Limited, which was formed under the Laws of England and Wales. The Company was founded as a “shell” company registered under the Exchange Act, with no specific business plan or purpose until it began operating the business of SmartKem Limited following the closing of the Exchange described below.

On February 23, 2021, Parasol entered into a Securities Exchange Agreement (“the Exchange Agreement”), with SmartKem Limited. Pursuant to the Exchange Agreement all of the equity interests in SmartKem Limited, except certain deferred shares which had no economic or voting rights (the “Deferred Shares”) and which were purchased by Parasol for an aggregate purchase price of \$1.40, were exchanged for shares of Parasol common stock, par value \$0.0001 per share (“common stock”), and SmartKem Limited became a wholly owned subsidiary of Parasol (the “Exchange”).

As a result of the Exchange, Parasol legally acquired the business of SmartKem Limited, and continues as the existing business operations of SmartKem Limited as a public reporting company under the name SmartKem, Inc.

Under ASC 805, Business Combinations, SmartKem Limited was deemed the accounting acquirer based on the following predominate factors: Parasol was created as a “shell” company to effect a business combination and had no operations, the former shareholders of SmartKem Limited own more than a majority of the outstanding voting stock of the Company, the Company’s board of directors and management consists of the former board of directors and management of SmartKem Limited, SmartKem Limited was the largest entity by assets at the time of the Exchange, and the principal operating location of the Company is SmartKem Limited’s premises which are located in Manchester, United Kingdom.

The Exchange was accounted for as a reverse recapitalization, with no goodwill or other intangible assets recorded, in accordance with accounting principles generally accepted in the United States of America (“US GAAP”). Under this method of accounting, Parasol was treated as the “acquired” company for financial reporting purposes. Accordingly, for accounting purposes, the Exchange was treated as the equivalent of SmartKem Limited issuing stock for the net assets of Parasol, accompanied by a recapitalization. The net assets of Parasol are stated at historical cost, with no goodwill or other intangible assets recorded. The consolidated assets, liabilities, and results of operations prior to the Exchange are those of SmartKem Limited. Reported shares and earnings per share available to holders of the Company’s common stock, prior to the Exchange, have been retroactively restated as shares reflecting the exchange ratios established in the Exchange.

At the closing of the Exchange (the “Closing”), each SmartKem Limited ordinary share issued and outstanding immediately prior to the Closing (other than the Deferred Shares) was exchanged for 0.0111907 of a share of the Company’s common stock and each SmartKem Limited A ordinary share issued and outstanding immediately prior to the Closing was exchanged for 0.0676668 of a share of the Company’s common stock, with the maximum number of shares of our common stock issuable to the former holders of SmartKem Limited’s ordinary shares and A ordinary shares equal to 12,725,000. This includes enterprise management incentive options to purchase 124,497,910 SmartKem Limited ordinary shares (the “SmartKem Limited EMI Options”) issued and outstanding immediately prior to the Closing that were accelerated and exercised by the holders thereof for a like number of ordinary shares and exchanged for shares of the Company’s common stock pursuant to the Exchange. In aggregate 1,127,720,477 SmartKem Ltd shares were exchanged for 12,725,000 of the Company’s common stock, an average exchange ratio of 0.011283825. Immediately prior to the Closing, an aggregate of 2,500,000 shares of the Company’s common stock owned by the stockholders of Parasol prior to the Exchange were forfeited and cancelled (the “Stock Forfeiture”).

SMARTKEM, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements

Business

We are seeking to reshape the world of electronics with our disruptive organic thin-film transistors (OTFTs) that we believe have the potential to drive the next generation of displays. Our patented TRUFLEX® semiconductor and dielectric inks, or electronic polymers, are used to make a new type of transistor that we believe have the capability to revolutionize the display industry. Our inks enable low temperature printing processes that are compatible with existing manufacturing infrastructure to deliver low-cost displays that outperform existing technologies. Our electronic polymer platform can be used in a range of display technologies including microLED, miniLED and AMOLED displays for next generation televisions, laptops, augmented reality (AR) and virtual reality (VR) headsets, smartwatches and smartphones.

COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of COVID-19 as a global pandemic (the “Pandemic”). The Pandemic has had a widespread and detrimental effect on the global economy and has adversely impacted the Company’s business and results of operations. The Company has experienced travel bans, states of emergency, quarantines, lockdowns, “shelter in place” orders, business restrictions and shutdowns in the countries where it operates. The Company’s containment measures have impacted its day-to-day operations and disrupted its business. Because the severity, magnitude and duration of the Pandemic and its economic consequences are highly uncertain, rapidly changing and difficult to predict, the ultimate impact of the Pandemic on the Company’s business, financial condition and results of operations is currently unknown. The additional costs incurred by the Company related to COVID-19 for the years ended December 31, 2023, and 2022, respectively were deemed to be immaterial to the consolidated financial statements.

The consolidated entity presented is referred to herein as “SmartKem”, “we”, “us”, “our”, or the “Company”, as the context requires and unless otherwise noted.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

Basis for Presentation

These consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission and accounting principles generally accepted in the United States of America (“US GAAP”) as defined by the Financial Accounting Standards Board (FASB) within the FASB Accounting Standards Codification (“ASC”) and are presented in thousands, except number of shares and per share data.

Reclassification

Certain accounts in the prior period consolidated financial statements have been reclassified to conform to the presentation of the current year consolidated financial statements. These reclassifications had no effect on the previously reported operating results.

Reverse Stock Split

All share numbers and per share amounts presented in these financial statements, including these footnotes reflect a one-for-thirty-five (1:35) reverse stock split effected on September 21, 2023 (see also Note 8).

Liquidity

As of December 31, 2023, we have incurred recurring losses including net losses of \$8.5 million and \$11.5 million for the years ended December 31, 2023, and 2022, respectively. We anticipate operating losses to continue for the

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foreseeable future due to, among other things, costs related to research funding, further development of our technology and products and expenses related to the commercialization of our products.

In June 2023 the Company raised \$14.2 million through two closings of a private placement of Preferred Stock and Warrants. Net proceeds after related expenses was \$12.7 million. In addition, the company has also gone through various cost cutting measures such as lowering personnel costs through a reduction in force, reduced spending on professional service fees and reduced our lease and related utility costs by consolidating office and lab space. All of these actions together have alleviated the going concern that was reported in 2022.

We expect that our cash and cash equivalents of \$8.8 million as of December 31, 2023, will be sufficient to fund our operating expenses and capital expenditure requirements through the end of April 2025. It is possible this period could be shortened if there are any significant increases in planned spending or development programs or more rapid progress of development programs than anticipated.

Our future viability is dependent on our ability to raise additional capital to fund our operations. We will need to obtain additional funds to satisfy our operational needs and to fund our sales and marketing efforts, research and development expenditures, and business development activities. Until such time, if ever, as we can generate sufficient cash through revenue, management's plans are to finance our working capital requirements through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. If we raise additional funds by issuing equity securities, our existing security holders will likely experience dilution. If we borrow money, the incurrence of indebtedness would result in increased debt service obligations and could require us to agree to operating and financial covenants that could restrict our operations. If we enter into a collaboration, strategic alliance or other similar arrangement, we may be forced to give up valuable rights. There can be no assurance however that such financing will be available in sufficient amounts, when and if needed, on acceptable terms or at all. The precise amount and timing of the funding needs cannot be determined accurately at this time, and will depend on a number of factors, including the market demand for the Company's products and services, the quality of product development efforts, management of working capital, and continuation of normal payment terms and conditions for purchase of services. If the Company is unable to substantially increase revenues, reduce expenditures, or otherwise generate cash flows for operations, then the Company will need to raise additional funding.

Basis of Consolidation

The consolidated financial statements include the accounts of SmartKem, Inc. and its wholly-owned subsidiary, SmartKem Limited. The Company does not have any nonconsolidated subsidiaries. All intercompany balances and transactions have been eliminated on consolidation, including unrealized gains and losses on transactions between the companies.

Comprehensive loss

Comprehensive loss of all periods presented is comprised primarily of net loss and foreign currency translation adjustments.

Management's Use of Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, including disclosure of contingent assets and liabilities, at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. The most significant estimates in the Company's consolidated financial statements relates to the valuation of common share, fair value of share options, and the fair value of warrant liability. These estimates and assumptions are based on current facts, historical experience and various other factors believed

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to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Due to the uncertainty of factors surrounding the estimates or judgments used in the preparation of the consolidated financial statements, actual results may materially vary from these estimates.

Certain Risk and Uncertainties

The Company's activities are subject to significant risks and uncertainties including the risk of failure to secure additional funding to properly execute the Company's business plan. The Company is subject to risks that are common to companies in the growth stage, including, but not limited to, development by the Company or its competitors of new technological innovations, dependence on key personnel, reliance on third party manufacturers, protection of proprietary technology, and compliance with regulatory requirements.

The Company has access under a framework agreement to equipment which is used in the manufacturing of demonstrator products employing the Company's inks. If the Company lost access to this fabrication facility, it would materially and adversely affect the Company's ability to manufacture prototypes and demonstrate products for potential customers. The loss of this access could significantly impede the Company's ability to engage in product development and process improvement activities. Alternative providers of similar services exist but would take effort and time to bring into the Company's operations.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. As of December 31, 2023 and 2022, the Company did not have any cash equivalents.

Accounts Receivable

Accounts receivable are stated at the amount the Company expects to collect and do not bear interest. The Company considers the following factors when determining the collectability of specific customer accounts: customer creditworthiness, past transaction history with the customer, current economic industry trends, and changes in customer payment terms. These receivables have historically been paid timely. Due to the nature of the accounts receivable balance, the Company believes there is no significant risk of non-collection. If the financial condition of the Company's customers were to deteriorate, adversely affecting their ability to make payments, allowances for credit losses would be required. There was no allowance for credit losses recorded as of December 31, 2023 and 2022.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of cash and cash equivalents and accounts receivable. Periodically, the Company maintains deposits in financial institutions in excess of government insured limits.

Property, Plant and Equipment

Property, plant and equipment is stated at cost, less accumulated depreciation. Maintenance and repairs are expensed when incurred. Additions and improvements that extend the economic useful life of the asset are capitalized and depreciated over the remaining useful lives of the assets. The cost and accumulated depreciation of assets sold or retired are removed from the respective accounts, and any resulting gain or loss is reflected in current earnings. Depreciation and amortization are provided using the accelerated declining balance method in amounts considered to be sufficient to amortize the cost of the assets to operations over their estimated useful lives. Property, plant and equipment is depreciated over an estimated useful life of approximately 4 years.

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Impairment of Long-Lived Assets

Management continually evaluates whether events or changes in circumstances might indicate that the remaining estimated useful life of long-lived assets may warrant revision, or that the remaining balance may not be recoverable. When factors indicate that long-lived assets should be evaluated for possible impairment, the Company uses an estimate of the related undiscounted cash flows in measuring whether the long-lived asset should be written down to fair value. Measurement of the amount of impairment would be based on generally accepted valuation methodologies, as deemed appropriate. If the carrying amount is greater than the undiscounted cash flows, the carrying amount of the asset is reduced to the asset's fair value. An impairment loss is recognized immediately as an operating expense in the consolidated statements of operations. Reversal of previously recorded impairment losses are prohibited. As of December 31, 2023, and 2022, Company's management believed that no revision to the remaining useful lives or impairment of the Company's long-lived assets was required.

Fair Value of Financial Instruments

ASC 820, *Fair Value Measurements*, provides guidance on the development and disclosure of fair value measurements. Under this accounting guidance, fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability.

The accounting guidance classifies fair value measurements in one of the following three categories for disclosure purposes:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs other than Level 1 prices for similar assets or liabilities that are directly or indirectly observable in the marketplace.

Level 3: Unobservable inputs which are supported by little, or no market activity and values determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation.

Fair value measurements discussed herein are based upon certain market assumptions and pertinent information available to management as of and during the years ended December 31, 2023, and 2022. The carrying value of the Company's cash, accounts receivable, other receivables, and accounts payable approximate fair value because of the short-term maturity of these financial instruments.

Warrants

The accounting treatment of warrants issued is determined pursuant to the guidance provided by ASC 480, *Distinguishing Liabilities from Equity*, and ASC 815-40, *Contracts in Entity's Own Equity*, as applicable. Each feature of a freestanding financial instrument including, without limitation, any rights relating to subsequent dilutive issuance, dividend issuances, equity sales, rights offerings, forced conversions, dividends, and exercise are assessed with determinations made regarding the proper classification in the Company's consolidated financial statements. The Company assessed its warrants in accordance with this guidance, under which warrants that do not meet the criteria for equity treatment and must be recorded as liabilities. Accordingly, the Company will classify those warrants as liabilities at their fair value and adjusts the warrants to fair value in respect of each reporting period. This liability is subject to re-measurement at each balance sheet date and any change in fair value is recognized in the statements of operations.

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Issuance Costs

The Company assessed the issuance cost in connection with the issuance of an equity offering. ASC 340-10-S99-1 and SEC Staff Accounting Bulletin (“SAB”) Topic 5A, *Expenses of Offering*, states that specific incremental costs directly attributable to a proposed or actual offering of equity securities may properly be deferred and charged against the gross proceeds of the offering. Analogizing to that guidance, specific incremental costs directly attributable to the issuance of an equity contract to be classified in equity should generally be recorded as a reduction in equity. However, issuance costs for equity contracts that are classified as a liability should be expensed immediately. The issuance costs are allocated to the equity and liability components of the underlying transaction on a basis of the allocated fair value of the gross proceeds in the overall transactions.

Direct and incremental legal and accounting costs associated with the Company’s issuance of common stock, preferred stock and warrants are deferred and classified as a component of other assets on the consolidated balance sheet until completion of the issuance. Upon completion of the issuance, deferred offering costs are reclassified from other assets to equity in additional paid-in capital and recorded against the net proceeds received in the issuance. For the year ended December 31, 2023, we recorded \$1.5 million of offering costs of which \$1.3 million were recorded in additional paid-in capital and \$0.2 million were recorded as non-operating expenses and for the year ended December 31, 2022, \$170 thousand of offering costs were recorded in additional paid-in capital.

Non-retirement Post-employment Benefits

The company records employee severance benefits as non-retirement post-employment benefits that are accounted for under the guidance of ASC 712-10 *Compensation - Nonretirement Postemployment Benefits*. A liability is accrued when it becomes probable that a payment will be made, and the amount is estimable. In most cases, a payment is not deemed probable until the employer makes the decision to terminate the employee. All severance payments identified were paid and expensed in the period incurred.

Leases

Operating lease assets are included within operating lease right-of-use assets, and the corresponding operating lease obligation on the consolidated balance sheets as of December 31, 2023 and 2022. The Company has elected not to present short-term leases as these leases have a lease term of 12 months or less at lease inception and do not contain purchase options or renewal terms that the Company is reasonably certain to exercise. All other lease assets and lease liabilities are recognized based on the present value of lease payments over the lease term at commencement date. Because most of the Company’s leases do not provide an implicit rate of return, the Company used an incremental borrowing rate based on inception date of the lease agreement in determining the present value of lease payments.

Revenue

The Company applies the provisions of ASC 606, *Revenue from Contracts with Customers*. The Company recognizes revenue under the core principle to depict the transfer of control to the Company’s customers in an amount reflecting the consideration the Company expects to be entitled to. In order to achieve that core principle, the Company applies the following five step approach: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract and (5) recognize revenue when a performance obligation is satisfied.

The Company’s current contracts with customers do not contain significant estimates or judgments. All of the Company’s revenue contains a single performance obligation that is recognized upon fulfillment of the sales order.

The Company derives its revenues primarily from sales of TRUFLEX® inks and of demonstrator units to customers evaluating organic semiconductor technology. The transaction price is stated in each customer agreement and is

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allocated to a single performance obligation. Revenue is recognized upon shipment of each TRULFEX® ink or demonstrator, at a point in time. The Company does not have any significant financing components as payment is received at or shortly after the point of sale. Costs incurred to obtain a contract will be expensed as incurred when the amortization period is less than a year.

Collaboration Arrangements

The Company entered into several collaboration agreements during 2023. The business arrangements between the two parties are not accounted for as a Collaborative Arrangement, as defined within the guidance under ASC 808, *Collaborative Arrangement*, as both parties are not exposed to significant risks and rewards dependent on the commercial success of the activity.

It has also determined that other parties are a vendor and not a customer, as defined within the guidance under ASC 606, as the other parties did not primarily contract with SmartKem to obtain goods or services that are an output of the entity's ordinary activities in exchange for consideration. It was SmartKem that contracted with the other parties to obtain design services from it.

These agreements are accounted for under the guidance of ASC 705, *Cost of Sales and Service*. Within ASC 705–20, *Accounting for Consideration Received from a Vendor*, the section discusses the accounting for consideration received by an entity from a vendor or supplier. Consideration from a vendor includes cash amounts that an entity receives or expects to receive from a vendor (or from other parties that sell the goods or services to the vendor). Consideration from a vendor also includes credit or other items (e.g., a coupon or voucher) that the entity can apply against amounts owed to the vendor (or to other parties that sell the goods or services to the vendor). Consideration from a vendor should be accounted for as a reduction of the purchase price of the goods or services acquired from the vendor unless the consideration from the vendor is one of the following, a) in exchange for a distinct good or service; b) a reimbursement of costs incurred by the entity to sell the vendor's products; or c) consideration for sales incentives offered to customers by manufacturers.

Research and Development Expenses

The Company expenses research and development costs as incurred. Research and development costs include salaries, employee benefit costs, direct project costs, supplies and other related costs. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received.

Patent and Licensing Costs

Patent and licensing costs are expensed as incurred because their realization is uncertain. These costs are classified as research and development expenses in the accompanying consolidated statements of operations and comprehensive loss.

Other Operating Income

The Company's other operating income includes government grants received for qualifying research and development projects, and research and development tax credits related to the United Kingdom's Research and Development tax relief for small and medium-sized enterprises, which is a government tax incentive designed to reward innovative companies for investing in research and development. Such incentives are recorded as other income when it is probable the amounts are collectible and can be reasonably estimated.

The Company has applied the guidance of IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance* to account for grants and recognition of the other operating income related to the grant. The government

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grant is recognized only when there is reasonable assurance that a) the Company will comply with any conditions attached to the grant and, (b) the grant will be received. The grant is recognized as income over the period necessary to match the related costs, for which the grant is intended to compensated, on a systematic basis. A grant receivable as compensation for costs already incurred or for immediate financial support, with no future related costs, is recognized as other operating income in the period in which it is receivable.

For the year ended December 31, 2023 and 2022, the Company recorded grant income and research & development tax credits of \$836 thousand and \$1,172 thousand, respectively, which are recorded as other operating income in the accompanying consolidated statements of operations. As of December 31, 2023 and 2022, the Company had receivables related to research & development tax credits for payments not yet received of \$610 thousand and \$1,121 thousand, respectively and receivables related to a government grants of \$160 thousand as of December 31, 2023. The Company had no receivables related to government grants as of December 31, 2022.

Ordinary Shares Valuation

Due to the absence of public trading market for the Company's common stock before February 2022, the Company utilized methodologies in accordance with the framework of the American Institute of Certified Public Accountants Technical Practice Aid, Valuation of Privately-Held Company Equity Securities Issued as Compensation, to estimate the fair value of its ordinary shares. In determining the exercise prices for options to be issued, the estimated fair value of the Company's common stock on each grant date was estimated based upon a variety of factors, including:

- the issuance prices of shares of common stock;
- the rights and preferences of holders of preferred stock;
- the progress of the Company's research and development programs;
- the Company's stage of development and business strategy;
- external market conditions affecting the technology industry and trends within the technology industry;
- the Company's financial position, including cash on hand;
- the Company's historical and forecasted performance and operating results;
- the lack of active public market for the Company's ordinary shares;
- the likelihood of achieving a liquidity event, such as a securities offering, initial public offering or a sale of the Company's common stock

From February 2022, the Company's common stock is publicly traded, and the Company no longer has to estimate the fair value of the common stock, rather the value is determined based on quoted market prices.

Significant changes to the key assumptions underlying the factors used could result in different fair values of ordinary shares at each valuation date.

Shares of common stock are classified in stockholders' equity and represent issued share capital.

Share-based compensation

All share-based payments, including grants of stock options, are measured based on the fair value of the share-based awards at the grant date and recognized over their respective vesting periods. Outstanding options generally expire 10 years after the grant date. The Company has issued options that vest based on service requirements and issued options that vest based on performance requirements. Options become exercisable when service requirements are met. In the case of performance-based options, options become exercisable when there is a liquidity event, such as a change in control or sale or admission (listing as a public company or initial public offering ("IPO")), and the employee, or consultant, must be providing services to the Company at the time of the event. Due to the Exchange, all options outstanding immediately prior to the event with a performance obligation requirement became vested and exercisable.

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Non-cash stock-based compensation expense for the year ended December 31, 2023 and 2022 were \$0.7 million and \$0.5 million, respectively (see also Note 9).

The estimated fair value of stock options at the grant date is determined using the Black-Scholes pricing model. The Black-Scholes option pricing model requires inputs such as the fair value of common stock on date of grant, expected term using a simplified method, expected volatility, dividend yield, and risk-free interest rate. The assumptions used in calculating the fair value of stock-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. As a result, if factors change and management uses different assumptions, stock-based compensation expense could be materially different for future awards. The Company records forfeitures when they occur.

Functional Currency and Operations

Prior to the Exchange, SmartKem Limited's ("the predecessor's") functional currency was the British Pound Sterling ("GBP"), and the consolidated financial statements were presented in United States dollars ("USD"). The predecessor's functional currency was the respective local currency of the primary economic environment in which an entity's operations are conducted. The predecessor translated the consolidated financial statements into the presentation currency using exchange rates in effect on the balance sheet date for assets and liabilities and average exchange rates for the period for statement of operations accounts, with the difference recognized in accumulated other comprehensive income/ (loss).

The Company's functional currency is the U.S. dollar ("USD"). The functional currency of the Company's foreign operation is the respective local currency. Assets and liabilities of foreign operations denominated in local currencies are translated at the spot rate in effect at the applicable reporting date. The consolidated statements of operations and comprehensive loss are translated at the weighted average rate of exchange during the applicable period. The resulting unrealized gain/loss is recognized as foreign currency translation as a component of other comprehensive income.

Income Taxes

Valuation allowance of deferred tax assets

Income taxes are recorded in accordance with ASC 740, *Income Taxes*, which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

We considered the positive and negative evidence bearing upon its ability to realize the deferred tax assets. In addition to the Company's history of cumulative losses, the Company cannot be certain that future taxable income will be sufficient to realize its deferred tax assets. Accordingly, a full valuation allowance has been provided against its net deferred tax assets at both December 31, 2023 and 2022. Should the Company change its determination, based on the evidence available as to the amount of its deferred tax assets that can be realized, the valuation allowance will be adjusted with a corresponding impact to the provision for income taxes in the period in which such determination is made and which may be material.

As of December 31, 2023, and 2022, there were no material uncertain tax positions.

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Contingent Liabilities

A provision for contingent liabilities is recorded when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. With respect to legal matters, provisions are reviewed and adjusted to reflect the impact of negotiations, estimated settlements, legal rulings, advice of legal counsel and other information and events pertaining to a particular matter. From time to time, the Company may be party to certain litigation and disputes arising in the normal course of business. As of December 31, 2023, the Company is not a party to any litigation or disputes.

Segment Information

The Company has determined that it operates and reports in one segment, which focuses on the development of materials and processes used to make organic thin-film transistors (OTFTs) for the manufacture of flexible electronics. The Company's operating segment is reported in a manner consistent with the internal reporting provided to the chief operating decision maker ("CODM"). The Company's CODM has been identified as its Chairman and Chief Executive Officer.

Basic and Diluted Loss Per Share

Basic and diluted net loss per share is determined by dividing net loss by the weighted average ordinary shares outstanding during the period. For all periods presented with a net loss, the shares underlying the ordinary share options and warrants have been excluded from the calculation because their effect would be anti-dilutive. Therefore, the weighted-average shares outstanding used to calculate both basic and diluted loss per share are the same for periods with a net loss.

The loss per share information in these consolidated financial statements is reflected and calculated as if the Company had existed since January 1, 2021. Accordingly, loss per share for all periods was calculated based on the number of shares retroactively adjusted for the exchange ratio determined in the reverse recapitalization (see also Note 1).

As of December 31, 2023, the Company had 61,587 pre-funded common stock warrants and 769,826 Class B Warrants outstanding and exercisable. As the pre-funded common stock warrants and Class B Warrants are exercisable for \$0.35, these shares are considered outstanding common shares and included in computation of basic and diluted Earnings Per Share as the exercise of the pre-funded common stock warrants is virtually assured.

The following potentially dilutive securities have been excluded from the computation of diluted weighted average shares outstanding as they would be anti-dilutive:

	December 31,	
	2023	2022
Common stock warrants	1,772,829	28,161
Assumed conversion of preferred stock	1,573,226	—
Stock options	70,412	80,887
Total	3,416,467	109,048

Recent Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments: Credit Losses (Topic 326)*, which requires measurement and recognition of expected losses for financial assets held. The new standard changes the impairment model for most financial instruments, including trade receivables, from an incurred loss method to a new forward-looking approach, based on expected losses. The estimate of expected credit losses will require organizations to

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incorporate considerations of historical information, current conditions and reasonable and supportable forecasts. The standards update is effective prospectively for annual and interim periods in fiscal years beginning after December 15, 2019, with early adoption permitted, for U.S. Securities Exchange filers. However, the standard was not applicable until January 1, 2023, because the company has elected to apply the extended transition period available for emerging growth companies. Emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies, which is effective prospectively for annual and interim periods beginning after December 15, 2022. The adoption of this guidance did not have a material impact in the interim condensed consolidated financial statements of the Company.

In November 2023, the FASB issued Accounting Standards Update (ASU) No. 2023-07, *Segment Reporting (Topic 280), Improvements to Reportable Segment Disclosures* which will require companies to disclose significant segment expenses that are regularly provided to the chief operating decision maker (“CODM”). The pronouncement is effective for annual filings for the year ended December 31, 2024. The Company is still assessing the impact of the adoption of this standard but does not expect it to have a material impact on its results of operations, financial position or cash flows.

On December 14, 2023, the FASB issued ASU 2023-09, *Improvements to Income Tax Disclosures* which applies to all entities subject to income taxes. The standard requires disaggregated information about a reporting entity’s effective tax rate reconciliation as well as information on income taxes paid. The standard is intended to provide more detailed income tax disclosures. For public business entities (PBEs), the new requirements will be effective for annual periods beginning after December 15, 2024. The guidance will be applied on a prospective basis with the option to apply the standard retrospectively. The Company is still assessing the impact of the adoption of this standard but does not expect it to have a material impact on its results of operations, financial position or cash flows.

The OECD reached an agreement among various countries to implement a minimum 15% tax rate on certain multinational enterprises, commonly referred to as Pillar Two. Many countries continue to announce changes in their tax laws and regulations based on Pillar Two Proposals. We are continuing to evaluate the impact of these proposed and enacted legislative changes as new guidance becomes available. Given the numerous proposed changes in law and uncertainty regarding such proposed changes, the impact cannot be determined at this time.

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3. PREPAID EXPENSES AND OTHER CURRENT ASSETS:

Prepaid expenses and other current assets consist of the following:

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Prepaid facility costs	\$ 101	\$ 106
Prepaid insurance	274	358
Prepaid professional service fees	68	339
Research grant receivable	160	—
Prepaid software licenses	24	22
VAT receivable	104	195
Other receivable and other prepaid expenses	80	36
Total prepaid expenses and other current assets	<u>\$ 811</u>	<u>\$ 1,056</u>

4. PROPERTY, PLANT AND EQUIPMENT:

Property, plant and equipment consist of the following:

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Plant and equipment	\$ 1,584	\$ 1,478
Furniture and fixtures	108	218
Computer hardware and software	24	24
	<u>1,716</u>	<u>1,720</u>
Less: Accumulated depreciation	(1,261)	(1,118)
Property, plant and equipment, net	<u>\$ 455</u>	<u>\$ 602</u>

Depreciation expense was \$145 thousand and \$198 thousand for the year ended December 31, 2023 and 2022, respectively, and is classified as research and development expense.

5. ACCOUNTS PAYABLE AND ACCRUED EXPENSES:

Accounts payable and accrued expenses consist of the following:

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Accounts payable	\$ 355	\$ 250
Accrued expenses – lab refurbishments	—	117
Accrued expenses – technical fees	91	130
Accrued expenses – audit & accounting fees	182	179
Accrued expenses – other	175	44
Payroll liabilities	375	211
Total accounts payable and accrued expenses	<u>\$ 1,178</u>	<u>\$ 931</u>

6. LEASES:

The Company has operating leases consisting of office space, lab space, and equipment with remaining lease terms of 1 to 3 years, subject to certain renewal options as applicable.

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The table below presents certain information related to the lease costs for the Company's operating leases for the periods ended:

<i>(in thousands)</i>	Year Ended December 31,	
	2023	2022
Operating lease cost	\$ 276	\$ 262
Short-term lease cost	7	10
Variable lease cost	162	186
Total lease cost	<u>\$ 445</u>	<u>\$ 458</u>

The total lease cost is included in the consolidated statements of operations as follows:

<i>(in thousands)</i>	Year Ended December 31,	
	2023	2022
Research and development	\$ 419	\$ 430
Selling, general and administrative	26	28
Total lease cost	<u>\$ 445</u>	<u>\$ 458</u>

Right of use lease assets and lease liabilities for our operating leases were recorded in the consolidated balance sheets as follows:

<i>(in thousands)</i>	December 31,	December 31,
	2023	2022
Assets		
Right of use assets - Operating Leases	\$ 285	\$ 475
Total lease assets	<u>\$ 285</u>	<u>\$ 475</u>
Liabilities		
Current liabilities:		
Lease liability, current - Operating Leases	\$ 230	\$ 206
Noncurrent liabilities:		
Lease liability, non-current - Operating Leases	19	239
Total lease liabilities	<u>\$ 249</u>	<u>\$ 445</u>

The Company had no right of use lease assets or lease liabilities for financing leases as of December 31, 2023 and 2022.

The table below presents certain information related to the cash flows for the Company's operating leases for the periods ended:

<i>(in thousands)</i>	Year Ended December 31,	
	2023	2022
Operating cash outflows from operating leases	\$ 266	\$ 265
Supplemental non-cash amounts of operating lease liabilities arising from obtaining right of use assets	\$ 50	\$ 583

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The table below presents certain information related to the weighted average remaining lease term and the weighted average discount rate for the Company’s operating leases as of the period ended:

	Year Ended December 31,	
	2023	2022
Weighted average remaining lease term (in years) – operating leases	1.31	2.19
Weighted average discount rate – operating leases	7.88%	7.73%

Undiscounted operating lease liabilities as of December 31, 2023, by year and in the aggregate, having non-cancelable lease terms in excess of one year were as follows:

<i>(in thousands)</i>	December 31,	
	2023	
2024	\$	243
2025		20
Total undiscounted lease payments		263
Less imputed interest		(14)
Total net lease liabilities	\$	249

7. COMMITMENTS AND CONTINGENCIES:

Legal proceedings

In the normal course of business, the Company may become involved in legal disputes regarding various litigation matters. In the opinion of management, any potential liabilities resulting from such claims would not have a material effect on the consolidated financial statements.

8. STOCKHOLDERS’ EQUITY:

Reverse Stock Split

At the Company’s Annual Meeting of Stockholders held on August 25, 2023 (the “Annual Meeting”), the Company’s stockholders approved a proposal to approve and adopt an amendment to the Company’s Amended and Restated Certificate of Incorporation to effect a reverse stock split of its shares of common stock, issued and outstanding or reserved for issuance, at a specific ratio within a range from 1-for-30 to 1-for-60, inclusive, prior to the first anniversary of stockholder approval of the proposal, and to grant authorization to the Board of Directors to determine, in its sole discretion, whether to effect the reverse stock split, as well as its specific timing and ratio. On September 19, 2023, the Company’s Board of Directors adopted resolutions to effect as soon as reasonably practicable the reverse split of the issued and outstanding shares of the Common Stock at a ratio of 1-for-35.

On September 19, 2023, the Company filed with the Secretary of State of the State of Delaware a Certificate of Amendment to the Company’s Amended and Restated Certificate of Incorporation (the “Charter Amendment”) to effect a reverse stock split of the issued and outstanding shares of the Company’s common stock, \$0.01 par value per

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share, at a ratio of 1-for-35 to be effective as of September 21, 2023 at 12:01 a.m., New York City time (the “Reverse Stock Split”). The Charter Amendment did not change the par value or any other terms of the common stock.

Preferred Stock

The board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, redemption rights, liquidation preferences, sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock.

Series A-1 Preferred Stock

On June 14, 2023, the Company filed a Certificate of Designation of Preferences, Rights and Limitations with the Secretary of State of the State of Delaware designating 18,000 shares out of the authorized but unissued shares of its preferred stock as Series A-1 Preferred Stock with a stated value of \$1,000 per share (the “Series A-1 Certificate of Designation”). On January 29, 2024, the Company filed an Amended and Restated Certificate of Designation of Preferences, Rights and Limitation with the Secretary of the State of Delaware designating 11,100 shares of Series A-1 Preferred Stock. The following is a summary of the principal amended and restated terms of the Series A-1 Preferred Stock as set forth in the Amended and Restated Series A-1 Certificate of Designation:

Dividends

The holders of Series A-1 Preferred Stock will be entitled to dividends, on an as-if converted basis, equal to and in the same form as dividends actually paid on shares of Common Stock, when and if actually paid. In addition, in the event that on the 18th month anniversary of the Closing Date, the trailing 30-day VWAP (as defined in the Series A-1 Certificate of Designation) is less than the then-effective Series A-1 Conversion Price, the Series A-1 Preferred Stock will begin accruing dividends at the annual rate of 19.99% of the stated value thereof (the “Series A-1 Dividend”). The Series A-1 Dividend would be paid in cash, or, at the option of the Company if certain equity conditions are met, in shares of Common Stock at a price per share equal to ninety percent (90%) of the trailing 10-day VWAP for the last 10 trading date prior to the date the Series A-1 Dividend is paid.

Voting Rights

The shares of Series A-1 Preferred Stock have no voting rights, except to the extent required by the Delaware General Corporation Law.

As long as any shares of Series A-1 Preferred Stock are outstanding, the Company may not, without the approval of a majority of the then outstanding shares of Series A-1 Preferred Stock which must include AIGH Investment Partners LP and its affiliates (“AIGH”) for so long as AIGH is holding at least \$1,500,000 in aggregate stated value of Series A-1 Preferred Stock acquired pursuant to the Purchase Agreement (a) alter or change the powers, preferences or rights given to the Series A-1 Preferred Stock, (b) alter or amend the Amended and Restated Certificate of Incorporation (the “Charter”), the Series A-1 Certificate of Designation, the Series A-2 Certificate of Designation (as defined below) or the bylaws of the Company (the “Bylaws”) in such a manner so as to materially adversely affect any rights given to the Series A-1 Preferred Stock, (c) authorize or create any class of stock ranking as to dividends, redemption or distribution of assets upon a Liquidation (as defined below) senior to, or otherwise pari passu with, the Series A-1 Preferred Stock, other than 3,050 shares of Series A-2 Preferred Stock of the Company, (d) increase the number of authorized shares of Series A-1 Preferred Stock, (e) issue any Series A-1 Preferred Stock except pursuant to the Purchase Agreement, or (f) enter into any agreement to do any of the foregoing.

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Liquidation

Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary (a "Liquidation"), the then holders of the Series A-1 Preferred Stock are entitled to receive out of the assets available for distribution to stockholders of the Company an amount equal to 100% of the stated value, plus any accrued and unpaid dividends thereon and any other fees or liquidated damages then due and owing thereon, prior and in preference to the Common Stock or any other series of preferred stock (other than the Series A-2 Preferred Stock).

Conversion

The Series A-1 Preferred Stock is convertible into Common Stock at any time at a conversion price of \$87.50, subject to adjustment for certain anti-dilution provisions set forth in the Series A-1 Certificate of Designation (the "Series A-1 Conversion Price"). Upon conversion the shares of Series A-1 Preferred Stock will resume the status of authorized but unissued shares of preferred stock of the Company.

Conversion at the Option of the Holder

The Series A-1 Preferred Stock is convertible at the then-effective Series A-1 Conversion Price at the option of the holder at any time and from time to time.

Mandatory Conversion at the Option of the Company

So long as certain equity conditions are satisfied, the Company may give notice requiring the holders to convert all of the outstanding shares of Series A-1 Preferred Stock into shares of Common Stock at the then-effective Series A-1 Conversion Price.

Beneficial Ownership Limitation

The Series A-1 Preferred Stock cannot be converted to Common Stock if the holder and its affiliates would beneficially own more than 4.99% (or 9.99% at the election of the holder) of the outstanding common stock. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon notice to us, provided that any increase in this limitation will not be effective until 61 days after such notice from the holder to us and such increase or decrease will apply only to the holder providing such notice.

Preemptive Rights

No holders of Series A-1 Preferred Stock will, as holders of Series A-1 Preferred Stock, have any preemptive rights to purchase or subscribe for Common Stock or any of our other securities.

Redemption

The shares of Series A-1 Preferred Stock are not redeemable by the Company.

Negative Covenants

As long as any Series A-1 Preferred Stock is outstanding, unless the holders of more than 50% in stated value of the then outstanding shares of Series A-1 Preferred Stock shall have otherwise given prior written consent (which must include AIGH for so long as AIGH is holding at least \$1,500,000 in aggregate stated value of Series A-1 Preferred Stock acquired pursuant to the Purchase Agreement), the Company cannot, subject to certain exceptions, (a) enter into, create, incur, assume, guarantee or suffer to exist any indebtedness, (b) enter into, create, incur, assume or suffer to exist any liens, (c) repay, repurchase or offer to repay, repurchase or otherwise

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acquire more than a de minimis number of shares of its Common Stock, Common Stock equivalents or junior securities, (d) enter into any transaction with any affiliate of the Company which would be required to be disclosed in any public filing with the Commission, unless such transaction is made on an arm's-length basis and expressly approved by a majority of the disinterested directors of the Company, (e) declare or pay a dividend on junior securities or (f) enter into any agreement with respect to any of the foregoing.

Trading Market

There is no established trading market for any of the Series A-1 Preferred Stock, and we do not expect a market to develop. We do not intend to apply for a listing for any of the Series A-1 Preferred Stock on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Series A-1 Preferred Stock will be limited.

Series A-2 Preferred Stock

On June 14, 2023, the Company filed a Certificate of Designation of Preferences, Rights and Limitations with the Secretary of State of the State of Delaware designating 18,000 shares out of the authorized but unissued shares of its preferred stock as Series A-2 Preferred Stock with a stated value of \$1,000 per share (the "Series A-2 Certificate of Designation"). The following is a summary of the principal terms of the Series A-2 Preferred Stock as set forth in the Series A-2 Certificate of Designation:

Dividends

The holders of Series A-2 Preferred Stock will be entitled to dividends, on an as-if converted basis, equal to and in the same form as dividends actually paid on shares of Common Stock, when and if actually paid.

Voting Rights

The shares of Series A-2 Preferred Stock have no voting rights, except to the extent required by the DGCL.

As long as any shares of Series A-2 Preferred Stock are outstanding, the Company may not, without the approval of a majority of the then outstanding shares of Series A-2 Preferred Stock (a) alter or change the powers, preferences or rights of the Series A-2 Preferred Stock, (b) alter or amend the Charter, the Series A-2 Certificate of Designation or the Bylaws in such a manner so as to materially adversely affect any rights given to the Series A-2 Preferred Stock, (c) authorize or create any class of stock ranking as to dividends, redemption or distribution of assets upon a liquidation senior to, or otherwise *pari passu* with, the Series A-2 Preferred Stock or (d) enter into any agreement to do any of the foregoing.

Liquidation

Upon a Liquidation, the then holders of the Series A-2 Preferred Stock are entitled to receive out of the assets available for distribution to stockholders of the Company an amount equal to 100% of the stated value, plus any accrued and unpaid dividends thereon and any other fees or liquidated damages then due and owing thereon, prior and in preference to the Common Stock or any other series of preferred stock (other than the Series A-1 Preferred Stock).

Conversion

The Series A-2 Preferred Stock is convertible into Common Stock at any time at a conversion price of \$8.75, subject to adjustment for certain anti-dilution provisions set forth in the Series A-2 Certificate of Designation (the

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“Series A-2 Conversion Price”). Upon conversion the shares of Series A-2 Preferred Stock will resume the status of authorized but unissued shares of preferred stock of the Company.

Conversion at the Option of the Holder

The Series A-2 Preferred Stock is convertible at the then-effective Series A-2 Conversion Price at the option of the holder at any time and from time to time.

Automatic Conversion

On the trading day immediately preceding the date on which shares of Common Stock commence trading on the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange all, but not less than all, of the outstanding shares of Series A-2 Preferred Stock shall automatically convert, without any action on the part of the holder thereof and without payment of any additional consideration, into that number of shares of Common Stock determined by dividing the stated of such share of Series A-2 Preferred Stock by the then applicable Series A-2 Conversion Price.

Beneficial Ownership Limitation

The Series A-2 Preferred Stock cannot be converted to common stock if the holder and its affiliates would beneficially own more than 4.99% (or 9.99% at the election of the holder) of the outstanding common stock. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon notice to us, provided that any increase in this limitation will not be effective until 61 days after such notice from the holder to us and such increase or decrease will apply only to the holder providing such notice.

Preemptive Rights

No holders of Series A-2 Preferred Stock will, as holders of Series A-2 Preferred Stock, have any preemptive rights to purchase or subscribe for Common Stock or any of our other securities.

Redemption

The shares of Series A-2 Preferred Stock are not redeemable by the Company.

Trading Market

There is no established trading market for any of the Series A-2 Preferred Stock, and the Company does not expect a market to develop. The Company does not intend to apply for a listing for any of the Series A-2 Preferred Stock on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Series A-2 Preferred Stock will be limited.

Series A-1 and A-2 Preferred Stock and Class A and Class B Warrant Issuances

On June 14, 2023, the Company and certain investors entered into a securities purchase agreement (the “Purchase Agreement”) pursuant to which the Company sold an aggregate of (i) 9,229 shares of Series A-1 Convertible Preferred Stock at a price of \$1,000 per share (the “Series A-1 Preferred Stock”), (ii) 2,950 shares of the Company’s Series A-2 Convertible Preferred Stock at a price of \$1,000 per share (“Series A-2 Preferred Stock” and together with the Series A-1 Preferred Stock, the “Preferred Stock”), (iii) Class A Warrants to purchase up to an aggregate of 1,391,927 shares of common stock (the “Class A Warrant”), and (iv) Class B Warrants to purchase up to an aggregate of 798,396 shares of common stock (the “Class B Warrant” and together with the Class A Warrant, the “Warrants”) for aggregate gross

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proceeds of \$12.2 million (the “June 2023 PIPE”). In addition, 34,286 Class B Warrants were issued in lieu of cash payments for consulting services related to the offering. The fair value of the service provided was \$59 thousand.

On June 22, 2023, in a second closing of the June 2023 PIPE, the Company sold an aggregate of (i) 1,870.36596 Series A-1 Preferred Stock, (ii) 100 shares of Series A-2 Preferred Stock, and (iii) Class A Warrants to purchase up to an aggregate of 225,190 shares of Common Stock pursuant to the Purchase Agreement for aggregate gross proceeds of \$2.0 million. In addition, 8,572 Class B Warrants were issued in lieu of cash payments for consulting services related to the offering. The fair value of the service provided was \$15 thousand.

Each Class A Warrant has an exercise price of \$8.75 and each Class B Warrant has an exercise price of \$0.35, both subject to adjustments in accordance with the terms of the Warrants. The Warrants expire five years from the issuance date.

There were an additional 127,551 warrants issues related to a placement agent fee. The fair value of this fee is \$31 thousand.

The Company has accounted for the Class A and Class B Warrants as derivative instruments in accordance with ASC 815, Derivatives and Hedging. The Company classified the Warrants as a liability because they cannot be considered indexed to the Company’s stock due to provisions that, in certain circumstances, adjust the number of shares to be issued if the exercise price is adjusted and the existence of a pre-specified volatility input to the Black-Scholes calculation which could be used to calculate consideration in the event of a Fundamental Transaction, as defined in the agreements.

The Company received net proceeds after expenses of \$12.7 million. Of the net proceeds, the Company allocated an estimated fair value of \$1.8 million to the Warrants. The Company also expensed \$0.2 million of issuance costs that were allocated to the warranty liability during the three and six months ended June 30, 2023. The terms of the June 2023 PIPE include a number of restrictions on our operations and on our ability to raise additional capital. The Purchase Agreement, among other things, provides that, for a period ending on June 14, 2024, we may not use cash from operating activities (as defined under GAAP) of more than an average of \$2.8 million for any consecutive three-month period (subject to certain exceptions). This provision may cause us to delay certain actions that may benefit our business and may prevent us from pursuing potentially favorable business opportunities, even if a majority of our board of directors believes such actions or opportunities are in the best interest of our company and our stockholders.

Under the terms of the Purchase Agreement, for a period ending on December 15, 2025, in the event that we issue common stock or common stock equivalents in a subsequent financing (as defined in the Purchase Agreement), the significant purchasers (defined in the Purchase Agreement as a purchaser acquiring at least 1,000 shares of Series A-1 Preferred Stock) will have the right to purchase up to 40% of the securities sold in the subsequent financing. This provision may make it more difficult for us to raise additional capital because other investors may want to provide all, or a larger portion of the capital provided in the subsequent financing or may be unwilling to co-invest with one or more of the significant purchasers or may be unwilling to commit to provide financing without knowing how much of the subsequent financing will be provided by the significant purchasers.

In addition, during such period, the Company may not issue common stock or common stock equivalents in a subsequent financing with an effective price per share of common stock that is or may become lower than the then-effective conversion price of the Series A-1 Preferred Stock without the consent of the significant purchasers, which must include AIGH Investment Partners LP and its affiliates for so long as they are holding at least \$1,500,000 in aggregate stated value of Series A-1 Preferred Stock acquired pursuant to the Purchase Agreement. This provision may prevent the Company from obtaining additional capital on market terms even if a majority of the Company’s board of directors believes that the terms of the subsequent financing are in the best interests of the Company and its stockholders. This provision may also have the effect of increasing the cost of obtaining additional capital either because the significant purchasers refuse to consent to any such subsequent financing unless provided by them on

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terms approved by them or because the Company is required to provide additional consideration to such significant purchasers in exchange for their consent.

In the event that the Company issues common stock or common stock equivalents in a subsequent financing prior to the time the common stock is listed on a national securities exchange, the Purchase Agreement provides that if a significant purchaser reasonably believes that any of the terms and conditions of the subsequent financing are more favorable to an investor in the subsequent financing than the terms of the June 2023 PIPE, such significant purchaser has the right to require the Company to amend the terms of the June 2023 PIPE to include such more favorable term for such significant purchaser. This provision may make it more expensive to obtain additional capital prior to an uplisting because it permits any significant purchaser to “cherry pick” the terms of the subsequent financing and to require any term deemed to be more favorable to be included retroactively in the terms of the June 2023 PIPE. This provision also potentially creates uncertainty around the terms of a subsequent financing because the significant purchasers have the right to review terms of a completed subsequent financing before deciding which, if any, of the terms thereof they find more favorable to them.

The Purchase Agreement provides that, until June 14, 2025, a significant purchaser may participate in a subsequent transaction by exchanging some or all of its Series A-1 Preferred Stock having a stated value equal to its subscription amount in the subsequent financing. This provision may adversely affect the amount of capital the Company raises in a subsequent financing, as it permits a significant purchaser to roll its existing investment into the new financing rather than being required to invest cash. This provision also has the potential to make it more difficult for the Company to raise additional capital as other investors may want to provide all or a larger portion of the capital provided in the subsequent financing or may require the Company to raise a minimum amount of new capital or may be unwilling to commit to provide financing without knowing how much of the subsequent financing will be provided by the significant purchasers in cash.

If the Company is unable to raise additional capital when needed, the Company may be required to delay, limit, reduce or terminate commercialization, its research and product development, or grant rights to develop and market its products that the Company would otherwise prefer to develop and market itself and may have a material adverse effect on the Company’s business, financial condition and results of operations.

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. The Company’s amended and restated certificate of incorporation and the Company’s amended and restated bylaws do not provide for cumulative voting rights. The holders of one-third of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

Dividends

The Company has never paid any cash dividends to shareholders and does not anticipate paying any cash dividends to shareholders in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of our board of directors and will be dependent upon financial condition, results of operations, capital requirements and such other factors as the board of directors deems relevant.

Market Information

Quotations on the Company’s common stock on the OTC Market Group’s OTCQB® Market quotation system (“OTCQB”) commenced under the ticker symbol “SMTK” in February 2022. There was no trading of the common stock on the OTCQB or any other over-the-counter market prior to February 2022.

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Common Stock Issued to Vendors for Services

On January 6, 2023, the Company issued 1,429 shares of common stock, as payment for investor relations and other financial consulting services.

On February 27, 2023, the Company issued 1,508 shares of common stock as payment for investor relations services.

Common Stock Warrants

A summary of the Company's warrants to purchase common stock activity is as follows:

	<u>Number of Shares</u>	<u>Exercise Price per Share</u>	<u>Weighted- Average Exercise Price</u>	<u>Weighted- Average Remaining Contractual Term (Years)</u>
Warrants outstanding at January 1, 2023	28,161	\$70.00	\$ 70.00	3.15
Issued	2,585,923		6.01	
Exercised	(71,429)		0.35	
Expired	—			
Warrants outstanding at December 31, 2023 . .	<u>2,542,655</u>	\$0.35 - \$70.00	<u>\$ 6.89</u>	<u>4.43</u>

A summary of the Company's pre-funded warrants to purchase common stock activity is as follows:

	<u>Number of Shares</u>	<u>Weighted- Average Exercise Price</u>
Pre-funded warrants outstanding at January 1, 2023	61,945	\$ 0.35
Issued	—	
Exercised	(358)	
Expired	—	
Pre-funded warrants outstanding at December 31, 2023 . .	<u>61,587</u>	<u>\$ 0.35</u>

For any issuance dates prior to February 2022, the fair value of common stock warrants is determined using the Black Scholes option-pricing model. There was no public trading market for our shares before February 2022 and the Company estimates its expected stock volatility based on historical volatility of publicly traded peer companies.

9. SHARE-BASED COMPENSATION:

On February 23, 2021, the Company approved the 2021 Equity Incentive Plan ("2021 Plan"), in which a maximum aggregate number of shares of common stock that may be issued under the 2021 Plan is 65,000 shares. Subject to the adjustment provisions of the 2021 Plan, the number of shares of the Company's common stock available for issuance under the 2021 Plan will also include an annual increase on the first day of each fiscal year beginning with 2022 fiscal year and ending on the Company's 2031 fiscal year in an amount equal to the least of: 1) 65,000 shares of the Company's common stock; 2) four percent (4%) of the outstanding shares of the Company's common stock on the last day of the immediately preceding fiscal year; or 3) such number of shares of the Company's common stock as the administrator may determine.

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At the 2023 Annual Meeting, the Company’s stockholders approved an amendment (the “2021 Plan Amendment”) to the Company’s 2021 Plan, increasing the number of the shares of common stock, par value \$0.0001 per share (“Common Stock”), reserved for issuance under the 2021 Plan from 125,045 shares to 743,106 shares. The Company’s Board of Directors (the “Board”) had previously approved the 2021 Plan Amendment, subject to stockholder approval.

Determining the appropriate fair value of share-based awards requires the input of subjective assumptions, including the fair value of the Company’s common stock, and for share options, the expected life of the option, and expected share price volatility. The Company uses the Black-Scholes option pricing model to value its share option awards. The assumptions used in calculating the fair value of share-based awards represent management’s best estimates and involve inherent uncertainties and the application of management’s judgment. As a result, if factors change and management uses different assumptions, the share-based compensation expense could be materially different for future awards.

	For Year Ended
	December 31, 2022
Expected term (years)	6 years - 6.3 years
Risk-free interest rate	3.1% - 3.6%
Expected volatility	64%
Expected dividend yield	0%

There were no options granted under the 2021 Plan during the year ended December 31, 2023.

Prior to February 2022, in the absence of a public trading market for the common stock, on each grant date, the Company developed an estimate of the fair value of the shares of common stock underlying the option grants. The Company estimated the fair value of the shares of common stock by referencing arms-length transactions inclusive of the shares of common stock underlying which occurred on or near the valuation date(s). The Company determined the fair value of the common stock using methodologies, approaches and assumptions consistent with the AICPA Practice Guide, Valuation of Privately Held Company Equity Securities Issued as Compensation and based in part on input from an independent third-party valuation firm. From February 2022, the Company’s common stock is publicly traded, and the Company no longer has to estimate the fair value of the shares of common stock, rather the value is determined based on quoted market prices.

The Company estimates its expected volatility by using a combination of historical share price volatilities of similar companies within our industry. The risk-free interest rate assumption is based on observed interest rates for the appropriate term of the Company’s options on a grant date. The contractual term is 10 years, and the expected option term is lower.

The following table reflects share activity under the share option plans for the year ended December 31, 2023:

	Number of Shares	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (Years)	Weighted- Average Fair Value at Grant Date	Aggregate Intrinsic Value (in thousands)
Options outstanding at January 1, 2023	80,887	\$ 63.31	8.77	\$ 34.37	
Exercised	—	—			
Cancelled/Forfeited	—	—			
Expired	(10,476)	64.96			
Granted	—	—			
Options outstanding at December 31, 2023	70,411	\$ 63.07	7.28	\$ 33.98	
Options exercisable at December 31, 2023	42,713	\$ 58.57	6.76		\$ 39.52

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The aggregate intrinsic value of options is calculated as the difference between the exercise price of the options and the fair value of our common stock at the end of the year for those options that had exercise prices lower than the fair value of our common stock.

Stock-based compensation, including stock options is included in the consolidated statements of operations as follows:

<i>(in thousands)</i>	Year Ended December 31,	
	2023	2022
Research and development	\$ 254	\$ 216
Selling, general and administration	463	272
Total	<u>\$ 717</u>	<u>\$ 488</u>

As of December 31, 2023, there was \$0.7 million of compensation cost related to non-vested stock option awards not yet recognized that will be recognized on a straight-line basis through the end of the vesting periods in July 2026. The amount of future stock option compensation expense could be affected by any future option grants or by any forfeitures.

10. INCOME TAXES

United States and foreign profit/(loss) from operations before income taxes was as follows:

	December 31,	
	2023	2022
United States	(2,299)	584
Foreign	(6,200)	(12,055)
Loss before income taxes	<u>\$ (8,499)</u>	<u>\$ (11,471)</u>

A reconciliation of the statutory income tax rate to the Company's effective tax rate consists of the following:

	For the Years Ended December 31,	
	2023	2022
Taxes at domestic rate	21.0 %	21.0 %
State and local income taxes	(1.4)%	— %
Non-US statutory rates	1.8 %	2.9 %
Permanent items	(1.6)%	— %
Nondeductible Research Expense	(7.4)%	(6.3)%
Change in valuation allowance	(16.9)%	(17.9)%
Warrant revaluation	1.1 %	— %
Prior year true-up	3.4 %	0.1 %
Effective tax rate	<u>— %</u>	<u>(0.2)%</u>

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The components of income tax provision/(benefit) are as follows:

	December 31,	
	2023	2022
Current		
Federal	\$ —	\$ —
State	—	2
Foreign	—	22
Total Current	\$ —	\$ 24
Deferred		
Federal	—	—
State	—	—
Foreign	—	—
Total Deferred	—	—
Total	\$ —	\$ 24

Deferred income taxes reflect the net tax effects of temporary differences between the carrying value of assets and liabilities for financial reporting purposes and amounts used for income tax purposes. The temporary differences that give rise to deferred tax assets and liabilities are as follows:

	December 31,	
	2023	2022
Deferred tax assets/(liabilities):		
Net operating loss carryforwards	\$ 10,874	\$ 9,151
Stock Compensation	207	187
Property plant and equipment	(114)	(150)
Other	45	(119)
	11,012	9,069
Valuation allowance	(11,012)	(9,069)
Deferred tax assets, net of allowance	\$ —	\$ —

The Company recorded a full valuation allowance against its net deferred tax assets as of December 31, 2023, and 2022. The Company considered the positive and negative evidence bearing upon its ability to realize the deferred tax assets. In addition to the Company's history of cumulative losses, the Company cannot be certain that future taxable income will be sufficient to realize its deferred tax assets. Accordingly, a full valuation allowance has been provided against its net deferred tax assets. When the Company changes its determination as to the amount of its deferred tax assets that can be realized, the valuation allowance is adjusted with a corresponding impact to the provision for income taxes in the period in which such determination is made.

As of December 31, 2023, and 2022, the Company had United Kingdom net operating loss carry-forwards of approximately \$38.4 million and \$32.9 million, respectively. The United Kingdom net operating loss carry-forwards were generated in the tax years from 2009 to 2023 with an unlimited carry-forward period.

As of December 31, 2023, and 2022, the Company had United States federal net operating loss carry-forwards of approximately \$5.4 million and \$3.3 million, respectively. The United States federal net operating loss carry-forwards were generated in the tax years from 2020 to 2023 with an unlimited carry-forward period. As of December 31, 2023, and 2022, the Company had U.S. state net operating loss carry-forwards of approximately \$1.8 million and \$3.3 million, respectively. The U.S. state net operating loss carry-forwards were generated in the tax years from 2021 to 2022 expiring at various dates through 2042.

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The Company has no uncertain tax positions, or penalties and interest accrued, that if recognized would reduce net operating loss carry-forwards or affect tax expense.

The Company files tax returns as prescribed by the tax laws in the United States and United Kingdom in which they operate. In the normal course of business, the Company is subject to examination by the federal jurisdiction based on the statute of limitations. As of December 31, 2023, open years related to the United States and United Kingdom are 2020 to 2022.

The Company has no open tax audits with any taxing authority as of December 31, 2023. As of December 31, 2023 and December 31, 2022, the Company had no accrued interest and penalties related to uncertain tax positions and no amounts have been recognized in the Company's statements of operations.

11. DEFINED CONTRIBUTION PENSION:

The Company operates a defined contribution pension scheme. The assets of the scheme are held separately from those of the Company in an independently administered fund. The pension cost charge represents contributions payable by the Company to the fund. Pension cost is included in the consolidated statements of operations as follows:

<i>(in thousands)</i>	Year Ended December 31,	
	2023	2022
Research and development	\$ 90	\$ 108
Selling, general and administration	65	52
Total	\$ 155	\$ 160

As of December 31, 2023, there was \$5 thousand owed to the pension scheme that is recorded under accounts payable and accrued expenses on the consolidated balances sheets. As of December 31, 2022, there was \$1 thousand owed to the pension scheme.

12. FAIR VALUE MEASUREMENTS:

The table below presents activity within Level 3 of the fair value hierarchy, our liabilities carried at fair value for the year ended December 31, 2023:

<i>(in thousands)</i>	<u>Warrant Liability</u>
Balance at January 1, 2023	\$ —
Fair value of warrant issued in Private Placement Offering	1,837
Total change in the liability included in earnings	(465)
Balance at December 31, 2023	\$ 1,372

As disclosed in Note 8 of the Company's consolidated financial statements, the Company allocated part of the proceeds of private placement of the Company's Series A-1 Preferred Stock and Series A-2 Preferred Stock to warrant liability issued in connection with the transaction. The valuations of the warrants were determined using option pricing models. These models use inputs such as the underlying price of the shares issued at the measurement date, expected volatility, risk free interest rate and expected life of the instrument. Since our common stock was not publicly traded until February 2022 there has been insufficient volatility data available. Accordingly, we have used an expected volatility based on historical common stock volatility of our peers. The Company has accounted for them as derivative instruments in accordance with ASC 815, adjusting the fair value at the end of each reporting period.

SMARTKEM, INC. AND SUBSIDIARIES
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The fair value of the common warrants at December 31, 2023, June 22, 2023 and June 14, 2023 was determined by using option pricing models assuming the following:

	<u>December 31, 2023</u>	<u>June 22, 2023</u>	<u>June 14, 2023</u>
Expected term (years)	4.46	5.00	5.00
Risk-free interest rate	3.81%	3.95%	3.98%
Expected volatility	50.0%	50.0%	50.0%
Expected dividend yield	0.0%	0.0%	0.0%

Additionally, the Company has determined that the warrant liability should be classified within Level 3 of the fair-value hierarchy by evaluating each input for the option pricing models against the fair-value hierarchy criteria and using the lowest level of input as the basis for the fair-value classification as called for in ASC 820. There are six inputs: closing price of SmartKem stock on the day of evaluation; the exercise price of the warrants; the remaining term of the warrants; the volatility of the Company’s stock over that term; annual rate of dividends; and the risk-free rate of return. Of those inputs, the exercise price of the warrants and the remaining term are readily observable in the warrant agreements. The annual rate of dividends is based on the Company’s historical practice of not granting dividends. The closing price of SmartKem stock would fall under Level 1 of the fair-value hierarchy as it is a quoted price in an active market (ASC 820-10). The risk-free rate of return is a Level 2 input as defined in ASC 820-10, while the historical volatility is a Level 3 input as defined in ASC 820. Since the lowest level input is a Level 3, the Company determined the warrant liability is most appropriately classified within Level 3 of the fair value hierarchy.

The following tables present information about the Company’s financial assets and liabilities that have been measured at fair value as of December 31, 2023 and indicate the fair value hierarchy of the valuation inputs utilized to determine such fair value. We had no movement in or out of level 3 during the year. In general, the fair values were determined using Level 3:

<u>Description</u>	<u>Quoted Prices in Active Markets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Unobservable Inputs (Level 3)</u>	<u>December 31, 2023</u>
Liabilities:				
Warrant liability	\$ —	\$ —	\$ 1,372	\$ 1,372
Total liabilities	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,372</u>	<u>\$ 1,372</u>

13. RELATED PARTY TRANSACTIONS:

On January 27, 2022, we sold an aggregate of 28,572 shares of our common stock at a purchase price of \$70.00 per share to Octopus Titan VCT plc and Octopus Investments Nominees Limited in accordance with the Letter Agreement, dated as of February 23, 2021, between the Company and Octopus Titan VCT plc and certain related parties. During the year ended December 31, 2022, the Company reimbursed an owner for legal fees and other expenses as a result of the Octopus Share Purchase. The reimbursement of these fees for services resulted in an expense of \$11 thousand for the year ended December 31, 2022 and there was zero payable as of December 31, 2022.

SMARTKEM, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements

14. SUBSEQUENT EVENTS:

Consent, Conversion and Amendment Agreement

On January 26, 2024, the Company entered into a Consent, Conversion and Amendment Agreement (the “Consent Agreement”) with each holder of the Series A-1 Preferred Stock (each a “Holder” and together, the “Holders”). Pursuant to the Consent Agreement, each Holder converted, subject to the terms and conditions of the Consent Agreement, 90% of its Series A-1 Preferred Stock (the “Conversion Commitment”) into shares of Common Stock or Class C warrants (each a “Class C Warrant”) covering the shares of Common Stock that would have been issued to such Holder but for the Beneficial Ownership Limitation (the “Exchange”). The Class C Warrants have an exercise price of \$0.0001, were exercisable upon issuance and will expire when exercised in full.

Under the Consent Agreement, the Company issued (i) 412,293 shares of Common Stock and (ii) Class C Warrants to purchase up to 726,344 shares of Common Stock upon the conversion or exchange of an aggregate of 9,963 shares of Series A-1 Preferred Stock. 1,106 shares of Series A-1 Preferred Stock remain outstanding after giving effect to the transactions contemplated by the Consent Agreement.

Pursuant to the Consent Agreement, the Company and the Holders agreed to amend and restate the Certificate of Designation of Preferences, Rights and Limitations for the Series A-1 Preferred Stock (the “Amended and Restated Series A-1 Certificate of Designation”) to (i) make certain adjustments to reflect the Reverse Split, (ii) remove all voting rights, except as required by applicable law, (iii) increase the stated value of the Series A-1 Preferred Stock to \$10,000 from \$1,000, and (iv) adjust the conversion price of the Series A-1 Preferred Stock to \$87.50 as a result of the increase in stated value. The Consent Agreement, the Registration Rights Agreement, the Amended and Restated Series A-1 Certificate of Designation and the form of Class C Warrant, are attached as Exhibits 10.1, 10.2, 3.1 and 4.2 to the Form 8-K files with the SEC on January 29, 2024.

2021 Plan

Under the evergreen adjustment provisions of the 2021 Plan, on January 1, 2024, the number of shares of the Company’s common stock available for issuance under the 2021 Plan was increased by 35,586 or four percent (4%) of the total number of shares of Common Stock outstanding on December 31, 2023. After giving effect to the increase, the total number of shares of Common Stock that may be issued under the 2021 Plan is 778,692.

On January 31, 2024, the Company granted its employees a total 3,400 shares of common stock. The shares were issued pursuant to the 2021 Plan.

Consultant Shares

In March 2024, 50,000 shares of our common stock were issued to a vendor in consideration for services to be provided.

New CPIIS Framework Agreement

On March 22, 2024 we executed a new Framework Agreement with CPIIS for a twelve-month term commencing on April 1, 2024.

ITEM 9. Changes In And Disagreements With Accountants On Accounting And Financial Disclosure

None.

Item 9A. Controls and Procedures.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well-designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosures.

As of the end of the year covered by this Report, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) pursuant to Rule 13a-15 of the Exchange Act. Based upon, and as of the date of, this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures as of December 31, 2023, were effective.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) and Rule 15d-15(f) under the Exchange Act). Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our internal control over financial reporting as of the end of the period covered by this Report, based on the criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that, as of December 31, 2023, our internal control over financial reporting was effective.

Changes in Internal Control over Financial Reporting

In connection with the preparation of our financial statements for the second quarter of 2023, a material weakness in our internal control over financial reporting was identified relating to the complex financial reporting and accounting associated with the June 2023 PIPE, a non-cash item. None of the Company's filed financial statements were impacted. Management implemented measures designed to ensure that the control deficiency contributing to the material weakness was remediated, such that the controls are designed, implemented, and operating effectively. The remediation actions included the enhancement of control activity evidence, improvement of management review controls, and recording of the fair value of the warrant liability. In addition to the reviews the Company was already performing on the valuation models provided by the outside consultants, the Company has implemented one additional

step in its review process. The initial review is conducted by the VP, Finance and with the CFO performing a final review and approving the valuation before the entry is booked.

Other than the changes to remediate the material weaknesses noted above, there was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fiscal quarter ended December 31, 2023, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our registered public accounting firm pursuant to an exemption for nonaccelerated filers and emerging growth companies from the internal control audit requirements of Section 404(b) of the Sarbanes-Oxley Act.

Item 9B. Other Information.

None of the Company's directors and officers adopted, modified, or terminated a Rule 10b5-1 trading arrangement or a non-Rule 10b5-1 trading arrangement during the Company's fiscal quarter ended December 31, 2023 (each as defined in Item 408 of Regulation S-K under the Securities Exchange Act of 1934, as amended).

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not Applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The following table sets forth the names, positions and ages of our executive officers and directors as of March 27, 2024:

Name	Position	Age
Ian Jenks	Chairman of the Board, Chief Executive Officer and President	69
Barbra C. Keck	Chief Financial Officer	46
Beverley Brown, Ph.D.	Chief Scientist	62
Simon Ogier, Ph.D.	Chief Technology Officer	49
Klaas de Boer ⁽¹⁾⁽²⁾⁽³⁾	Director	58
Steven DenBaars, Ph.D. ⁽¹⁾⁽²⁾⁽³⁾	Director	61
Melisa Denis ⁽¹⁾⁽²⁾⁽³⁾	Director	60
Sriram Peruvemba	Director	58

⁽¹⁾ Member of the Audit Committee.

⁽²⁾ Member of the Compensation Committee.

⁽³⁾ Member of the Corporate Governance and Nominating Committee.

Executive Officers

Ian Jenks has served as our Chief Executive Officer and President since December 2017 and as a member of our board of directors since February 2021. Mr. Jenks has more than 30 years of board-level experience in the industrial technology industry and has served as chief executive officer of companies operating in the United States and Europe. Mr. Jenks founded and since August 2010 has acted as the chief executive officer of Ian Jenks Limited, a consulting company providing consulting services to companies in the industrial technology industry. Mr. Jenks's past directorships include Techstep ASA, a provider of managed mobile services in the Nordics, Paysafe plc., an international provider of payment processing services, and Brady plc, a provider of commodity trading software. Mr. Jenks has also served and continues to serve as a director of a number of private companies. Mr. Jenks received a B.Sc. in Aeronautical Engineering from Bristol University. We believe that Mr. Jenks' significant management experience and experience in the technology industry qualify him to serve on our board of directors.

Barbra C. Keck has served as our Chief Financial Officer since December 2022 and has served as a member of our board of directors from February 2021 to November 2022. From February 2021 to December 2022, Ms. Keck served as the chief financial officer of Deverra Therapeutics, Inc., a developer of cell therapies. From January 2009 until May 2020, she held positions of increasing responsibility at Delcath Systems, Inc., an interventional oncology company, starting as controller and ultimately becoming a senior vice president in March 2015 and chief financial officer in February 2017. Ms. Keck received an M.B.A. in Accountancy from Baruch College and a Bachelor of Music in Music Education from the University of Dayton. We believe that Ms. Keck's significant management experience, including as our Chief Financial Officer, qualifies her to serve on our board of directors.

Beverley Brown, Ph.D. has served as our Chief Scientist since July 2014. She provides services to us through her consulting company, B Brown Consultants Ltd. Prior to joining our company, she held a number of research and development positions with increasing responsibilities at Imperial Chemical Industries Ltd., Zeneca Group PLC and at the Avecia Group PLC. She formed BAB Consultants Ltd in 2006 and for approximately eight years provided consulting services to a number of chemical companies, as well as to the U.K. government and CPI. Dr. Brown has worked in the field of organic semiconductor technology and in the area of printable electronics for almost 20 years. Dr. Brown holds a Ph.D. in Organic Chemistry from the University of Glasgow.

Simon Ogier, Ph.D. has served as our Chief Technology Officer since June 2019. From August 2015 to June 2019 Dr. Ogier was CTO at NeuDrive Limited, a developer of organic semiconductor materials for sensor and other electronic applications, where he was responsible for the development of processes to fabricate OTFTs and to integrate them into biosensor devices. From April 2007 to July 2015, Dr. Ogier was Head of Research and

Development within the U.K.'s Printable Electronics Technology Centre ("PETEC") at CPI. He was responsible for the establishment of the PETEC facility and for developing the technical programs of work to build a capability within the U.K. for printed/plastic electronics processing. Dr. Ogier is a member of the IEC TC119 standards committee for Printed Electronics, leading the development of international standard IEC62899-203 (Semiconductor Ink) and is a Fellow of the Institute of Physics. Dr. Ogier has over 19 years of experience developing high performance organic semiconductors for transistor applications. Dr. Ogier has co-authored a number of journal articles and is a co-inventor on a number of patents families. He received a bachelor's degree and Ph.D. in Physics from the University of Leeds.

Non-Employee Directors

Klaas de Boer has served as a member of our board of directors since February 2021 and has served as a member of the board of directors of SmartKem Limited since 2017. From January 2008 until June 2021, Mr. de Boer served as the managing partner of Entrepreneurs Fund Management LLP, a venture capital firm. Mr. de Boer served as a director of Lifeline Scientific Inc., Heliocentris Energy Solutions AG and serves as chair of AIM listed Xeros Technology Group plc. Mr. de Boer has been a venture capitalist for more than 20 years. Mr. de Boer received his M.Sc. degree in Applied Physics from Delft University of Technology and his M.B.A. from INSEAD. We believe that Mr. de Boer's venture capital experience, experience with complex technology companies and previous experience as a director of publicly traded companies qualify him to serve on our board of directors.

Steven DenBaars has served as a member of our board of directors since June 2022. Professor DenBaars is a Distinguished Professor of Materials and Co-Director of the Solid-State Lighting and Energy Electronics Center at University of California, Santa Barbara. Professor DenBaars joined UCSB in February 1991, and currently holds the Mitsubishi Chemical Chair in Solid State Lighting and Displays. He has served on the board of directors of Akoustis Technologies, Inc. (NASDAQ:AKTS), a developer and manufacturer of radio frequency filters for mobile devices since May 2015 and has served on its technology committee since July 2017. He has also been a member of the board of directors of Aeluma, Inc., a privately held start-up engaged in the manufacture high performance sensors for mobile devices and vehicles, since June 2021. Professor DenBaars was formerly a co-founder and board member of privately held technology start-up companies, Soraa Inc. and Soraa Laser Diode Inc. Professor DenBaars has a Bachelor of Science in Metallurgical Engineering from the University of Arizona and a Master of Science and a Ph.D. in Material Science and Electrical Engineering from the University of Southern California. Professor DenBaars is a member of the National Academy of Engineering, and a Fellow of IEEE and National Academy of Inventors. We believe that Professor DenBaars's years of experience in the electronics industry and his extensive research involving semiconductors qualify him to serve on our board of directors.

Melisa A. Denis has served as a member of our board of directors since November 2023. Since November 20, 2020, she has served as a member of the audit committee and mergers and acquisitions committee of the board of directors of Hydrofarm Holdings Group, Inc. (NASDAQ: HYFM). Ms. Denis previously served as a partner at KPMG from 1998 to October 2020, including as National Tax Leader for Consumer Goods and as the leader of the Consumer and Industrial Market for Dallas. Ms. Denis has served as a member of the Board of Regents and chair of the audit committee for the University of North Texas System since January 2020, an advisory board member of Women Corporate Directors since 2011, and a board member of Enactus, a global non-profit, since 2019. Ms. Denis is a Certified Public Accountant and received her degree in accounting and her Bachelor of Science and Master of Science from the University of North Texas. We believe that Ms. Denis's accounting and public company experience qualifies her to serve on our board of directors.

Sriram Peruvemba has served as a member of our board of directors since July 2023. From September 2019 until his appointment to the Board, Mr. Peruvemba served as a consultant to the Company. Since July 2014, he has served as the chief executive officer of Marketer International Inc., a consulting services firm specializing in the global high-tech industry. Prior to that, from December 2009 to April 2013, Mr. Peruvemba was the chief marketing officer for E Ink Holdings, a company specializing in electronic paper displays. Since June 2020, Mr. Peruvemba has served on the board of directors of WiSA Technologies, Inc. (NASDAQ: WISA), an audio wireless technology company. He has also served as a board member of Visionect d.o.o, an electronics company in Slovenia since September 2017. Mr. Peruvemba has also served as chairman of the board of Omniplay, a Montreal-based electronics and display company since May 2020 and as board member of Edghegog Advanced Technologies an anti-reflective technology company in

Canada since January 2023. Mr. Peruvemba has a B.S. from R. V. College of Engineering, Bangalore, an M.B.A. from Barton School of Business, WSU and a post-graduate diploma in management from Indira Gandhi National University. We believe that Mr. Peruvemba's experience in the technology industry qualifies him to serve on our board of directors.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of our code is posted on our website, which is located www.smartkem.com. We intend to disclose future amendments to certain provisions of our code of business conduct and ethics, or waivers of such provisions applicable to any principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, and our directors, on our website identified above or in filings with the SEC.

Director Independence

Pursuant to the rules of Nasdaq, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Under such rules, our board of directors has determined that all current members of the board of directors are independent, except Mr. Jenks and Mr. Peruvemba. Mr. Jenks is not an independent director under these rules because he is an executive officer of the Company. Mr. Peruvemba is not an independent director under these rules, because, prior to his appointment to the board of directors, he served as a consultant to the Company and had earned compensation from the Company in excess of \$120,000 during any period of twelve consecutive months within the last three years. Ms. Keck, who resigned from the board of directors in November of 2023, was not an independent director under these rules because she is an executive officer of the Company. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. There are no family relationships among any of our directors and executive officers.

Classified Board of Directors

In accordance with the terms of our amended and restated certificate of incorporation, our board of directors is divided into three staggered classes of directors as follows:

- Class I director is Mr. DenBaars;
- Class II director is Mr. de Boer and Mr. Peruvemba; and
- Class III directors are Mr. Jenks and Ms. Denis.

At each annual meeting of the stockholders, a class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the annual meeting of stockholders to be held during the years 2025 for the Class I director, 2026 for the Class II directors and 2024 for Class III directors.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that the number of directors will be fixed from time to time by a resolution of a majority vote of the directors then in office. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the total number of our directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent stockholder efforts to effect a change of our management or a change in control.

Board Committees

As our common stock is not presently listed for trading or quotation on a national securities exchange, we are not presently required to have board committees. However, our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which operates pursuant to a charter adopted by the board of directors. Members serve on these committees until their resignation or until otherwise determined by the board of directors. The composition and functioning of all of our committees complies with all applicable requirements of the Sarbanes-Oxley Act and SEC rules and regulations and, at the time, if any, that shares of our common stock are listed on Nasdaq or another national securities exchange, we intend to comply with any applicable requirements of such exchange with respect to the composition of our committees of the board of directors.

Audit Committee

Ms. Denis, Mr. DenBaars and Mr. de Boer serve on the audit committee, which is chaired by Ms. Denis. Our board of directors has determined that each has sufficient knowledge in financial and auditing matters to serve on the audit committee and that each are “independent” for audit committee purposes as that term is defined under SEC and Nasdaq Marketplace Rules. The board of directors had designated Ms. Denis as an “audit committee financial expert,” as defined under the applicable rules of the SEC.

The audit committee’s responsibilities include, but are not limited to:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending, based upon the audit committee’s review and discussions with management and our independent registered public accounting firm, whether our audited financial statements will be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and making recommendations to our board of directors regarding all such transactions; and
- reviewing earnings releases.

Compensation Committee

Mr. DenBaars, Mr. de Boer and Ms. Denis serve on the compensation committee, which is chaired by Mr. DenBaars. Our board of directors has determined that each member of the compensation committee is “independent” as defined under the Nasdaq Marketplace Rules. The compensation committee’s responsibilities include, but are not limited to:

- annually reviewing and approving the corporate goals and objectives to be considered in determining the compensation of our Chief Executive Officer;
- evaluating the performance of our Chief Executive Officer in light of such corporate goals and objectives and based on such evaluation: (i) recommending to the board of directors the cash compensation of our Chief Executive Officer and (ii) reviewing and recommending to the independent directors on the board of directors regarding grants and awards to our Chief Executive Officer under equity-based plans;
- reviewing and approving the cash compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the Nasdaq Marketplace Rules;
- reviewing and approving our policies and procedures for the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors;
- preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement; and
- reviewing and approving the retention, termination or compensation of any consulting firm or outside advisor to assist in the evaluation of compensation matters.

Nominating and Corporate Governance Committee

Mr. de Boer, Mr. DenBaars, and Ms. Denis serve on the nominating and corporate governance committee, which is chaired by Mr. de Boer. Our board of directors has determined that each member of the nominating and corporate governance committee is “independent” under the Nasdaq Marketplace Rules.

The nominating and corporate governance committee’s responsibilities include, but are not limited to:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board’s committees;
- periodically reviewing and reassessing the adequacy of the code of business conduct and ethics and the corporate governance guidelines; and
- overseeing the evaluation of our board of directors and management.

Our board of directors may, from time to time, establish other committees.

Item 11. Executive Compensation

Summary Compensation Table

The following table shows the compensation awarded to or earned by our principal executive officer during the fiscal year ended December 31, 2023 and December 31, 2022, our two other most highly compensated executive officers

who were serving as executive officers as of December 31, 2023 and December 31, 2022, and up to two additional individuals for whom disclosure would have been provided but for the fact that the individual was not serving as an executive officer as of December 31, 2023. The persons listed in the following table are referred to herein as the “named executive officers.”

<u>Officer Name and Principle Position</u>	<u>Year</u>	<u>Salary</u>	<u>Bonus</u>	<u>Option Awards</u> ⁽¹⁾	<u>All Other Compensation</u> ⁽²⁾	<u>Total</u>
		\$	\$	\$	\$	\$
Ian Jenks	2023	342,333	50,000	—	17,117	409,450
<i>Chief Executive Officer</i>	2022	313,500	76,500	156,840	22,093	568,933
Barbra Keck ⁽⁴⁾	2023	314,773	37,500	—	19,800	372,073
<i>Chief Financial Officer</i>						
Beverly Brown ⁽³⁾	2023	200,093	—	—	—	200,093
<i>Chief Scientist</i>	2022	217,163	41,053	47,052	—	305,268

- (1) The amounts reported represent the aggregate grant-date fair value of the stock options awarded to the named executive officer, calculated in accordance with ASC 718. Such grant-date fair value does not take into account any estimated forfeitures related to service-based vesting conditions.
- (2) Represents our contributions to our workplace pension scheme, the 401(k) Plan (as defined below) and private healthcare insurance.
- (3) Represents consulting fees paid to Dr. Brown’s consulting company.
- (4) Includes a payment of \$14,773 for 2022 salary paid in January 2023.

In accordance with the U.K. Pensions Act 2008 (the “Pensions Act”), we have established a workplace pensions scheme available for all our employees in the UK, which is equivalent to a defined contribution plan. In accordance with the Pensions Act, all eligible employees are automatically enrolled upon joining our company unless they advise they wish to opt out. As defined by the Pensions Act, the current required contributions are 5% employee and 3% employer. We match employee contributions to a maximum of 6% of base salary. Contributions made by us vest immediately.

We sponsor a 401(k) savings plan (the “401(k) Plan”) for all eligible employees. Under the 401(k) Plan, we do make matching contributions into the 401(k) Plan other than the annual required safe harbor match.

Employment and Change in Control Agreements

We have entered into an employment agreement with Mr. Jenks (the “Jenks Employment Agreement”) dated as of February 23, 2021 (the “Commencement Time”) setting forth the terms and conditions of his employment and his expectations as our Chief Executive Officer and President. The Jenks Employment Agreement provides, among other things, for: (i) a term of three years beginning from the Commencement Time, subject to automatic renewal for successive one year terms unless either party provides sixty (60) days prior written notice of its intent not to renew; (ii) an annual base salary of \$300,000; (iii) eligibility for an annual bonus having a target of 30% of his then base salary; and (iv) in the event that Mr. Jenks’ employment is terminated without “cause” or he resigns “for good reason” (each as defined in the Jenks Employment Agreement), or his employment is terminated at the end of the any term, as the result of our company providing notice of non-renewal, subject to execution and non-revocation of a release of claims in our favor, Mr. Jenks’ will be eligible for: (a) payments equal to six (6) months of Mr. Jenks’ base salary (at the rate in effect immediately prior to the date of termination), less applicable withholdings and authorized deductions, to be paid in equal installments in accordance with our customary payroll practices), (b) a pro-rata bonus for the year of termination and (c) in the event Mr. Jenks timely elects to continue his health insurance employee benefits pursuant to COBRA, monthly payments equal to the applicable COBRA costs for a period of six (6) months. Mr. Jenks is subject to non-compete and non-solicit provisions, which applies during the term of his employment and for a period of 12 months following termination of his employment for any reason. The Jenks Employment Agreement also contains customary confidentiality and assignment of inventions provisions. In September 2023, the compensation

committee approved an increase to Mr. Jenks' annual base salary to \$400,000 from \$300,000, effective September 1, 2023, and increased Mr. Jenks' annual target bonus percentage to 50% of his base salary from 30% of his base salary.

On March 29, 2023, we entered into an employment agreement with Ms. Keck (the "Keck Employment Agreement") setting forth the terms and conditions of her employment and her expectations as Chief Financial Officer. The Keck Employment Agreement provides, among other things, for: (i) a term of three years beginning from December 14, 2022, the date of Ms. Keck's appointment as Chief Financial Officer, subject to automatic renewal for successive one year terms unless either party provides sixty (60) days prior written notice of its intent not to renew; (ii) an annual base salary of \$300,000 (subject to adjustment upwards to \$350,000 in the board of director's discretion, but at the latest immediately upon the listing of the Company's common stock on either The Nasdaq Stock Market or the NYSE American Exchange); (iii) eligibility for an annual bonus having a maximum of 40% of her then base salary; and (iv) in the event that Ms. Keck's employment is terminated without "cause" or she resigns "for good reason" (each as defined in the Keck Employment Agreement), or her employment is terminated at the end of the any term as the result of the Company providing notice of non-renewal, subject to execution and non-revocation of a release of claims in the Company's favor, Ms. Keck will be eligible for: (a) payments equal to twelve (12) months of her base salary (at the rate in effect immediately prior to the date of termination), less applicable withholdings and authorized deductions, to be paid in equal installments in accordance with our customary payroll practices), (b) a pro-rata bonus for the year of termination and (c) in the event Ms. Keck timely elects to continue any health insurance employee benefits pursuant to COBRA, monthly payments equal to the applicable COBRA costs for a period of six (6) months. Ms. Keck is subject to non-compete and non-solicit provisions, which apply during the term of her employment and for a period of twelve (12) months following termination of her employment for any reason. The Keck Employment Agreement also contains customary confidentiality and assignment of inventions provisions.

We entered into a consultancy agreement with B Brown Consultants Ltd, Dr. Brown's consultancy company, dated as of February 23, 2021 (the "Brown Consultancy Agreement"). The Brown Consultancy Agreement provides, among other things, for: (i) Dr. Brown (or, with the approval of our board a substitute) is to provide defined services to SmartKem; (ii) the Brown Consultancy Agreement will continue for a fixed term of three years unless terminated (a) by either party giving not less than 12 months' prior notice in writing, or (b) by SmartKem for "cause"; and (iii) a monthly fee, payable monthly in arrears within 30 days of receipt of an invoice, by reference to daily rate of \$1,119 plus applicable value added taxes and an hourly rate of \$139.90 plus applicable value added taxes. SmartKem also agreed to reimburse certain expenses incurred in connection with the services to be provided under the Brown Consultancy Agreement.

One-Time Bonuses

On September 6, 2023, the compensation committee, approved one-time bonuses (the "Bonuses") to Mr. Jenks and Ms. Keck in amounts equal to \$100,000 and \$75,000, respectively. Fifty percent of the Bonuses were paid upon approval, and the remaining 50% will be paid upon the listing of the shares of the Company's common stock on the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange.

Outstanding Equity Awards at December 31, 2023

The following table presents information regarding the outstanding options held by each of our named executive officers as of December 31, 2023.

Name	Grant Date	Type	Option Awards		Option Exercise Price (\$)	Option Expiration Date ⁽¹⁾
			Number of Securities Underlying Unexercised Options (#)			
			Exercisable	Unexercisable		
Ian Jenks	03/31/2021	ISO	11,729	5,332	\$70.00	03/30/2031
	08/07/2022	ISO	1,518	2,768	\$70.00	08/06/2032
Barbra Keck	03/31/2021	NQSO	354	161	\$70.00	03/30/2031
	08/07/2022	NQSO	61	111	\$70.00	08/06/2032
	12/14/2022	NQSO	3,215	9,643	\$70.00	12/13/2032
Beverly Brown ⁽²⁾	02/23/2021	NQSO	5,089	—	\$0.035	02/22/2031
	03/31/2021	ISO	3,666	1,666	\$70.00	03/30/2031
	08/07/2022	NQSO	455	831	\$70.00	08/06/2032

(1) The expiration date shown is the normal expiration date and the latest date that options may be exercised subject to certain extraordinary events.

(2) Consists of SmartKem Unapproved Options held by Dr. Brown's consulting company.

Director Compensation

The following table sets forth information concerning the compensation paid to our directors during 2023.

Director Name	Year	Cash Compensation	Stock Option Awards	All Other Compensation	Total
		\$	\$	\$	\$
Klaas de Boer ⁽¹⁾	2023	27,000	—	—	27,000
Steven DenBaars ⁽²⁾	2023	36,000	—	—	36,000
Sri Peruvemba ⁽³⁾	2023	9,000	—	—	9,000
Melisa Denis ⁽⁴⁾	2023	—	—	—	—
Barbra Keck ⁽⁵⁾	2023	—	—	—	—

(1) The aggregate number of shares of common stock underlying stock options outstanding as of December 31, 2023 held by Mr. de Boer was 687.

(2) The aggregate number of shares of common stock underlying stock options outstanding as of December 31, 2023 held by Mr. DenBaars was 515.

(3) The aggregate number of shares of common stock underlying stock options outstanding as of December 31, 2023 held by Mr. Peruvemba was 1,887.

(4) Ms. Denis was appointed to our board of directors in November 2023. The aggregate number of shares of common stock underlying stock options outstanding as of December 31, 2023 held by Ms. Denis was zero.

(5) Ms. Keck, our Chief Financial Officer, resigned as a member of our board of directors in November 2023. Ms. Keck, who is our Chief Financial Officer, received no additional compensation for services provided as a director in 2023. The aggregate number of shares of common stock underlying stock options outstanding as of December 31, 2023 held by Ms. Keck was 13,545. Options to purchase 12,858 shares of common stock were issued to Ms. Keck in connection with her appointment as our Chief Financial Officer.

Non-Employee Director Compensation

On March 31, 2021, the board of directors, upon recommendation of the Compensation Committee, adopted a non-employee director compensation policy (the "Policy"), pursuant to which each non-employee employee director is entitled to receive an annual cash retainer of \$36,000. In addition, each non-employee director was initially granted options to purchase 18,000 shares of common stock, which will vest 25% on the one-year anniversary of the grant date and the remainder in equal monthly installments over three years and is entitled in each subsequent year to receive

options to purchase 6,000 shares of common stock, which will vest on the one-year anniversary of the grant date. All equity awards granted pursuant to Policy are subject to the terms and conditions of the Company’s 2021 Equity Incentive Plan and/or the UK Tax-Advantaged Sub-Plan.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Securities Authorized for Issuance Under Equity Compensation Plans

General

The 2021 Equity Incentive Plan which includes a UK Tax-Advantaged Sub-Plan for employees of SmartKem based in the United Kingdom (the “2021 Plan”) was approved by our board of directors and stockholders on February 23, 2021. The general purpose of the 2021 Plan is to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to our employees, directors, and consultants, and to promote the success of our business.

The following table provides information with respect to our compensation plans under which equity compensation was authorized as of December 31, 2023.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column a) c) ⁽²⁾⁽³⁾
Equity compensation plans approved by security holders ⁽¹⁾	70,411	\$ 63.07	676,565
Equity compensation plans not approved by security holders	—	\$ —	—
Total	70,411	\$ 63.07	676,565

⁽¹⁾ The amounts shown in this row include securities under the 2021 Plan.

⁽²⁾ In accordance with the “evergreen” provision in our 2021 Plan, an additional 35,586 shares were automatically made available for issuance on the first day of 2024, which represents 4.0% of the number of shares outstanding on December 31, 2023; these shares are included in this calculation.

⁽³⁾ At the 2023 Annual Meeting, the Company’s stockholders approved an amendment (the “2021 Plan Amendment”) to the Company’s 2021 Plan, increasing the number of the shares of Common Stock, reserved for issuance under the 2021 Plan from 125,045 shares to 743,106 shares. The Board had previously approved the 2021 Plan Amendment, subject to stockholder approval.

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of March 27, 2024, by:

- each person (or group of affiliated persons) who is known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our directors and current executive officers as a group.

We have determined beneficial ownership in accordance with SEC rules. Except as indicated in the footnotes below, and subject to applicable community property laws, we believe, based on the information furnished to us, the persons and entities named in the table below have sole voting and investment power with respect to all shares shown as beneficially owned by them. The percentage of beneficial ownership is based on 1,305,361 shares of our common

stock outstanding as of March 27, 2024. In computing the number of shares beneficially owned by a person or entity and the percentage ownership of that person or entity, we deemed to be outstanding all shares of our common stock as to which such person or entity has the right to acquire within 60 days of March 24, 2023, through the exercise of any option or other right. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person or entity. Unless otherwise noted below, the address of each beneficial owner named below is c/o SmartKem, Inc., Manchester Technology Center, Hexagon Tower, Delaunays Road, Blackley Manchester, M9 8GQ U.K.

Name of Beneficial Owner	Shares Beneficially Owned (#)	Percentage Beneficially Owned (%)
5% Stockholders:		
Octopus Investments Limited, 33 Holburn, London EC1N 2HT ⁽¹⁾	213,602	15.8%
Entrepreneurs Fund LP, 2nd Floor, Windward House, La Route de la Liberation, St Helier, Jersey, JE2 3BQ, The Chanel Islands ⁽²⁾	102,436	7.6%
Orin Hirschman, 6006 Berkeley Ave., Baltimore, MD 21209 ⁽³⁾	134,180	9.9%
The Hewlett Fund, LP ⁽⁴⁾	134,180	9.9%
Five Narrow Lane ⁽⁵⁾	134,180	9.9%
Executive Officers and Directors:		
Ian Jenks ⁽⁶⁾	25,626	1.9%
Barbra Keck ⁽⁷⁾	5,130	*
Beverly Brown ⁽⁸⁾	10,460	*
Simon Ogier ⁽⁹⁾	10,459	*
Klaas de Boer ⁽¹⁰⁾	17,721	1.3%
Steven DenBaars ⁽¹¹⁾	1,051	*
Sri Peruvemba ⁽¹²⁾	1,987	*
Melisa Denis ⁽¹³⁾	100	*
All directors and current executive officers as a group:	72,534	5.2%

* Less than 1%

- (1) Consists of 211,895 shares of our common stock held by Octopus Titan VCT Plc and 1,707 shares of our common stock held by Octopus Investments Nominees Limited (collectively, the “Octopus Funds”). Octopus Investments Limited (“Octopus”) is the sole manager of each of the Octopus Funds. Through Octopus’s position with Octopus Funds, Octopus is deemed to control the voting and disposition of the shares of our common stock held by the Octopus Funds. Octopus disclaims beneficial ownership of the shares of our common stock held by the Octopus Funds except to the extent of its pecuniary interest therein.
- (2) Consists of 102,436 shares of our common stock held by Entrepreneurs Fund LP (“Entrepreneurs Fund”). Entrepreneurs Fund General Partner Limited (the “Entrepreneurs General Partner”) is the general partner of the Entrepreneurs Fund. By virtue of such relationship, Entrepreneurs General Partner may be deemed to have voting and investment power with respect to the securities held by Entrepreneurs Fund. Entrepreneurs Fund General Partner disclaims beneficial ownership of the shares of our common stock held by Entrepreneurs Fund except to the extent of its indirect pecuniary interest therein.
- (3) Based upon information contained in a Schedule 13G/A filed by AIGH Capital Management, LLC (“AIGH CM”) and Mr. Orin Hirschman on February 7, 2024 and other information known to the Company. Consists of shares of our common stock held by AIGH Investment Partners, L.P. (“AIGH LP”), WVP Emerging Manger Onshore Fund, LLC (“WVP”) and by AIGH Investment Partners, LLC (“AIGH LLC”). Excludes, after giving effect to the 9.99% beneficial ownership blockers, shares of common stock issuable upon the conversion of Series A-1 Preferred Stock and the exercise of certain warrants. Mr. Hirschman is the managing member of AIGH CM, which is an advisor or sub-advisor with respect to the securities held by AIGH LP and WVP, and president of AIGH LLC. Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM and directly by AIGH LP and AIGH LLC.
- (4) Based upon information known to the Company. Excludes, after giving effect to the 9.99% beneficial ownership blockers, shares of common stock issuable upon the conversion of Series A-1 Preferred Stock and the exercise of certain warrants.

- (5) Based upon information contained in a Schedule 13G filed by Five Narrow Lane LP on February 1, 2024 and other information known to the Company. Excludes, after giving effect to the 9.99% beneficial ownership blockers, shares of common stock issuable upon the conversion of Series A-1 Preferred Stock and the exercise of certain warrants.
- (6) Includes 10,511 shares of our common stock held and options to acquire 15,115 shares of our common stock exercisable within 60 days of March 28, 2024.
- (7) Includes of 100 shares of our common stock held and options to acquire 5,030 shares of our common stock exercisable within 60 days of March 28, 2024.
- (8) Includes 672 shares of our common stock held by B Brown Consultants Ltd and options to acquire 9,788 shares of our common stock exercisable within 60 days of March 28, 2024, held by Dr. Brown. Dr. Brown exercises dispositive and voting power over the securities owned by B Brown Consultants Ltd.
- (9) Includes 5,760 shares of our common stock held and options to acquire 4,699 shares of our common stock exercisable within 60 days of March 28, 2024.
- (10) Includes (i) 5,715 shares of our common stock purchased by Mr. de Boer's spouse in our private placement that closed in February 2021, (ii) options to acquire 476 shares of our common stock exercisable within 60 days of March 28, 2024, (iii) 5,715 shares of common stock issuable upon conversion of Series A-2 Preferred Stock held by Mr. de Boer's spouse (iv) 5,715 shares of common stock issuable upon exercise of certain warrants held by Mr. de Boer's spouse and (v) 100 shares of common stock held by Mr. de Boer.
- (11) Includes 815 shares of our common stock held and options to acquire 236 shares of our common stock exercisable within 60 days of March 28, 2024.
- (12) Includes 100 shares of our common stock held and options to acquire 1,887 shares of our common stock exercisable within 60 days of March 28, 2024.
- (13) Includes 100 shares of our common stock held.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The following is a description of transactions since January 1, 2022, and each currently proposed transaction in which:

- The Company (“we”) has been or is to be a participant;
- the amount involved exceeded or will exceed the lesser of \$120,000 or 1% of our total assets at year-end for our last two completed fiscal years; and
- any of our directors, executive officers or beneficial owners of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described in the section titled “Executive Compensation.”

Consulting Agreement with Sriram Peruvemba

Prior to his appointment as a director, Mr. Peruvemba served as a consultant to the Company, pursuant to a consultancy agreement entered into on September 13, 2019, by and between the SmartKem Limited and Marketer International (“Marketer”), a company controlled by Mr. Peruvemba (the “Consulting Agreement”). During the fiscal years ended December 31, 2022 and 2021, the Company paid Marketer \$120,000 and \$130,000, respectively. From January 1, 2023 through Mr. Peruvemba's appointment to the board of directors on July 13, 2023, the Company paid Marketer \$65,000. In addition, in connection with the services provided pursuant to the Consulting Agreement, on February 23,

2021, Mr. Peruvemba was granted options to purchase 66,029 shares of the Company's common stock with an exercise price of \$2.00 per share. The options vested immediately upon grant and expire on the 10th anniversary of the date of grant. On July 12, 2023, prior to Mr. Peruvemba's appointment to the Board, the Consulting Agreement was terminated.

Registration Rights Agreement

In connection with the transactions contemplated by that certain Share Exchange Agreement with SmartKem Limited, whereby all of the equity interests in SmartKem Limited, except certain "deferred shares" which had no economic or voting rights and which were purchased by us for an aggregate purchase price of \$49.00, were exchanged for shares of our common stock and SmartKem Limited became our wholly owned subsidiary (the "Exchange"). Following the closing of the Exchange, on February 23, 2021, we sold, in a private placement (the "Offering") 290,343 shares of our common stock and pre-funded warrants to purchase up to 61,945 shares of our common stock for aggregate gross proceeds of \$24.6 million pursuant to a private placement offering of our common stock (or pre-funded warrants in lieu thereof) at a purchase price of \$70.00 per share or \$69.65 per pre-funded warrant, as applicable. Pursuant to the offering, we offered to certain purchasers whose purchase of shares of our common stock in the offering would otherwise have resulted in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the closing of the offering, the opportunity to purchase, if any such purchaser so chose, pre-funded warrants in lieu of shares of our common stock that would otherwise have resulted in such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock, at a purchase price of \$69.65 per pre-funded warrant. Each pre-funded warrant is exercisable for one share of our common stock at an exercise price of \$0.35 per share. In connection with the Exchange and the Offering, we entered into a registration rights agreement (the "Registration Rights Agreement"), pursuant to which we agreed to file, no later than 60 calendar days from the closing of the Offering a registration statement covering, among other things, (i) the shares of our common stock issued in the Offering (including shares of our common stock issuable upon the exercise of the pre-funded warrants sold in the Offering); (ii) the shares of our common stock issuable upon exercise of the warrants issued to the placement agent in the Offering; (iii) the shares of our common stock issued or issuable as a result of the Exchange; (iv) 71,429 shares of our common stock held by the stockholders of Parasol prior to the Exchange; and (v) 1,429 shares of our common stock issued to certain advisors in connection with the Exchange and the Offering ((i)-(v) collectively, the "Registrable Shares"). We must use commercially reasonable efforts to keep such registration statement effective for the earlier of (i) five years from the date it is declared effective by the SEC, (ii) the date on which all Registrable Shares have been transferred other than to certain enumerated permitted assignees under the Registration Rights Agreement, or (iii) the date on which no Registrable Securities are outstanding. All of our directors, except Mr. DenBaars, Mr. Peruvemba and Ms. Denis, executive officers, except Ms. Keck and holders of more than 5% of our capital stock are parties to the Registration Rights Agreement.

Octopus Share Purchase

In connection with the Offering, we entered into an agreement with Octopus Titan VCT plc and certain related parties (the "Octopus Investors"), a holder of more than 5% of our common stock, pursuant to which the Octopus Investors agreed to purchase \$2.0 million of our common stock on the same economic terms as the shares of common stock sold in the Offering subject to the satisfaction of certain U.K related tax requirements (the "Octopus Share Purchase"). The Octopus Share Purchase was conditioned on, among other things, the requirement that our gross assets must be less than £15.0 million at the time of the purchase and less than £16.0 million after giving effect to the Octopus Share Purchase.

On January 27, 2022, we entered into a subscription agreement (the "Subscription Agreement") with the Octopus Investors effecting the Octopus Share Purchase. Pursuant to the Subscription Agreement, we issued the Octopus Investors an aggregate of 28,572 shares of common stock (the "Octopus Shares"), at a purchase price of \$70.00 per share. On January 27, 2022, we also entered into a registration rights agreement with the Octopus Investors, pursuant to which we agreed, subject to customary exceptions, to file, no later than fifteen (15) calendar days after we filed our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, a registration statement with the SEC covering the Octopus Shares. We must use commercially reasonable efforts to keep such registration statement

effective for the earlier of (i) five years from the date it is declared effective by the SEC, (ii) the date on which all Octopus Shares have been transferred other than to certain enumerated permitted assignees under the Octopus Registration Rights Agreement, or (iii) the date on which no Octopus Shares are.

June 2023 PIPE and Conversion Agreement

On June 14, 2023, we and certain investors entered into a securities purchase agreement (the “Purchase Agreement”) pursuant to which the Company sold an aggregate of (i) 9,229 shares of Series A-1 Convertible Preferred Stock at a price of \$1,000 per share (the “Series A-1 Preferred Stock”), (ii) 2,950 shares of the Company’s Series A-2 Convertible Preferred Stock at a price of \$1,000 per share (“Series A-2 Preferred Stock” and together with the Series A-1 Preferred Stock, the “Preferred Stock”), (iii) Class A Warrants to purchase up to an aggregate of 1,391,927 shares of common stock (the “Class A Warrant”), and (iv) Class B Warrants to purchase up to an aggregate of 798,396 shares of common stock (the “Class B Warrant” and together with the Class A Warrant, the “Warrants”) for aggregate gross proceeds of \$12.2 million (the “June 2023 PIPE”).

On June 22, 2023 (the “Second Closing Date”), in a second closing of the June 2023 PIPE, we sold an aggregate of (i) 1,870.36596 Series A-1 Preferred Stock, (ii) 100 shares of Series A-2 Preferred Stock, and (iii) Class A Warrants to purchase up to an aggregate of 225,190 shares of Common Stock pursuant to the Purchase Agreement for aggregate gross proceeds of \$2.0 million. In addition, 8,572 Class B Warrants were issued in lieu of cash payments for consulting services related to the offering. Each Class A Warrant has an exercise price of \$8.75 and each Class B Warrant has an exercise price of \$0.35, both subject to adjustments in accordance with the terms of the Warrants. The Warrants expire five years from the issuance date.

In connection with the June 2023 PIPE, we entered into a Registration Rights Agreement (the “2023 Registration Rights Agreement”) pursuant to which we agreed to register for resale (i) the Conversion Shares, (ii) the Class A Warrant Shares, (iii) any additional shares of Common Stock issued and issuable in connection with any anti-dilution provisions in the Preferred Stock or the Class A Warrants, (iv) any shares of Common Stock issued in lieu of cash dividends on the Series A-1 Preferred Stock and (v) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing (together, the “2023 Registrable Securities”). Under the terms of the 2023 Registration Rights Agreement, the Company is required to file a registration statement with the SEC covering the resale of the Conversion Shares and the Series A Warrant Shares on or before the 45-day anniversary of the earlier of (x) the Second Closing Date and (y) the Offering Termination Date and to use its commercially reasonable efforts to cause such registration statement to be declared effective by the SEC by the 135-day anniversary of the earlier of (x) the Second Closing Date and (y) the Offering Termination Date and to keep such registration statement continuously effective until the date that all 2023 Registrable Securities covered by such registration statement (a) have been sold, thereunder or pursuant to Rule 144, or (b) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144. The Company will be obligated to pay certain liquidated damages to the Purchasers if the Company fails to file such registration statement when required, fails to cause such registration statement to be declared effective by the SEC when required, or fails to maintain the effectiveness of such registration statement pursuant to the terms of the Registration Rights Agreement. The 2023 Registration Rights Agreement also provides the Purchasers with “piggy-back” registration rights in certain circumstances if there is not an effective registration statement covering all of the Registrable Securities.

On January 26, 2024, we entered into a Consent, Conversion and Amendment Agreement (the “Consent Agreement”) with each holder of the Series A-1 Preferred Stock. Pursuant to the Consent Agreement, each holder of Series A-1 Preferred Stock converted, subject to the terms and conditions of the Consent Agreement, 90% of its Series A-1 Preferred Stock (the “Conversion Commitment”) into shares of Common Stock, except as provided below for the Exchanging Holders (as defined below). Pursuant to the Consent Agreement, in the event the conversion of all of the Series A-1 Preferred Stock held by a Holder would have resulted in such Holder acquiring shares of Common Stock in excess of its Beneficial Ownership Limitation (as defined in the Purchase Agreement) (an “Exchanging Holder”), such Exchanging Holder agreed to (i) convert its shares of Series A-1 Preferred Stock subject to its Conversion Commitment into shares of Common Stock up to its Beneficial Ownership Limitation, and (ii) exchange all of its remaining shares of Series A-1 Preferred Stock subject to its Conversion Commitment for Class C warrants (each a

“Class C Warrant”) covering the shares of Common Stock that would have been issued to such Holder but for the Beneficial Ownership Limitation (the “Exchange”). The Class C Warrants have an exercise price of \$0.0001, were exercisable upon issuance and will expire when exercised in full. The Series C Warrants may be exercised for cash or on a cashless basis at the election of the Exchanging Holder. The Class C Warrants may not be exercised to the extent that the Exchanging Holder, together with its affiliates, would beneficially own more than 4.99% (or, at the election of the Exchanging Holder, 9.99%) of Common Stock immediately after exercise, except that upon at least 61 days’ prior notice from the Exchanging Holder to the Company, the holder may increase the beneficial ownership limitation to up to 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise. Under the Consent Agreement, we issued (i) 412,293 shares of Common Stock and (ii) Class C Warrants to purchase up to 726,344 shares of Common Stock upon the conversion or exchange of an aggregate of 9,963 shares of Series A-1 Preferred Stock.

In connection with the Consent Agreement, on January 26, 2024, we and the Holders entered into a Registration Rights Agreement (the “2024 Registration Rights Agreement”) pursuant to which the Company agreed to register for resale (i) the shares of Common Stock issuable upon exercise of the Class B Warrants and Class C Warrants (ii) any additional shares of Common Stock issued and issuable in connection with any anti-dilution provisions in the Class B Warrants and the Class C Warrants, and (iii) any securities issued or then issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing (together, the “2024 Registrable Securities”). Under the terms of the 2024 Registration Rights Agreement, the Company is required to file a registration statement with the SEC covering the resale of the 2024 Registrable Securities on or before the earlier of (x) the 45th day following the filing by the Company of its Annual Report on Form 10-K for the year ended December 31, 2023 and (y) April 11, 2024, to use its commercially reasonable efforts to cause such registration statement to be declared effective by the SEC by the 60-day anniversary of the filing date (or the 75-day anniversary of the filing date in the case of a “full review” by the SEC), and to keep such registration statement continuously effective until the date that all 2024 Registrable Securities covered by such registration statement (a) have been sold, thereunder or pursuant to Rule 144, or (b) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the Company to be in compliance with the current public information requirement under Rule 144. The Company will be obligated to pay certain liquidated damages to the Holders if the Company fails to file such registration statement when required, fails to cause such registration statement to be declared effective by the SEC when required, or fails to maintain the effectiveness of such registration statement pursuant to the terms of the 2024 Registration Rights Agreement. The 2024 Registration Rights Agreement also provides the Holders with “piggy-back” registration rights in certain circumstances if there is not an effective registration statement covering all of the Registrable Securities.

Orin Hirschman and his affiliates, The Hewlett Fund, LP and Five Narrow Lane, all of whom are beneficial holders of more than 5% of our capital stock, participated in the June 2023 PIPE. Orin Hirschman and his affiliates purchased 5,029 shares of Series A-1 Preferred Stock, Series A Warrants to purchase 574,744 shares of Common Stock and Series B Warrants to purchase 596,800 shares of Common Stock in the June 2023 PIPE for \$5.0 million. The Hewlett Fund purchased 2,500 shares of Series A-1 Preferred Stock, Series A Warrants to purchase 285,715 shares of Common Stock and Series B Warrants to purchase 160,000 shares of Common Stock in the June 2023 PIPE for \$2.5 million. Five Narrow Lane purchased 1,200 shares of Series A-1 Preferred Stock, and Series A Warrants to purchase 137,143 shares of Common Stock in the June 2023 PIPE for \$1.2 million. In connection with the June 2023 PIPE, we also issued The Hewlett Fund, LP additional Series B Warrants to purchase 42,858 shares of Common Stock pursuant to a consulting agreement.

Orin Hirschman and his affiliates, The Hewlett Fund, LP and Five Narrow Lane were also parties to the Consent Agreement and the 2024 Registration Rights Agreement. In connection with the Consent Agreement, we issued to Orin Hirschman and his affiliates Series C Warrants to purchase 469,201 shares of Common Stock and The Hewlett Fund Series C Warrants to purchase 257,143 shares of Common Stock.

Policies and Procedures for Related Party Transactions

Our board of directors has adopted a policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any class of our common stock, any members of the immediate family of any of the foregoing persons and any firms, corporations or other entities in which any of the foregoing persons is employed or is a partner or principal or in a similar position or in which such person has a 5% or greater beneficial ownership interest (collectively “related parties”), are not permitted to enter into a transaction with us without the prior consent of our board of directors acting through the Audit Committee or, in certain circumstances, the chairman of the Audit Committee. Any request for us to enter into a transaction with a related party, in which the amount involved exceeds \$100,000 and such related party would have a direct or indirect interest must first be presented to our Audit Committee, or in certain circumstances the chairman of our Audit Committee, for review, consideration and approval. In approving or rejecting any such proposal, our Audit Committee, or the chairman of our Audit Committee, is to consider the material facts of the transaction, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances, the extent of the benefits to us, the availability of other sources of comparable products or services and the extent of the related party’s interest in the transaction.

Director Independence

Pursuant to the rules of Nasdaq, a director will only qualify as an “independent director” if, in the opinion of that company’s board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Under such rules, our board of directors has determined that all current members of the board of directors are independent, except Mr. Jenks and Mr. Peruvemba. Mr. Jenks is not an independent director under these rules because he is an executive officers of the Company. Mr. Peruvemba is not an independent director under these rules, because, prior to his appointment to the board of directors, he served as a consultant to the Company and had earned compensation from the Company in excess of \$120,000 during any period of twelve consecutive months within the last three years, Ms. Keck, who resigned from the board of directors in November of 2023, was not an independent director under these rules because she is an executive officers of the Company. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. There are no family relationships among any of our directors and executive officers.

Item 14. Principal Accountant Fees and Services

Principal Accountant Fees and Services

The following table summarizes the fees paid for professional services rendered by Marcum, LLP and BDO, LLP, our independent registered public accounting firms, for each of the last fiscal years:

US\$(000)	For the Years End December 31,	
	2023	2022
Audit fees	\$ 336	\$ 368
Audit-related fees	—	—
Tax fees.	—	—
All other fees.	—	—
Total	<u>\$ 336</u>	<u>\$ 368</u>

Audit Fees

Represents fees, including out of pocket expenses, for professional services provided in connection with the audit of our annual financial statements, the review of our quarterly financial statements, accounting consultations or advice on accounting matters necessary for the rendering of an opinion on our financial statements, services provided in connection with the offerings of our securities and audit services provided in connection with other statutory or regulatory filings.

Procedures for Approval of Fees

The Audit Committee is responsible for appointing, setting compensation and overseeing the work of the independent auditors. The Audit Committee has established a policy regarding pre-approval of all auditing services and the terms thereof and non-audit services (other than non-audit services prohibited under Section 10A(g) of the Exchange Act or the applicable rules of the SEC or the Public Company Accounting Oversight Board) to be provided to us by the independent auditor. However, the pre-approval requirement may be waived with respect to the provision of non-audit services for us if the “de minimums” provisions of Section 10A(i)(1)(B) of the Exchange Act are satisfied.

The Audit Committee is responsible for reviewing and discussing the audited financial statements with management, discussing with the independent registered public accountants the matters required in Auditing Standards No. 16, receiving written disclosures from the independent registered public accountants required by the applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accountants’ communications with the Audit Committee concerning independence and discussing with the independent registered public accountants their independence, and recommending to our board of directors that the audited financial statements be included in our annual report on Form 10-K.

PART IV

Item 15. Exhibit and Financial Statement Schedules

(a) The following documents are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K:

1. Financial Statements: See Item 8 of this Annual Report on Form 10-K.
2. Financial Statement Schedules: All schedules are omitted because they are not required, are not applicable or the information is included in the consolidated financial statements or notes thereto.

(b) The following exhibits are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K:

See Exhibit Index.

EXHIBIT INDEX

Exhibit No.	Description
2.1*	Share Exchange Agreement, dated as of February 23, 2021, among the Registrant, SmartKem Limited and the shareholders of SmartKem Limited (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on February 24, 2021)
3.1†	Amended and Restated Certificate of Incorporation of the Registrant, as amended to date
3.2	Amended and Restated Bylaws of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.4 to the Company's Current Report on Form 8-K filed on February 24, 2021)
4.1	Form of Registration Rights Agreement (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on February 24, 2021)
4.2	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on February 24, 2021)
4.3	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on February 24, 2021)
4.4†	Description of Securities
4.5	Form of Class A Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 15, 2023)
4.6	Form of Class B Warrant (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on June 15, 2023)
4.7	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on June 15, 2023)
4.8	Form of Class C Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 29, 2024)
10.1#	2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.2#	U.K. Tax Advantaged Sub-Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.3*	Form of Subscription Agreement (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.4#	Employment Agreement, dated as of February 23, 2021, by and between the Registrant and Ian Jenks (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.5#	Employment Agreement, dated as of February 23, 2021, by and between SmartKem Limited and Simon Ogier (incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.6#	Consultancy Agreement, dated as of February 23, 2021, by and between SmartKem Limited and B Brown Consultants Ltd. (incorporated by reference to Exhibit 10.9 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.7*	License of Office Space, dated September 16, 2020, by and between SmartKem Limited and CPI Innovation Services Limited (incorporated by reference to Exhibit 10.10 to the Company's Current Report on Form 8-K filed on February 24, 2021)
10.98*	License of Office Space, dated April 21, 2020, by and between SmartKem Limited and CPI Innovation Services Limited (incorporated by reference to Exhibit 10.11 to the Company's Current Report on Form 8-K filed on February 24, 2021)

- 10.9** Framework Services Agreement, dated February 23, 2021, by and between SmartKem Limited and CPI Innovation Services Limited (incorporated by reference to Exhibit 10.13 to the Company's Current Report on Form 8-K filed on February 24, 2021)
- 10.10 Facility Agreement, dated January 26, 2021, by and between SmartKem Limited and FRCF 2 Limited (incorporated by reference to Exhibit 10.14 to the Company's Current Report on Form 8-K filed on February 24, 2021)
- 10.11 Debenture Agreement, dated January 26, 2021, by and between SmartKem Limited and FRCF 2 Limited (incorporated by reference to Exhibit 10.15 to the Company's Current Report on Form 8-K filed on February 24, 2021)
- 10.12 Form of Director and Officer Indemnification Agreement (incorporated by reference to Exhibit 10.16 to the Company's Current Report on Form 8-K filed on February 24, 2021)
- 10.13 Form of Pre-Exchange Indemnity Agreement (incorporated by reference to Exhibit 10.17 to the Company's Current Report on Form 8-K filed on February 24, 2021)
- 10.14 Letter Agreement, dated as of February 23, 2021, among the Registrant and Octopus Titan VCT plc and certain related parties (incorporated by reference to Exhibit 10.18 to the Company's Current Report on Form 8-K filed on February 24, 2021)
- 10.15 Subscription Agreement, dated January 27, 2022, by and between the Company and the Purchasers (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 27, 2022)
- 10.16 Registration Rights Agreement, dated January 27, 2022, by and between the Company and the Purchasers (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 27, 2022)
- 10.117** Contract Variation relating to the Framework Services Agreement, dated February 23, 2021, by and between SmartKem Limited and CPI Innovation Services Limited (incorporated by reference to Exhibit 10.21 to the Company's Current Report on Form 10-K/A filed on August 23, 2022)
- 10.18* ** Renewal Lease by Reference of Lease of The Whole of the 8th Floor, Hexagon Tower, Manchester, M9 8GP, dated April 12, 2022, between AG Hexagon BV and SmartKem Limited (incorporated by reference to Exhibit 10.3 on the Company's Quarterly Report on Form 10-Q filed on May 13, 2022)
- 10.19# Service Agreement, dated September 19, 2022, by and between SmartKem Limited and Robert Bahns (incorporated by reference to Exhibit 10.1 on the Company's Current Report on Form 8-K filed September 19, 2022)
- 10.20# Employment Agreement, dated as of December 14, 2022, by and between the Registrant and Barbra Keck (incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K filed on March 30, 2023)
- 10.21 Form of Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 15, 2023)
- 10.22 Form of Registration Rights Agreement (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on June 15, 2023)
- 10.23* Technical Service Agreement, dated July 1, 2023, by and between SmartKem Limited and Industrial Technology Research Institute (incorporated by reference to Exhibit 10.27 to the Company's Registration Statement on Form S-1 filed on July 24, 2023)
- 10.24 License of Office Space, dated May 31, 2023, by and between SmartKem Limited and CPI Innovation Services Limited (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed on August 14, 2023)
- 10.25 Amendment to the 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 28, 2023)

10.26	Form of Consent Agreement (incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on January 29, 2024)
10.27	Form of Registration Rights Agreement (incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on January 29, 2024)
10.28†	Framework Supply Agreement, dated March 22, 2024, by and between SmartKem Limited and CPI Innovation Services Limited
21.1	List of Subsidiaries (incorporated by reference to Exhibit 21.1 to the Company’s Annual Report on Form 10-K filed on March 30, 2023)
23.1†	Consent of Marcum LLP, independent register public accounting firm (Marcum LLP, New York, USA, PCAOB ID # 688)
23.2†	Consent of BDO LLP, independent register public accounting firm (BDO LLP, London, United Kingdom, PCAOB ID # 1295)
31.1†	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2†	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1††	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2††	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS†	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH†	Inline XBRL Taxonomy Extension Schema Document
101.CAL†	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF†	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB†	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE†	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104†	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101)

* Annexes, schedules and/or exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Registrant hereby undertakes to furnish supplementally a copy of any of the omitted schedules and exhibits to the SEC on a confidential basis upon request.

† Filed herewith.

†† This certification is not deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section. Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the registrant specifically incorporates it by reference.

Indicates management contract or compensatory plan.

** Portions of the exhibit, marked by brackets, have been omitted because the omitted information (i) is not material and (ii) would likely cause competitive harm if publicly disclosed. The Registrant hereby undertakes to furnish supplementally a copy of any of the omitted schedules and exhibits to the SEC on a confidential basis upon request.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, duly authorized.

Date: March 27, 2024

SMARTKEM, INC.

By: /s/ Ian Jenks
Name: Ian Jenks
Title: Chief Executive Officer and Chairman of the Board
(Principal Executive Officer)

By: /s/ Barbra C. Keck
Name: Barbra C. Keck
Title: Chief Financial Officer
(Principal Financial Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ian Jenks and Barbra C. Keck, jointly and severally, his or her true and lawful attorneys-in-fact and agent, each with the power of substitution, for him in any and all capacities, to sign any amendments to this report, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Ian Jenks</u> Ian Jenks	Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	March 27, 2024
<u>/s/ Barbra C. Keck</u> Barbra C. Keck	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 27, 2024
<u>/s/ Klaas de Boer</u> Klaas de Boer	Director	March 27, 2024
<u>/s/ Steven DenBaars</u> Steven DenBaars	Director	March 27, 2024
<u>/s/ Sri Peruvemba</u> Sri Peruvemba	Director	March 27, 2024
<u>/s/ Melisa Denis</u> Melisa Denis	Director	March 27, 2024

