

PROSPECTUS



Motus GI Holdings, Inc.

8,491,125 Shares  
Common Stock

The selling stockholders named in this prospectus may use this prospectus to offer and resell from time to time up to 8,491,125 shares of our common stock, par value \$0.0001 per share (“*Common Stock*”), which are comprised of (i) 525,000 shares (the “*Shares*”) of our Common Stock issued in a private placement on May 19, 2023 (the “*Private Placement*”), pursuant to a certain Securities Purchase Agreement by and between us and a certain institutional and accredited investor (the “*Purchaser*”), dated as of May 17, 2023 (the “*Securities Purchase Agreement*”), (ii) 3,617,012 shares of Common Stock (the “*Pre-Funded Warrant Shares*”) issuable upon the exercise of the pre-funded warrants (the “*Pre-Funded Warrants*”) issued in the Private Placement, pursuant to the Securities Purchase Agreement, (iii) 4,142,012 shares of Common Stock (the “*Common Warrant Shares*” and, together with the Pre-Funded Warrant Shares, the “*Purchaser Warrant Shares*”) issuable upon the exercise of the common warrants (the “*Common Warrants*”) issued in the Private Placement, pursuant to the Securities Purchase Agreement, and (iv) 207,101 shares of Common Stock (the “*Placement Agent Warrant Shares*”) issuable upon the exercise of the placement agent warrants (the “*Placement Agent Warrants*” and, together with the Pre-Funded Warrants and the Common Warrants, the “*Warrants*”) we issued to certain selling stockholders as the designees of H.C. Wainwright & Co., LLC (“*Wainwright*”) on May 19, 2023, as part of Wainwright’s compensation for serving as our exclusive placement agent in connection with the Private Placement.

We refer to the Common Warrants, the Pre-Funded Warrants and the Placement Agent Warrants collectively as the “*Warrants*.”

The Shares, Pre-Funded Warrants and Common Warrants were issued to the Purchaser in reliance upon the exemption from the registration requirements in Section 4(a)(2) of the Securities Act of 1933, as amended (the “*Securities Act*”) and Regulation D (Rule 506) thereunder. The Purchaser represented that it was an “accredited investor” (as defined by Rule 501 under the Securities Act). We are registering the offer and resale of the Shares, Pre-Funded Warrant Shares and the Common Warrant Shares to satisfy a provision in a certain registration rights agreement, dated May 17, 2023 (the “*Registration Rights Agreement*”), pursuant to which we agreed to register the resale of the Shares, the Pre-Funded Warrant Shares and the Common Warrant Shares.

In addition, the Placement Agent Warrants were issued to Wainwright’s designees in reliance upon the exemption from the registration requirements in Section 4(a)(2) of the Securities Act and Regulation D thereunder.

We will not receive any of the proceeds from the sale of our Common Stock by the selling stockholders. However, we will receive proceeds from the exercise of the Warrants if the Warrants are exercised for cash. We intend to use those proceeds, if any, for general corporate purposes.

Any shares of Common Stock subject to resale hereunder will have been issued by us and acquired by the selling stockholders prior to any resale of such shares pursuant to this prospectus.

The selling stockholders named in this prospectus, or their donees, pledgees, transferees or other successors-in-interest, may offer or resell the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The selling stockholders will bear all commissions and discounts, if any, attributable to the sale of shares of Common Stock offered hereby, and all selling and other expenses incurred by the selling stockholders. We will bear all costs, expenses and fees in connection with the registration of the shares of Common Stock offered hereby. For additional information on the methods of sale that may be used by the selling stockholders, see “*Plan of Distribution*” beginning on page 7 of this prospectus.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “*MOTS*.” On May 26, 2023, the last reported sale price of our Common Stock as reported on the Nasdaq Capital Market was \$0.73 per share.

We are an “emerging growth company” as that term is used in the Jumpstart Our Business Startups Act of 2012, and, as such, we have elected to take advantage of certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our securities involves a high degree of risk. These risks are discussed in this prospectus under “*Risk Factors*” beginning on page 3 and in the documents incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission (the “*SEC*”) nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 9, 2023

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC using a “shelf” registration process. The selling stockholders named in this prospectus may resell, from time to time, in one or more offerings, the shares of Common Stock offered by this prospectus. Information about the selling stockholders may change over time. When the selling stockholders sell shares of Common Stock under this prospectus, we will, if necessary and required by law, provide a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add to, update, modify or replace information contained in this prospectus. If a prospectus supplement is provided and the description of the offering in the prospectus supplement varies from the information in this prospectus, you should rely on the information in the prospectus supplement. You should carefully read this prospectus and the accompanying prospectus supplement, if any, along with all of the information incorporated by reference herein and therein, before making an investment decision.

You should rely only on the information contained or incorporated by reference in this prospectus or any applicable prospectus supplement. We have not, and the selling stockholders have not, authorized any other person to provide you with different or additional information. If anyone provides you with different or additional information, you should not rely on it. This prospectus is not an offer to sell, nor are the selling stockholders seeking an offer to buy, the shares offered by this prospectus in any jurisdiction where the offer or sale is not permitted. No offers or sales of any of the shares of Common Stock are to be made in any jurisdiction in which such an offer or sale is not permitted. You should assume that the information contained in this prospectus or in any applicable prospectus supplement is accurate only as of the date on the front cover thereof or the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any applicable prospectus supplement or any sales of the shares of Common Stock offered hereby or thereby.

You should read the entire prospectus and any prospectus supplement and any related issuer free writing prospectus, as well as the documents incorporated by reference into this prospectus or any prospectus supplement or any related issuer free writing prospectus, before making an investment decision. Neither the delivery of this prospectus or any prospectus supplement or any issuer free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or issuer free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or issuer free writing prospectus, as applicable. You should assume that the information appearing in this prospectus, any prospectus supplement or any document incorporated by reference is accurate only as of the date of the applicable documents, regardless of the time of delivery of this prospectus or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

## PROSPECTUS SUMMARY

*This summary provides an overview of selected information contained elsewhere or incorporated by reference in this prospectus and does not contain all of the information you should consider before investing in our securities. You should carefully read the prospectus, the information incorporated by reference and the registration statement of which this prospectus is a part in their entirety before investing in our securities, including the information discussed under “Risk Factors” in this prospectus and the documents incorporated by reference and our financial statements and related notes that are incorporated by reference in this prospectus. As used in this prospectus, unless the context otherwise indicates, the terms “we,” “our,” “us,” or “the Company” refer to Motus GI Holdings, Inc., a Delaware corporation, and its subsidiaries taken as a whole.*

### Overview

We have developed the Pure-Vu System, a medical device that has been cleared by the U.S. Food and Drug Administration (the “FDA”) to help facilitate the cleansing of a poorly prepared gastrointestinal tract during colonoscopy and to help facilitate upper gastrointestinal (“GI”) endoscopy procedures. The Pure-Vu System is also CE marked in the European Economic Area (EEA) for use in colonoscopy. The Pure-Vu System integrates with standard and slim colonoscopes, as well as gastroscopes, to improve visualization during colonoscopy and upper GI procedures while preserving established procedural workflow and techniques. Through irrigation and evacuation of debris, the Pure-Vu System is designed to provide better-quality exams. Challenges exist for inpatient colonoscopy and endoscopy, particularly for patients who are elderly, with comorbidities, or active bleeds, where the ability to visualize, diagnose and treat is often compromised due to debris, including fecal matter, blood, or blood clots. We believe this is especially true in high acuity patients, like GI bleeding where the existence of blood and blood clots can impair a physician’s view and removing them can be critical in allowing a physician the ability to identify and treat the source of bleeding on a timely basis. We believe use of the Pure-Vu System may lead to positive outcomes and lower costs for hospitals by safely and quickly improving visualization of the colon and upper GI tract, potentially enabling effective diagnosis and treatment without delay. In multiple clinical studies to date, involving the treatment of challenging inpatient and outpatient cases, the Pure-Vu System has consistently helped achieve adequate bowel cleanliness rates greater than 95% following a reduced prep regimen. We also believe that the technology may be useful in the future as a tool to help reduce user dependency on conventional pre-procedural bowel prep regimens. Based on our review and analysis of 2019 market data and 2021 projections for the U.S. and Europe, as obtained from iData Research Inc., we believe that during 2022 approximately 1.5 million inpatient colonoscopy procedures were performed in the U.S. and approximately 4.8 million worldwide. Upper GI bleeds occurred in the U.S. at a rate of approximately 400,000 cases per year in 2019, according to iData Research Inc. The Pure-Vu System has been assigned an ICD-10 code in the US. The system does not currently have unique codes with any private or governmental third-party payors in any other country or for any other use; however, we may pursue reimbursement activities in the future, particularly in the outpatient colonoscopy market. We received 510(k) clearance in February 2022 from the FDA for our Pure-Vu EVS System and have commenced commercialization of this product.

### Implications of Being an Emerging Growth Company

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and, for as long as we continue to be an “emerging growth company,” we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to “emerging growth companies,” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, (the “Sarbanes-Oxley Act”), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the

requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an “emerging growth company” for up to five years from the date of our initial public offering in February 2018, which would be at the end of the current fiscal year, ending December 31, 2023, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenues exceed \$1.07 billion, (ii) the date that we become a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our Common Stock that is held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter, or (iii) the date on which we have issued more than \$1 billion in non-convertible debt during the preceding three-year period. We intend to take advantage of these reporting exemptions described above until we are no longer an “emerging growth company.” 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 irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies.”

## Corporate Information

We are a Delaware corporation formed in September 2016 under the name Eight-Ten Merger Corp. In November 2016, we changed our name to Motus GI Holdings, Inc. We are the parent company of Motus GI Medical Technologies Ltd., an Israeli corporation, and Motus GI, LLC a Delaware limited liability company.

Our principal executive offices are located at 1301 East Broward Boulevard, 3rd Floor, Ft. Lauderdale, FL 33301. Our phone number is (954) 541-8000 and our web address is [www.motusgi.com](http://www.motusgi.com). Our website and the information contained on, or that can be accessed through, our website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on our website or any such information in making your decision whether to purchase our securities.

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## THE OFFERING

Common Stock offered by the selling stockholders	Up to 8,491,125 shares of Common Stock, which are comprised of (i) 525,000 Shares, (ii) 3,617,012 shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants, (iii) 4,142,012 shares of Common Stock issuable upon the exercise of the Common Warrants and (iv) 207,101 shares of Common Stock issuable upon the exercise of the Placement Agent Warrants.
Selling stockholders	All of the shares of Common Stock are being offered by the selling stockholders named herein. See “Selling Stockholders” on page 4 of this prospectus for more information on the selling stockholders.
Use of Proceeds	We will not receive any proceeds from the sale of the shares in this offering. However, we will receive proceeds from the exercise of the Warrants if the Warrants are exercised for cash. We intend to use those proceeds, if any, for general corporate purposes. See “Use of Proceeds” beginning on page 4 of this prospectus for additional information.
Registration Rights	<p>Under the terms of the Registration Rights Agreement, we have agreed to file this registration statement with respect to the registration of the resale by the selling stockholders of the Shares and the Purchaser Warrant Shares by June 1, 2023. We have agreed to cause such registration statement to become effective under the Securities Act by the 45<sup>th</sup> day following the date of the Registration Rights Agreement (or by the 75<sup>th</sup> day following the date of the Registration Rights Agreement if there is a full review of the registration statement by the SEC). In addition, we agreed that, upon the registration statement being declared effective, we will use our best efforts to maintain the effectiveness of the registration statement until the earlier of (i) the selling stockholders have sold all of the Shares and Purchaser Warrant Shares or (ii) such shares may be resold by the selling stockholders pursuant to Rule 144 of the Securities Act, without the requirement for us to be in compliance with the current public information required under such rule and without volume or manner-of-sale restriction.</p> <p>The selling stockholders do not have any registration rights in connection with the Placement Agent Warrants.</p> <p>See “Selling Stockholders” on page 4 of this prospectus for additional information.</p>
Plan of Distribution	<p>The selling stockholders named in this prospectus, or their pledgees, donees, transferees, distributees, beneficiaries or other successors-in-interest, may offer or sell the shares of Common Stock from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The selling stockholders may also resell the shares of Common Stock to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions.</p> <p>See “Plan of Distribution” beginning on page 7 of this prospectus for additional information on the methods of sale that may be used by the selling stockholders.</p>
Risk Factors	Investing in our Common Stock involves a high degree of risk. You should carefully read and consider the information beginning on page 3 of this prospectus set forth under the heading “Risk Factors” and all other information set forth in this prospectus, and the documents incorporated herein and therein by reference before deciding to invest in our Common Stock.
Nasdaq Capital Market symbol	“MOTS”

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## RISK FACTORS

*An investment in our securities involves certain risks. Before investing in our securities, you should carefully consider the risks, uncertainties and assumptions discussed under the heading “Risk Factors” included in our most recent Annual Report on Form 10-K, and any updates in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, together with all of the other information appearing in this prospectus or incorporated by reference into this prospectus and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks so described are not the only risks facing our company. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Any of these risks could materially and adversely affect our business, financial condition, results of operations and cash flows and could result in a loss of all or part of your investment. In any case, the value of the securities offered by means of this prospectus could decline due to any of these risks, and you may lose all or part of your investment. Please also read carefully the section below entitled “Special Note Regarding Forward-Looking Statements.”*

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain information set forth in this prospectus or incorporated by reference herein may contain “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, that are intended to be covered by the “safe harbor” created by those sections. Forward-looking statements, which are based on certain assumptions and describe our future plans, strategies and expectations, can generally be identified by the use of forward-looking terms such as “believe,” “expect,” “may,” “will,” “should,” “would,” “could,” “seek,” “intend,” “plan,” “goal,” “project,” “estimate,” “anticipate,” “strategy,” “future”, “likely” or other comparable terms and references to future periods. All statements other than statements of historical facts included in this prospectus and the documents incorporated by reference regarding our strategies, prospects, financial condition, operations, costs, plans and objectives are forward-looking statements. Examples of forward-looking statements include, among others, statements we make regarding expectations for revenues, cash flows and financial performance, the anticipated results of our development efforts and the timing for receipt of required regulatory approvals and product launches.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others, the following:

- our limited operating history and need for additional capital and need for additional capital;
- our ability to execute our strategic restructuring program aimed at capital preservation, reduction in cash expenditures and reduction of our workforce;
- our ability to enter into and consummate strategic alternatives, including any acquisition, merger, reverse merger, other business combination, sale of assets, licensing and other strategic transactions;
- our history of operating losses in each year since inception and expectation that we will continue to incur operating losses for the foreseeable future;
- our current and future capital requirements to support our development and commercialization efforts for the Pure-Vu System and our ability to satisfy our capital needs;
- our ability to remain compliant with the requirements of The Nasdaq Capital Market for continued listing;
- our dependence on the Pure-Vu System, our sole product;
- our ability to commercialize the Pure-Vu System;
- our Pure-Vu System and the procedure to cleanse the colon in preparation for colonoscopy are not currently separately reimbursable through private or governmental third-party payors;
- our ability to obtain approval or certification from regulatory agents or other competent entities in different jurisdictions for the Pure-Vu System;
- our dependence on third-parties to manufacture the Pure-Vu System;
- our ability to maintain or protect the validity of our patents and other intellectual property;
- our ability to retain key executives and medical and science personnel;
- our ability to internally develop new inventions and intellectual property;
- interpretations of current laws and the passages of future laws;
- acceptance of our business model by investors;
- the accuracy of our estimates regarding expenses and capital requirements;
- our ability to adequately support growth;
- our ability to predict the financial impact of inflation on costs such as labor, freight and materials; and
- our ability to project in the short term the hospital medical device environment considering the global pandemic and strains on hospital systems; and
- other risks and uncertainties discussed in the Company’s annual report on Form 10-K for the year ended December 31, 2022, as updated in our Form 10-Q for the quarter ended March 31, 2023 and other reports, as applicable, the Company files with the Securities and Exchange Commission, which are incorporated by reference in this prospectus and the accompanying prospectus.

Any forward-looking statement made by us in this prospectus is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise. We anticipate that subsequent events and developments will cause our views to change. You should read this prospectus and the documents referenced herein or therein and filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. Our forward-looking statements do not reflect the potential impact of any future acquisitions, merger, dispositions, joint ventures or investments we may undertake. We qualify all of our forward-looking statements by these cautionary statements.

## USE OF PROCEEDS

All shares of our Common Stock offered by this prospectus are being registered for the accounts of the selling stockholders, and we will not receive any proceeds from the sale of these shares of Common Stock. However, we will receive proceeds from the exercise of the Warrants if the Warrants are exercised for cash. We intend to use those proceeds, if any, for general corporate purposes.

## SELLING STOCKHOLDERS

Up to 8,491,125 shares of our Common Stock are currently being offered by the selling stockholders.

### Private Placement

On May 17, 2023, we entered into the Securities Purchase Agreement with the Purchaser, pursuant to which we issued and sold to the Purchaser in the Private Placement an aggregate of (i) 525,000 shares of Common Stock, (ii) Pre-Funded Warrants to purchase up to an aggregate of 3,617,012 shares of Common Stock and (iii) Common Warrants to purchase up to an aggregate of 4,142,012 shares of Common Stock, in each case, in accordance with the terms and conditions of the Securities Purchase Agreement, at a combined offering price of \$0.845 per Share and accompanying Common Warrant to purchase one share of Common Stock and \$0.8449 per Pre-Funded Warrant to purchase one share of Common Stock and accompanying Common Warrant to purchase one share of Common Stock, for gross proceeds of approximately \$3.5 million. The Private Placement closed on May 19, 2023.

The Common Warrants have an exercise price of \$0.72 per share. The Common Warrants are immediately exercisable and may be exercised at any time after their original issuance until November 20, 2028. The Pre-Funded Warrants have an exercise price of \$0.0001 per share. The Pre-Funded Warrants are immediately exercisable and may be exercised at any time until the Pre-Funded Warrants are exercised in full. A holder of Common Warrants or Pre-Funded Warrants may not exercise any portion of such holder’s Common Warrants or Pre-Funded Warrants to the extent that the holder, together with its affiliates, would beneficially own more than 4.99% (or, at the election of the holder, 9.99%) of the Company’s outstanding shares of Common Stock immediately after exercise, except that upon at least 61 days’ prior notice from the 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. If at any time of exercise, there is no effective registration statement under the Securities Act registering the resale of the Common Warrant Shares by the selling shareholders, the Common Warrants may also be exercised, in whole or in part, by means of a cashless exercise according to a formula set forth in the Common Warrants. The Pre-Funded Warrants may also be exercised, in whole or in part, by means of a cashless exercise according to a formula set forth in the Pre-Funded Warrants.

In connection with the Private Placement, we entered into the Registration Rights Agreement with the Purchaser, pursuant to which, among other things, we agreed to prepare and file with the SEC a registration statement on Form S-3 to register for resale the Shares and the shares of Common Stock issuable upon the exercise of the Common

Warrants and Pre-Funded Warrants by June 1, 2023. We have also agreed to cause such registration statement to become effective under the Securities Act by the 45th day following the date of the Registration Rights Agreement (or by the 75th day following the date of the Registration Rights Agreement if there is a full review of the registration statement by the SEC). In addition, we agreed that, upon the registration statement being declared effective, we will use best efforts to keep such registration statement effective until the earlier of (i) the selling stockholders have sold all of the Shares and the Purchaser Warrant Shares or (ii) such shares may be resold by the selling stockholders pursuant to Rule 144 of the Securities Act without any public information requirements or volume or manner of sale limitations.

Pursuant to the Registration Rights Agreement, we are registering the Shares and the Purchaser Warrant Shares in order to permit the selling stockholders to offer such shares for resale from time to time pursuant to this prospectus. The selling stockholders may also sell, transfer or otherwise dispose of all or a portion of their shares in transactions exempt from the registration requirements of the Securities Act, or pursuant to another effective registration statement covering those shares.

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Wainwright acted as the exclusive placement agent for the Private Placement. Pursuant to a certain engagement letter, dated May 5, 2023, as amended, we issued to the designees of Wainwright Placement Agent Warrants to purchase up to 207,101 shares of Common Stock, equal to 5.0% of the aggregate number of Shares and shares of Common Stock underlying the Pre-Funded Warrants placed in the Private Placement. The Placement Agent Warrants are exercisable immediately, have an exercise price of \$1.0563 per share (equal to 125% of the offering price per Share and accompanying Common Warrant), and terminate on November 20, 2028. A holder of a Placement Agent Warrant may not exercise any portion of such holder's Placement Agent Warrants to the extent that the holder, together with its affiliates, would beneficially own more than 4.99% (or, at the election of the holder, 9.99%) of our outstanding shares of Common Stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, 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. If at any time of exercise, there is no effective registration statement under the Securities Act registering the resale of the Placement Agent Warrant Shares by the selling shareholders, then the Placement Agent Warrants may also be exercised, in whole or in part, by means of a cashless exercise according to a formula set forth in the Placement Agent Warrants.

The selling stockholders do not have any registration rights in connection with the Placement Agent Warrants.

The Shares, the Pre-Funded Warrants, the Pre-Funded Warrant Shares, the Common Warrants, the Common Warrant Shares, the Placement Agent Warrants and the Placement Agent Warrant Shares have not been registered under the Securities Act and were offered pursuant to the exemption from registration provided in Section 4(a)(2) under the Securities Act, and Rule 506(b) promulgated thereunder.

#### Relationship with the Selling Stockholders

Except with respect to the following, none of the selling stockholders has, or within the past three years has had, any position, office or other material relationship with us.

The selling stockholders participated in the Private Placement.

#### Affiliates of Wainwright

Each of Michael Vasinkevich, Noam Rubinstein, Craig Schwabe and Charles Worthman are affiliated with Wainwright, a registered broker-dealer, which served as our placement agent for the Private Placement, for which it received cash and warrant compensation. In connection with the Private Placement, each of Michael Vasinkevich, Noam Rubinstein, Craig Schwabe and Charles Worthman, as a designee of Wainwright, received the Placement Agent Warrants.

#### Information About Selling Stockholder Offering

The shares of Common Stock being offered by the selling stockholders are those previously issued to the selling stockholders, and those issuable to the selling stockholders, upon the exercise of the Warrants. For additional information regarding the issuances of those shares of Common Stock, see "—Private Placement" above. We are registering the shares of Common Stock in order to permit the selling stockholders to offer the shares for resale from time to time.

The table below lists the selling stockholders and other information regarding the ownership of the shares of Common Stock by each of the selling stockholders. The second column lists the number of shares of Common Stock owned by each selling stockholder, based on its ownership of the shares of Common Stock and securities convertible into shares of Common Stock, as of May 19, 2023, assuming exercise of the securities convertible into shares of Common Stock held by the selling stockholders on that date, without regard to any limitations on exercises.

The third column lists the shares of Common Stock being offered by this prospectus by the selling stockholders.

In accordance with the terms of the Registration Rights Agreement, this prospectus generally covers the resale of the sum of (i) the Shares issued to the selling stockholders in the "—Private Placement" described above and (ii) the maximum number of Purchaser Warrant Shares. In addition, this prospectus covers the maximum number of the Placement Agent Warrant Shares. The table below assumes that the outstanding Warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the Registration Rights Agreement, without regard to any limitations on the exercise of the Warrants. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus. The fifth column lists the percentages of shares of Common Stock owned by the selling stockholders after this offering, taking account of any limitations on exercise set forth in the applicable convertible securities.

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Under the terms of the Warrants, a selling stockholder may not exercise the Warrants to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of Common Stock which would exceed 4.99% or 9.99%, as applicable, of our then outstanding Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock issuable upon the exercise of the Warrants, which have not been exercised. The number of shares in the second column does not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

Name of Selling stockholder	Number of shares of Common Stock Owned Prior to Offering	Maximum Number of shares of Common Stock to be Sold Pursuant to this Prospectus	Number of shares of Common Stock Owned After Offering	Percentage of Common Stock Owned After Offering(1)
Armistice Capital, LLC (2)	8,584,021(2)	8,284,024	299,997	2.2%
Michael Vasinkevich(3)	132,804	132,804	-	*

Noam Rubinstein(3)	65,236	65,236	-	*
Craig Schwabe(3)	6,990	6,990	-	*
Charles Worthman(3)	2,071	2,071	-	*

- (1) Based on 4,778,873 shares of Common Stock outstanding as of May 17, 2023. “\*” denotes less than 1%.
- (2) Includes 3,617,012 shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants, 4,142,012 shares of Common Stock issuable upon the exercise of the Common Warrants and 299,997 shares of Common Stock issuable upon the exercise of other warrants. The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The warrants are subject to a beneficial ownership limitation of 4.99% or 9.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the warrants that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of Common Stock in excess of the beneficial ownership limitation. The amounts and percentages in the table do not give effect to the beneficial ownership limitations. The address of the Master Fund is c/o Armistice Capital, LLC, 510 Madison Ave, 7th Floor, New York, NY 10022.
- (3) Each of the Selling Stockholders is associated with Wainwright, a registered broker dealer with a registered address at c/o H.C. Wainwright & Co. 430 Park Ave, 3rd Floor, New York, NY 10022, and has sole voting and dispositive power over the securities held. The number of shares beneficially owned prior to this offering consist of shares of Common Stock issuable upon exercise of Placement Agent Warrants, which were received as compensation for the Private Placement. The Selling Stockholder purchased or received the securities in the ordinary course of business and, at the time of purchase of the securities that are registered for resale, the Selling Stockholders had no agreements or understanding, directly or indirectly with any person to distribute securities.

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## PLAN OF DISTRIBUTION

Each selling stockholder of the shares of Common Stock and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of Common Stock covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the shares of Common Stock are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such shares of Common Stock at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares of Common Stock under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of shares of Common Stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares of Common Stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of Common Stock short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these shares of Common Stock. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares of Common Stock offered by this prospectus, which shares of Common Stock such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares of Common Stock may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares of Common Stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the shares of Common Stock. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the shares of Common Stock may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the shares of Common Stock have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale shares covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

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The validity of the securities offered by this prospectus will be passed upon by Lowenstein Sandler LLP, New York, New York.

## EXPERTS

The consolidated balance sheets of Motus GI Holdings, Inc. and Subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of comprehensive loss, changes in shareholders’ equity, and cash flows for each of the years then ended, have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their report which is incorporated herein by reference, which report includes an explanatory paragraph about the existence of substantial doubt concerning the Company’s ability to continue as a going concern. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

## DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Section 145 of the DGCL provides that we may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal or investigative (other than an action by us or in our right) by reason of the fact that he is or was our director, officer, employee or agent, or is or was serving at our request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action, suit or proceeding if he acted in good faith and in a manner he or she reasonably believed to be in or not opposed to our best interests, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. Section 145 further provides that we similarly may indemnify any such person serving in any such capacity who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by us or in our right to procure judgment in our favor, against expenses actually and reasonably incurred in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he reasonably believed to be in or not opposed to our best interests and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to us unless and only to the extent that the Delaware Court of Chancery or such other court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our certificate of incorporation, as amended, limits the liability of our directors to the fullest extent permitted by Delaware law. In addition, we have entered into indemnification agreements with certain of our directors and officers whereby we have agreed to indemnify those directors and officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or officer was, or is threatened to be made, a party by reason of the fact that such director or officer is or was a director, officer, employee or agent of the Company, provided that such director or officer acted in good faith and in a manner that the director or officer reasonably believed to be in, or not opposed to, the best interests of the Company.

We have director and officer liability insurance to cover liabilities our directors and officers may incur in connection with their services to us, including matters arising under the Securities Act. Our certificate of incorporation and bylaws also provide that we will indemnify our directors and officers who, by reason of the fact that he or she is one of our officers or directors of our company, is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative, related to their board role with the company.

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Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by us is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act, and in accordance therewith file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC’s website is [www.sec.gov](http://www.sec.gov).

We make available free of charge on or through our website at [www.motusgi.com](http://www.motusgi.com), our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with or otherwise furnish it to the SEC.

We have filed with the SEC a registration statement under the Securities Act, relating to the offering of these securities. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement for free at [www.sec.gov](http://www.sec.gov). The registration statement and the documents referred to below under “Incorporation of Certain Information By Reference” are also available on our website, [www.motusgi.com](http://www.motusgi.com).

We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

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## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we have filed with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future documents (excluding information furnished pursuant to Items 2.02 and 7.01 of Form 8-K) we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, subsequent to the date of this prospectus and prior to the termination of the offering:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2022, filed with the SEC on March 31, 2023;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2023, filed with the SEC on May 10, 2023;
- our Current Reports on Form 8-K filed with the SEC on [January 10, 2023](#), [March 14, 2023](#), [April 5, 2023](#), [April 13, 2023](#), [May 11, 2023](#), [May 17, 2023](#), [May 22, 2023](#) and [June 5, 2023](#) (other than any portions thereof deemed furnished and not filed); and
- the description of our common stock contained in our Registration Statement on [Form 8-A](#), filed on February 6, 2018, including any amendments thereto or reports filed for the purposes of updating this description, including the Description of Securities filed as [Exhibit 4.15](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2020.

All reports and other documents that we file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement, and after the date of this prospectus but before the termination of the offering of the securities hereunder will also be considered to be incorporated by reference into this prospectus from the date of the filing of these reports and documents, and will supersede the information herein; provided, however, that all reports, exhibits and other information that we “furnish” to the SEC will not be considered incorporated by reference into this prospectus. We undertake to provide without charge to each person (including any beneficial owner) who receives a copy of this prospectus, upon written or oral request, a copy of all of the preceding documents that are incorporated by reference (other than exhibits, unless the exhibits are specifically incorporated by reference into these documents). You may request a copy of these materials in the manner set forth under the heading “Additional Information,” above.