

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

FORM S-3

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

ELECTROCORE, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-3454976
(I.R.S. Employer
Identification Number)

**200 Forge Way, Suite 205
Rockaway, New Jersey 07866
(973) 290-0097**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Daniel S. Goldberger, Chief Executive Officer
electroCore, Inc.
200 Forge Way, Suite 205
Rockaway, New Jersey 07866
(973) 290-0097**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Ira L. Kotel, Esq.
Dentons US LLP
1221 Avenue of the Americas
New York, New York 10020
(212) 768-6700**

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: ☐

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box: ☒

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or 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
Non-accelerated filer
Emerging growth company

☐ Accelerated filer
☒ Smaller reporting company
☐

☐
☒

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 7(a)(2)(B) of the Securities Act. ☐

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED October 3, 2025

PROSPECTUS



electroCore, Inc.

762,508 Shares of Common Stock

This prospectus relates to the offer and sale by the selling stockholders identified herein of up to 762,508 shares of common stock, \$0.001 par value per share (the "Common Stock") of electroCore, Inc. ("we" or the "Company"). 401,771 of the shares of Common Stock being registered have been issued or are issuable in connection with the Loan and Security Agreement dated August 4, 2025 (the "Loan and Security Agreement"), between the Company and Avenue Venture Opportunities Fund II, L.P., as administrative agent and collateral agent, and as lender ("Avenue"), and the Supplement (as defined below) thereto, as further described in this prospectus, the Loan and Security Agreement, the Supplement, the Subscription Agreement (as defined below) and the note or notes issued or issuable pursuant to the Loan and Security Agreement. 360,737 shares of the Common Stock being registered were issued by us to certain institutional and accredited investors (the "PIPE Investors"), in private placement transactions completed on October 2, 2025. The shares of Common Stock issued in the private placement transactions completed on October 2, 2025 are being registered as required by the related securities purchase agreements (individually, a "Purchase Agreement" and together, the "Purchase Agreements").

The selling stockholders refer to (i) Avenue and its pledgees, donees, transferees, or other successors in interest as permitted by the Loan and Security Agreement, and (ii) the PIPE Investors, and their respective pledgees, donees, transferees, or other successors in interest as permitted by the Purchase Agreements.

The number of shares of Common Stock being registered hereunder is comprised of: (i) 295,420 shares of Common Stock (the "Conversion Shares") issuable upon conversion of up to \$2,500,000 of the outstanding principal amount under the note or notes issued or issuable by the Company pursuant to the Loan and Security Agreement at a conversion price per Conversion Share equal to \$8.4625, representing 125% of the closing sales price of the Common Stock on the date prior to the closing of the loan transaction (\$6.77); (ii) 106,351 shares of Common Stock (the "Private Placement Shares") issued to Avenue in connection with the Loan and Security Agreement, in a private placement, pursuant to a Subscription Agreement dated August 4, 2025, between the Company and Avenue (the "Subscription Agreement"); and (iii) 360,737 shares (the "Private Shares") issued pursuant to the Purchase Agreements.

We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of securities by the selling stockholders. We will pay the expenses incurred in registering the Common Stock covered by the prospectus, including legal and accounting fees. The selling stockholders will bear all commissions and discounts, if any, attributable to its sales of Common Stock under this prospectus.

The selling stockholders may offer the shares of Common Stock in one or more transactions at fixed prices, at prevailing market prices at the time of sale, at varying prices determined at the time of sale, at negotiated prices, or in trading markets for our Common Stock. Additional information on the selling stockholders, and the times and manner in which they may offer and sell shares of our Common Stock under this prospectus, is provided under "Selling Stockholders" and "Plan of Distribution" in this prospectus.

Our Common Stock is traded on The Nasdaq Capital Market, or Nasdaq, under the symbol "ECOR." On October 2, 2025, the closing sale price of our Common Stock on Nasdaq was \$5.12 per share.

Investing in our securities involves significant risks. See "Risk Factors" beginning on page 8.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This registration statement shall hereafter become effective in accordance with the provisions of Section 8(a) of the Securities Act of 1933, as amended.

The date of this prospectus is , 2025.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission (the “SEC”), under which the selling stockholders may, from time to time, sell the securities described in this prospectus in one or more offerings.

To the extent required under applicable law in connection with a particular offering of such securities by the selling stockholders, we or the selling stockholders will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. To the extent permitted under applicable law, we and the selling stockholders may also authorize one or more free writing prospectuses that may contain material information relating to these offerings. Any such prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable.

Neither we nor the selling stockholders have authorized anyone to provide you with information that is different from or in addition to the information contained or incorporated by reference in this prospectus. Accordingly, neither we nor the selling stockholders take any responsibility for, or can provide any assurance as to the reliability of, any information that others may give. The selling stockholders are offering to sell, and seeking offers to buy, our securities only in jurisdictions where it is lawful to do so. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any securities other than where offers and sales of these securities are permitted or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus is accurate only as of the date of this prospectus and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed materially since those dates. In making your investment decision it is important for you to read and consider all information contained in this prospectus. You should also read and consider the information in the documents to which we have referred you in the section titled “Incorporation by Reference” in this prospectus. To the extent the information contained in this prospectus differs or varies from the information contained in documents previously filed with the SEC that are incorporated by reference herein, the information in this prospectus will supersede such information.

In this prospectus and any prospectus supplement, unless otherwise stated or the context otherwise indicates, references to “ECOR,” “electroCore,” “the Company,” “we,” “us,” “our” and similar references refer to electroCore, Inc., a Delaware corporation.

The electroCore logo, gammaCore, Truvaga, TAC-STIM, Quell, names, logos, and other trademarks of electroCore, Inc. appearing in this prospectus are the property of electroCore, Inc. All other trademarks, service marks and trade names in this prospectus are the property of their respective owners. We have omitted the ® and ™ designations, as applicable, for the trademarks used in this prospectus.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from the SEC's website at www.sec.gov. We make available free of charge our annual, quarterly and current reports, proxy statements and other information upon request. To request such materials, please contact the Corporate Secretary at the following address or telephone number: electroCore, Inc., 200 Forge Way, Suite 205, Rockaway, New Jersey 07866, Attention: Corporate Secretary; (973) 290-0097. Exhibits to the documents will not be sent, unless those exhibits have specifically been incorporated by reference in this prospectus.

We maintain our website at www.electrocore.com. Our website and the information contained therein or connected thereto are not incorporated into this prospectus.

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933, as amended (the "Securities Act"), relating to the securities being registered for resale by the selling stockholders. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. Please refer to the registration statement and its exhibits and schedules for further information with respect to us and our securities. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of that contract or document filed as an exhibit to the registration statement. You may read and obtain a copy of the registration statement and its exhibits and schedules from the SEC, as described above.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future information filed (rather than furnished) with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any current report on Form 8-K:

- The Company’s Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2024, filed with the SEC on March 12, 2025 (the “2024 Form 10-K”).
- The Company’s Quarterly Reports on Form 10-Q for the periods ended March 31, 2025 and June 30, 2025, filed with the SEC on [May 7, 2025](#) and [August 6, 2025](#), respectively.
- The Company’s Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on July 17, 2025.
- The Company’s Current Reports on Form 8-K and amendment to Current Report on Form 8-K, filed with the SEC on [January 17, 2025](#), [February 28, 2025](#), [March 12, 2025](#), [April 3, 2025](#), [May 2, 2025](#), [May 7, 2025](#), [July 16, 2025](#), and [August 6, 2025](#), [September 3, 2025](#), and [October 3, 2025](#) (other than portions of any such Current Report on Form 8-K which are furnished but deemed not to be “filed” with the SEC).
- The description of the Company’s Common Stock in our registration statement on Form 8-A filed with the SEC on [June 18, 2018](#), including any amendments or reports filed for the purpose of updating such description, including [Exhibit 4.1](#) to the 2024 Form 10-K.

Any statement in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents by writing or telephoning us at the following address or phone number:

electroCore, Inc.
Attention: Corporate Secretary
200 Forge Way, Suite 205,
Rockaway, New Jersey 07866
(973) 290-0097

PROSPECTUS SUMMARY

This prospectus summary highlights important features of this offering and the information included or incorporated by reference in this prospectus. Because it is a summary, it may not contain all of the information that may be important to you. You should carefully read this entire prospectus, including the section entitled "Risk Factors."

Business Overview

We are a commercial stage bioelectronic technology company whose mission is to improve health and quality of life through innovative non-invasive bioelectronic technologies. Our two leading commercial products that treat chronic pain syndromes through non-invasive neuromodulation technology are gammaCore non-invasive vagus nerve stimulation, or nVNS, and Quell Fibromyalgia, or Quell. We also sell our Truvaga product, a handheld, personal use consumer products utilizing bioelectronic technologies, to promote general wellness and human performance.

nVNS a form of bioelectronic technology, modulates neurotransmitters through its effects on both the peripheral and central nervous systems. Our nVNS treatment is delivered through a proprietary high-frequency burst waveform that safely and comfortably passes through the skin and stimulates therapeutically relevant fibers in the vagus nerve. Various scientific publications suggest that nVNS works through a variety of mechanistic pathways including the modulation of neurotransmitters.

Historically, vagus nerve stimulation or VNS, required an invasive surgical procedure to implant a costly medical device. This has generally limited VNS from being used by anyone other than the most severe patients. Our non-invasive bioelectronic nVNS technologies es are self-administered and intended for regular or intermittent use over many years.

Our capabilities include product development, regulatory affairs and compliance, sales and marketing, product testing, electromechanical assembly, fulfillment, and customer support. We derive revenues from the sale of products in the United States and select overseas markets. We have two principal product categories:

- Handheld, personal use bioelectronic therapies for the management and treatment of certain medical conditions such as primary headache; and
- Handheld, personal use consumer products utilizing bioelectronic technologies to promote general wellness and human performance.

We believe our bioelectronic technologies may be used in the future to effectively treat additional medical conditions.

Our goal is to be a leader in non-invasive neuromodulation to deliver better health. To achieve this, we offer multiple propositions:

- Prescription gammaCore bioelectronic therapy for the treatment of certain prescription FDA cleared medical conditions such as primary headache;
- Truvaga for the support of general health and wellbeing; and
- TAC-STIM for human performance.

Our flagship gammaCore Sapphire is a prescription medical device using our bioelectronic therapy that is FDA cleared for a variety of primary headache conditions. gammaCore is available by prescription only and Sapphire is a portable, reusable, rechargeable and reloadable personal use option for patients to use at home or on the go. Prescriptions are written by a health care provider and dispensed from a specialty pharmacy, through the patient's healthcare system, or shipped directly to certain patients in the United States from our facility in Rockaway, NJ. After the initial prescription is filled, access to additional therapy can be refilled for certain of our gammaCore products through the input of a prescription-only authorization.

We offer two versions of our bioelectronic technology to support general health and wellbeing. Truvaga 350 is a personal use consumer electronics general wellness product and Truvaga Plus, which was launched in April 2024, is our next generation, app-enabled general wellness product. Neither product requires a prescription, and are available direct-to-consumer from electroCore at www.truvaga.com or through online retailers such as Amazon.com.

TAC-STIM handset is a form of nVNS for human performance and has been developed in collaboration with the United States Department of Defense Biotech Optimized for Operational Solutions and Tactics, or BOOST program. TAC-STIM handsets are available as a Commercial Off the Shelf (COTS) solution to professional organizations and are the subject of ongoing research and evaluation within the United States Air Force Special Operations Command, the United States Army Special Operations Command and at the United States Air Force Research Laboratory.

Truvaga and TAC-STIM are intended for general wellness in compliance with the FDA guidance document entitled “General Wellness: Policy for Low-Risk Devices; Guidance for Industry and FDA Staff, issued on September 27, 2019.” Truvaga and TAC-STIM handsets are not intended to diagnose, treat, cure, or prevent any disease or medical condition.

Our two largest customers by revenue are the United States Department of Veterans Affairs and United States Department of Defense, or VA, and the United Kingdom National Health Service, or NHS, utilizing our FDA cleared and CE marked product, gammaCore.

Sales to the VA comprised 71.8% and 71.1% of our revenue during the three and six months ended June 30, 2025, respectively. The majority of our 2024 sales were made pursuant to our qualifying contract under the Federal Supply Schedule, or FSS, which was secured by us in December 2018 (the “Original FSS Contract”), as well as open market sales to individual facilities within the government channel. In March 2025, we entered into a new FSS contract which become effective on June 15, 2025, and runs through June 14, 2030.

In August 2023, we signed a non-exclusive distribution agreement with Lovell providing Lovell the right to list and distribute certain gammaCore products into the federal market. Lovell is a Service-Disabled Veteran-Owned Small Business (SDVOSB) offering medical and pharmaceutical goods and services to federal healthcare providers. Listing products with Lovell is intended to streamline the sales process to a variety of government procurement channels through Lovell’s compliance with contracting regulations and its provision of logistical solutions connected directly into government contracting portals, all of which are intended to help government agencies meet their SDVOSB procurement goals. Customers for these vehicles are federal healthcare systems such as the Veterans Health Administration (VHA, which includes the VA), the Military Health System (MHS), and Indian Health Services (IHS), which we believe serve up to approximately 21 million patients combined.

Between November 2023 and January 2024, certain gammaCore products were added to the FSS, the VA Distribution and Pricing Agreement (DAPA), GSA Advantage, and Defense Logistics Agency’s ECAT system procurement portals through the Lovell contract vehicles, enabling the purchase of gammaCore products within the government channel and throughout the federal markets, including, but not limited to, the VA. The gammaCore products offered through Lovell provide government customers with similar product configuration options to those currently sold through our existing FSS contract, new FSS contract and open market sales made directly to individual VA facilities. We expect an increasing portion of our 2025 sales will be made pursuant to the distribution agreement with Lovell and its contract vehicles as well as through our new FSS contract, and our sales function in this channel is comprised of employees and an increasing number of independent contractors.

Sales under the UK Med Tech Funding Mandate, or MTFM, for cluster headache in the UK comprised 4.9% and 5.1% of our revenue during the three and six months ended June 30, 2025, respectively. We plan on continuing use of this program. In 2023, NHS granted a two-year extension in which our prescription gammaCore therapy will continue to be listed in the NHS catalog. This extension is through March 17, 2026 with an option for us to extend an additional two years. In 2025, we expect NICE to review the guidance document and any changes in recommendation or pricing may adversely impact our ability to work with NHS England on the MTFM program and could have an adverse impact on our financial results. We continue to utilize distribution partners to commercialize our nVNS technology in selected territories outside the United States and United Kingdom.

We believe there may be significant opportunities beyond these two areas. Specifically, we believe there may be a large commercial opportunity for our gammaCore bioelectronic therapy with additional insurance covered lives, cash pay, physician dispense, and direct-to-consumer approaches, along with wellness and human performance propositions through our Truvaga and TAC-STIM handsets. Therefore, we will continue our investments to expand our efforts in these channels and markets in 2025.

On May 1, 2025, we acquired NeuroMetrix, Inc. (“NURO”). NURO is a commercial stage healthcare company that develops and commercializes neurotechnology devices to address unmet needs in the chronic pain market through its Quell® platform: a wearable, app and cloud-enabled neuromodulation platform that is indicated for the treatment of fibromyalgia symptoms (Quell Fibromyalgia) and lower-extremity chronic pain (Quell 2.0). The transaction excluded NURO’s DPNCheck® technology and business, which was divested by NURO prior to closing of the transaction.

On August 4, 2025, we entered into the Loan and Security Agreement and the Subscription Agreement with Avenue. See “Description of the Transactions” for more information.

Recent Legal Proceedings

UAB Pulsetto v. electroCore, Inc.

On June 11, 2025, UAB Pulsetto (“Pulsetto”) filed a declaratory judgment action against the Company in the United States District Court for the District of New Jersey, captioned *UAB Pulsetto v. electroCore, Inc.*, Civ. No. 25-10036 (D.N.J.), asserting that its non-invasive vagus nerve stimulation product does not infringe the Company’s U.S. Patent No. 11,446,491 (the “‘491 Patent”).

On July 16, 2025, the Company filed a responsive pleading, answering the complaint and asserting counterclaims, that Pulsetto’s non-invasive vagus nerve stimulation product infringes the ‘491 Patent, as well as the Company’s U.S. Patent Nos. 8,948,873, 9,339,653, 10,874,857, 8,843,210, 9,242,092, 11,623,078, and 10,441,780, as well as claims that Pulsetto’s commercial conduct has infringed and continues to infringe the Company’s Truvaga™ and gammaCore® trademarks, and committed acts of false advertising and unfair competition in violation of state and federal law. On September 5, 2025, Pulsetto requested leave to file a motion to dismiss the Company’s counterclaims for lack of jurisdiction and/or insufficient pleadings. The Company has opposed that request, which has not yet been considered by the trial judge. On September 9, 2025, the court approved a schedule for discovery, and certain proceedings, filings, submissions, motions, reports and conferences. The parties have exchanged initial requests for the production of documents relevant to the dispute.

The Company believes that Pulsetto’s claim is without merit and intends to defend vigorously against it and to pursue vigorously the Company’s patent and non-patent counterclaims against Pulsetto. The Company expenses associated legal fees in the period they are incurred, and in light of, among other things, the preliminary stage of the litigation, the Company is unable to determine the reasonable probability of loss or a range of potential loss or gain or a range of potential gain. Accordingly, the Company has not established an accrual for potential losses or gains, if any, that could result from any unfavorable or favorable outcome, and there can be no assurance that these litigation matters will not result in substantial litigation costs and/or judgments or settlements that could adversely affect the Company’s financial condition.

Recent Offerings

On September 30, 2025, the Company entered into the Purchase Agreements with the PIPE Investors, which collectively provided for the sale by the Company of 360,737 Private Shares.

The Private Shares were issued at a price of \$5.145 per share, in satisfaction of an aggregate of approximately \$1.856 million of legal services rendered or to be rendered to the Company by the PIPE Investors. The Company did not receive cash proceeds in connection with the issuance of these shares.

The offerings described above (collectively, the “2025 PIPE Offering”) closed on October 2, 2025. The Private Shares are not registered under Securities Act. The Private Shares were issued in reliance on the exemptions from registration provided by Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder, for transactions not involving a public offering. The Company agreed to file a registration statement with the SEC to cover the resale of the Private Shares, and to cause such registration statement to become effective by the 90th calendar day following the date of the closing of the 2025 PIPE Offering. The registration statement of which this prospectus is a part relates to the resale of the Private Shares.

Corporate Information

Our principal executive offices are located at 200 Forge Way, Suite 205, Rockaway, New Jersey 07866. Our telephone number is (973) 290-0097 and our website address is www.electrocore.com. We have included our website address in this prospectus as an inactive textual reference only. The information available on or accessible through our website does not constitute a part of this prospectus and should not be relied upon. See “Where You Can Find More Information” and “Incorporation of Information by Reference.” Our Common Stock is listed on the Nasdaq Capital Market (“Nasdaq”) under the symbol “ECOR”.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K promulgated by the SEC. As a smaller reporting company, we may rely on exemptions from certain disclosure requirements that are available to smaller reporting companies, 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. We will be able to take advantage of these scaled disclosures for so long as our voting and non-voting common shares held by non-affiliates is less than \$250 million measured on the last business day of our second fiscal quarter, or our annual revenue is less than \$100 million during the most recently completed fiscal year and our voting and non-voting common shares held by non-affiliates is less than \$700 million measured on the last business day of our second fiscal quarter.

THE OFFERING

Common Stock offered	Up to 762,508 shares (which (a) includes the maximum number of Conversion Shares issuable upon conversion of up to \$2,500,000 of the outstanding principal amount under the note or notes issued by the Company pursuant to the Loan and Security Agreement, (b) the Private Placement Shares, and (c) the Private Shares).
Common Stock outstanding before this offering	7,995,903 shares as of October 2, 2025 (which number does not include the shares being offered pursuant to this prospectus other than 106,351 issued and outstanding Private Placement Shares held by Avenue and the Private Placement Shares).
Common Stock outstanding after this offering	8,291,323 shares (which (a) includes the maximum number of Conversion Shares issuable upon conversion of up to \$2,500,000 of the outstanding principal amount under the note or notes issued by the Company pursuant to the Loan and Security Agreement, (b) the Private Placement Shares, and (c) the Private Shares).
Use of proceeds	We will not receive any proceeds from the sale of shares of Common Stock in this offering. See the section entitled “Use of Proceeds.”
Nasdaq Capital Market symbol	ECOR
Risk factors	You should consider carefully the information set forth in the section entitled “Risk Factors,” beginning on page 8 of this prospectus, in deciding whether or not to invest in our common stock.
Plan of distribution	The selling stockholders and their pledgees, donees, transferees, or other successors in interest may offer the shares of Common Stock in one or more transactions at fixed prices, at prevailing market prices at the time of sale, at varying prices determined at the time of sale, at negotiated prices, or in trading markets for our Common Stock. See the section entitled “Plan of Distribution” beginning on page 14 of this prospectus for a complete description of the manner in which the shares registered hereby may be distributed.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before you invest in any of the Company's securities, in addition to the other information in this prospectus, you should carefully consider (i) the risk factors contained in the 2024 Form 10-K and the Company's most recent Quarterly Report on Form 10-Q, which are incorporated by reference into this prospectus, and (ii) all of the other information included or incorporated by reference in this prospectus, as the foregoing may be updated from time to time by the Company's future filings under the Exchange Act.

The risks and uncertainties described and incorporated by reference herein are not the only ones facing the Company. Additional risks and uncertainties not presently known to the Company or that the Company currently deems immaterial may also impair its business or operations. Any adverse effect on the Company's business, financial condition or operating results could result in a decline in the value of the securities and the loss of all or part of your investment.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and certain information incorporated herein by reference contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed in the forward-looking statements. The statements contained in this prospectus that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act. Forward-looking statements are often identified by the use of words such as, but not limited to, “anticipate,” “believe,” “can,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “seek,” “should,” “strategy,” “target,” “will,” “would” and similar expressions or variations intended to identify forward-looking statements. These statements are based on the beliefs and assumptions of our management based on information currently available to management. Such forward-looking statements are subject to risks, uncertainties and other important factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by such forward-looking statements.

Factors that could cause or contribute to such differences include, but are not limited to, (i) those included in the 2024 Form 10-K, (ii) those contained in our other SEC reports described under “Risk Factors,” (iii) those described elsewhere in this prospectus, and (iv) other factors that we may publicly disclose from time to time. Furthermore, such forward-looking statements speak only as of the date made. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

You should read this prospectus and the documents that we incorporate by reference herein and therein completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this prospectus are made as of the date of this prospectus and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

This prospectus and the documents incorporated by reference herein and therein contain estimates, projections, market research and other information concerning, among other things, our industry, our business and the markets for our devices. Unless otherwise expressly stated, we obtain this information from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources as well as from our own internal estimates and research and from publications, research, surveys and studies conducted by third parties on our behalf. Information that is based on estimates, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are reflected in this information. As a result, you are cautioned not to give undue weight to such information.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements and our management is responsible for the accuracy of such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to unduly rely upon these statements.

DESCRIPTION OF THE TRANSACTIONS

Avenue Loan and Security Agreement

On August 4, 2025 (the “LSA Closing Date”), we, and our wholly owned subsidiary, NURO, each as borrowers, entered into the Loan and Security Agreement with Avenue as administrative agent and collateral agent, and as lender.

Amount. The Loan and Security Agreement provides for term loans in an aggregate principal amount of up to \$12.0 million (the “Loan Amount”) to be delivered in two tranches (the “Term Loans”). The tranches consist of (i) a term loan advanced to the Company on the LSA Closing Date in an aggregate principal amount of \$7.5 million (“Tranche 1”), and (ii) subject to the achievement of certain performance milestones set forth in the Loan and Security Agreement, a right of the Company to request that Avenue make additional term loan advances to the Company in an aggregate principal amount of up to \$4.5 million (“Tranche 2”), which right expires on December 31, 2025. The Company intends to use the proceeds of the Term Loans for working capital and general corporate purposes.

Maturity. The Term Loans mature on August 1, 2029 (the “Maturity Date”).

Interest Rate and Amortization. The principal balance of the Term Loans bears interest at a variable rate per annum equal to the greater of (i) the sum of 5.0% and the prime rate as reported in *The Wall Street Journal*, provided that, in the event such prime rate of interest is less than zero, such rate shall be deemed to be zero, and (ii) twelve and one-half percent (12.50%) (the “Interest Rate”). Interest only shall be payable at the Interest Rate during the period following the LSA Closing Date and continuing until the first day of the first full calendar month following the 18 month anniversary of the LSA Closing Date, provided, however, that such period shall be extended for six months if as of the 18 month anniversary of the LSA Closing Date, the Company has achieved certain milestones, as provided in the Supplement to the Loan and Security Agreement dated August 4, 2025, by and among the Company, NURO and Avenue (the “Supplement”); provided, further, however, that the such interest only period shall not exceed 24 months. Thereafter, principal and interest of the Term Loans shall be fully amortized and paid, in equal, monthly principal installments, plus interest at the Interest Rate for such month, through the Maturity Date, subject to the terms and conditions of the Supplement.

Final Payment. The Company will pay final payment at a fee of 3.5% of the Loan Amount, due upon the earlier of the Maturity Date or prepayment in full of the Term Loans.

Prepayment Fee. The Company may, at its option at any time, prepay the Term Loans in their entirety by paying the then outstanding principal balance and all accrued and unpaid interest on the Term Loans, subject to a prepayment fee equal to (i) 3.0% of the principal amount outstanding if the prepayment occurs on or prior to the first anniversary following the LSA Closing Date, (ii) 2.0% of the principal amount outstanding if the prepayment occurs after the first anniversary following the LSA Closing Date, but on or prior to the second anniversary following the LSA Closing Date, and (iii) 1.0% of the principal amount outstanding if the prepayment occurs after the second anniversary following the LSA Closing Date, but on or prior to the Maturity Date.

Security. The Loan and Security Agreement is collateralized by substantially all of the Company’s assets in which Avenue is granted a senior secured lien. The Company also grants Avenue a negative pledge on the Company’s intellectual property, subject to limited exceptions, pursuant to the Loan and Security Agreement.

Covenants; Representations and Warranties; Other Provisions. The Loan and Security Agreement contains customary representations, warranties and covenants, including covenants by the Company limiting certain additional indebtedness, liens (including a negative pledge on intellectual property and other assets, subject to limited exceptions), guaranties, substantial asset sales, investments and loans, certain corporate changes, transactions with affiliates and fundamental changes.

Default Provisions. The Loan and Security Agreement provides for events of default customary for term loans of this type, including but not limited to non-payment, breaches or defaults in the performance of covenants, insolvency, bankruptcy and the occurrence of a material adverse effect on the Company. After the occurrence of an event of default, Avenue may (i) accelerate payment of all obligations, impose an increased rate of interest, and terminate Avenue commitments under the Loan and Security Agreement and (ii) exercise any other right or remedy provided by contract or applicable law.

Conversion Right. Additionally, subject to certain exceptions, Avenue has the right to convert (the “Conversion Right”) an aggregate amount of up to \$2.5 million of the outstanding Loan Amount into shares of the Company’s common stock at a conversion price per share equal to \$8.4625, representing 125% of the lower of (i) the five-day volume-weighted average price of the Common Stock as calculated on the day prior to the LSA Closing Date, or (ii) the closing price of the Common Stock on the date prior to the LSA Closing Date (\$6.77). In the event the Company elects to prepay the Term Loans in full, the Company shall provide no less than five business days’ prior written notice to Avenue; provided, however, if Avenue has not yet exercised the Conversion Right, the Company shall provide written notice of prepayment at least 10 days in advance of the proposed prepayment date and Avenue shall have the option, with respect to the Conversion Right, to exercise the Conversion Right by delivering written notice to the Company at least two business days in advance of the proposed prepayment date.

Right to Invest. Avenue shall have the right, but not the obligation, to invest up to an aggregate of \$1 million in equity securities of the Company on the same terms, conditions, and pricing offered by the Company to other investors in connection with any offering of the Company’s equity securities to third party investors for capital raising purposes occurring after the Closing Date, on the terms and conditions set forth in the Supplement.

The foregoing summary of the Loan and Security Agreement and the Supplement do not purport to be complete and are qualified in their entirety by reference to the full text of Loan and Security Agreement and the Supplement, which are filed as Exhibits 10.1 and 10.2 to our Quarterly Report on Form 10-Q for the period ended June 30, 2025, and are incorporated by reference herein. The representations, warranties and covenants in the Loan and Security Agreement and the Supplement were made only for purposes of such agreement and as of specific dates and were solely for the benefit of the parties to such agreements.

Avenue Subscription Agreement

In connection with the entry into the Loan and Security Agreement, the Company entered into the Subscription Agreement with Avenue, pursuant to which the Company issued 106,351 Private Placement Shares for no additional consideration. The issuance of the Private Placement Shares was made in reliance on the exemption from registration contained in Section 4(a)(2) of the Securities Act, and Rule 506 of Regulation D thereunder, because the offer and sale of such securities does not involve a “public offering” as defined in Section 4(a)(2) of the Securities Act.

Pursuant to the Subscription Agreement, the Company agreed to use commercially reasonable efforts to prepare and file with the SEC within 60 days of the LSA Closing Date a registration statement on Form S-3, or if the Company is not then eligible to register for resale securities on Form S-3, on another appropriate form of registration statement, registering the resale of the Private Placement Shares, and the Conversion Shares. The registration statement of which this prospectus is a part relates to the resale of the Private Placement Shares, and the Conversion Shares.

The foregoing summary of the Subscription Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of Subscription Agreement, which is filed as Exhibit 10.3 to our Quarterly Report on Form 10-Q for the period ended June 30, 2025, and is incorporated by reference herein. The representations, warranties and covenants Subscription Agreement were made only for purposes of such agreement and as of specific dates and were solely for the benefit of the parties to such agreement.

October 2025 Private Placement

On October 2, 2025, we completed the transactions contemplated by the Purchase Agreements, providing for the sale by us of an aggregate of 360,737 Private Shares. Each Private Share was issued at a price of \$5.145 per share. The registration statement of which this prospectus is a part relates to the resale of the Private Shares. For more information, see “*Prospectus Summary – Recent Offerings.*”

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares of Common Stock by the selling stockholders.

The selling stockholders will pay all underwriting discounts, selling commissions and expenses incurred by them for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in connection with the sale of the shares, if any. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, listing fees and fees and expenses of our counsel and our accountants.

SELLING STOCKHOLDERS

The shares of Common Stock being offered for resale by the selling stockholder pursuant to the Form S-3 of which this prospectus forms a part are: (i) the Conversion Shares, (ii) the Private Placement Shares, and (iii) the Private Shares. For additional information regarding the Conversion Shares, the Private Placement Shares, and the Private Shares, see the section entitled “Description of the Transactions” 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. Except for the Loan and Security Agreement and the Private Placement Shares, and as described below, Avenue has not had any material relationship with us within the past three years. Each of the other selling stockholders acts as our legal counsel from time to time.

The table below lists the selling stockholders and other information regarding the beneficial ownership of shares of Common Stock by the selling stockholders. The second column lists the number of shares of Common Stock beneficially owned by the selling stockholders as of October 2, 2025, assuming the conversion of \$2,500,000 of the outstanding principal amount under the note or notes issued in accordance with the terms of the Loan and Security Agreement as of October 2, 2025. The third column lists the shares of Common Stock being offered by this prospectus by the selling stockholders. The fourth column lists the shares of Common Stock held by the selling stockholders after completion of this offering, assuming the conversion of \$2,500,000 of the outstanding principal amount under the note or notes issued in accordance with the terms of the Loan and Security Agreement. The fifth column lists the percentage ownership held by the selling stockholders after completion of this offering if such percentage exceeds 1% of the total number of shares of Common Stock outstanding at that time. The information presented regarding the selling stockholders is based, in part, on information the selling stockholders provided to us in writing specifically for use in this prospectus. The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

In addition to the assumptions described above, beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power over securities. To our knowledge, unless otherwise indicated, the stockholder named in the table below has sole voting and investment power with respect to its shares of Common Stock. Percentage of beneficial ownership is based on 7,995,903 shares of our Common Stock outstanding as of October 2, 2025 (which number includes the 106,351 Private Placement Shares held by Avenue and the Private Shares).

Name of Selling Stockholders	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 Shares of Common Stock Owned After Offering (to the extent greater than 1%)
Avenue Venture Opportunities Fund II, L.P. ⁽¹⁾	401,771 ⁽²⁾	401,771	—	*
Denton US LLP	272,108	272,108	—	*
Leason Ellis LLP	77,745	77,745	—	*
Ruskin Moscou Faltischek, P.C.	10,884	10,884	—	*

* Denotes less than 1%.

(1) Avenue Venture Opportunities Fund II, L.P. is a Delaware limited partnerships. Decisions with respect to the disposition of securities are determined by Avenue Venture Opportunities Fund II, L.P. Marc Lasry, the Chairman and Chief Executive Officer of Avenue Capital Group, which includes the General Partner and Investment Manager of Avenue, may be deemed to beneficially own the securities beneficially owned by Avenue directly or indirectly controlled by it or him. The address of Avenue Venture Opportunities Fund II, L.P., and their affiliates, is 11 West 42nd Street, 9th Floor, New York, New York 10036.

(2) Consists of (i) 295,420 Conversion Shares potentially issuable upon conversion of the \$2,500,000 of the outstanding principal amount under the note or notes issued in accordance with the terms of the Loan and Security Agreement, and (ii) 106,351 Private Placement Shares.

PLAN OF DISTRIBUTION

We are registering the Conversion Shares issuable upon conversion of \$2,500,000 of the outstanding principal amount under the note or notes issued in accordance with the terms of the Loan and Security Agreement and the Supplement, the Private Placement Shares, and the Private Shares to permit the resale of these shares of Common Stock by the selling stockholders from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of Common Stock.

The selling stockholders, which, as used herein, includes donees, pledgees, transferees or other successors in interest selling shares of Common Stock or interests in shares of Common Stock received after the date of this prospectus from the selling stockholders as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of Common Stock or interests in shares of Common Stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares 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;
- short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- sales pursuant to Rule 144;
- one or more underwritten offerings on a firm commitment or best effort basis;
- a combination of any such methods of sale; and
- any other method permitted by applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of the Common Stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of Common Stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of Common Stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale 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 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 Common Stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the Common Stock offered by them will be the purchase price of the Common Stock less discounts or commissions, if any. The selling stockholders reserve the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of Common Stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, if available, or pursuant to other available exemptions from the registration requirements under the Securities Act, rather than this prospectus, provided that they meet the criteria and conform to the requirements of that rule. Registration of the shares of Common Stock covered by this prospectus does not mean that any shares of the Common Stock will be offered or sold.

The selling stockholders may engage in at-the-market offerings and offer the Common Stock into an existing trading market in accordance with Rule 415(a) (4) under the Securities Act on the terms described in any prospectus supplement relating thereto, if applicable. Underwriters, dealers and agents who participate in any at-the-market-offerings will be described in any prospectus supplement relating thereto, if applicable.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the Common Stock or interests therein may be “underwriters” within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are “underwriters” within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our Common Stock to be sold, the name of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the Common Stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the Common Stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

If at the time of any offering made under this prospectus, a member of FINRA participating in the offering has a “conflict of interest” as defined in FINRA Rule 5121 (“Rule 5121”), that offering will be conducted in accordance with the relevant provisions of Rule 5121.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M promulgated under the Exchange Act, may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We will pay all expenses of the registration of the shares of Common Stock, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, that a selling stockholder will pay all underwriting discounts and selling commissions, if any.

LEGAL MATTERS

Unless indicated otherwise in any applicable prospectus supplement, the validity of the issuance of the securities offered hereby will be passed upon for us by Dentons US LLP, New York, New York. As appropriate, legal counsel representing the underwriters, dealers, or agents will be named in the accompanying prospectus supplement relating to such offering. As of the date of this prospectus, Dentons US LLP and members of Dentons US LLP own shares of our common stock with a market value in excess of \$50,000.

EXPERTS

The consolidated financial statements of electroCore, Inc. and subsidiaries as of December 31, 2024 and 2023 and for the years ended December 31, 2024 and 2023 have been incorporated by reference herein and in the registration statement in reliance upon the report of Marcum LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

762,508 Shares of Common Stock



electroCore, Inc.

PROSPECTUS

, 2025

PART II INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth an estimate of the fees and expenses, other than any underwriting discounts and commissions, payable by us in connection with the issuance and distribution of the securities being registered. All the amounts shown are estimates, except for the SEC registration fee.

	Amount
SEC registration fee	\$ 516.51
Accounting fees and expenses	*
Legal fees and expenses	*
Transfer agent and registrar fees and expenses	*
Printing and miscellaneous fees and expenses	*
Blue Sky, qualification fees and expenses	*
Total	\$ *

*The calculation of these fees and expenses is dependent on the number of issuances and amount of securities offered and, accordingly, cannot be estimated at this time.

Item 15. Indemnification of Directors and Officers

As permitted by Section 102 of the Delaware General Corporation Law, our certificate of incorporation and bylaws contain provisions that limit or eliminate the personal liability of our directors for a breach of their fiduciary duty of care as directors. The duty of care generally requires that, when acting on behalf of the corporation, directors exercise an informed business judgment based on all material information reasonably available to them. Consequently, a director will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions or other distributions or payment of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not affect the availability of equitable remedies such as injunctive relief or rescission. Our certificate of incorporation also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Section 145 of the Delaware General Corporation Law, our bylaws provide that:

- we may indemnify our directors, officers, and employees to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions;
- we may advance expenses to our directors, officers and employees in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions; and
- we may advance expenses to our directors, officers and employees in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions; and
- the rights provided in our bylaws are not exclusive.

Our certificate of incorporation and our bylaws provide for the indemnification provisions described above and elsewhere herein. We have entered into separate indemnification agreements with our directors and officers which are broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements generally require us, among other things, to indemnify our officers and directors against liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct. These indemnification agreements also generally require us to advance any expenses incurred by the directors or officers as a result of any proceeding against them as to which they could be indemnified. In addition, we have purchased a policy of directors' and officers' liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment in some circumstances. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933, as amended, or the Securities Act.

Insofar as indemnification for liabilities arising under the 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 Act and is, therefore, unenforceable.

Item 16. Exhibits

Exhibit No.	Description	Method of Filing
3.1	Certificate of Incorporation of the Registrant.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2018 as filed with the SEC on August 14, 2018.
3.2	Amended and Restated Bylaws of the Registrant.	Incorporated by reference to the Company's Current Report on Form 8-K as filed with the SEC on December 9, 2021.
3.3	Certificate of Designation of the Series A Preferred Stock of the Company.	Incorporated by reference to the Company's Current Report on Form 8-K as filed with the SEC on December 7, 2022.
3.4	Certificate of Elimination of the Series A Preferred Stock of the Company.	Incorporated by reference to the Company's Annual Report on Form 10-K for the period ended December 31, 2022 as filed with the SEC on March 8, 2023.
3.5	Certificate of Amendment to the Certificate of Incorporation.	Incorporated by reference to the Company's Current Report on Form 8-K as filed with the SEC on February 14, 2023.
5.1	Opinion of Dentons US LLP.	Filed herewith.
10.1#	Loan and Security Agreement by and among electroCore, Inc., NeuroMetrix, Inc., and Avenue Venture Opportunities Fund II, L.P., dated August 4, 2025.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2025, as filed with the SEC on August 5, 2025.
10.2^	Supplement to Loan and Security Agreement by and among electroCore, Inc., NeuroMetrix, Inc., and Avenue Venture Opportunities Fund II, L.P., dated August 4, 2025.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2025, as filed with the SEC on August 5, 2025.
10.3^	Subscription Agreement between electroCore, Inc. and Avenue Venture Opportunities Fund II, L.P., dated August 4, 2025.	Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2025, as filed with the SEC on August 5, 2025.
23.1	Consent of Marcum LLP.	Filed herewith.
23.2	Consent of Dentons US LLP.	Filed herewith (included in Exhibit 5.1).
24.1	Power of Attorney.	Filed herewith (included on signature pages).
107	Filing Fee Table.	Filed herewith.

Pursuant to Item 601(a)(5) of Regulation S-K, certain schedules and exhibits to this exhibit have been omitted and will be furnished to the Securities and Exchange Commission supplementally upon request.

^ Certain confidential portions of this exhibit have been redacted from the publicly filed document because such portions are (i) not material and (ii) would be competitively harmful if publicly disclosed.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 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, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirement of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Rockaway, State of New Jersey, on this 3rd day of October, 2025.

ELECTROCORE, INC.

By: /s/ Joshua S. Lev

Joshua S. Lev
Chief Financial Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Daniel S. Goldberger and Joshua S. Lev, and each of them, as his/her true and lawful attorney-in-fact and agent, each acting alone, with full power of substitution and resubstitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments and any additional registration statement related hereto permitted by Rule 402 under the Securities Act (and any further amendments, including post-effective amendments thereto)) this Registration Statement on Form S-3, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated below.

<u>Signature</u>	<u>Capacity</u>	<u>Date</u>
<u>/s/ Daniel S. Goldberger</u> Daniel S. Goldberger	Chief Executive Officer and Director (Principal Executive Officer)	October 3, 2025
<u>/s/ Joshua S. Lev</u> Joshua S. Lev	Chief Financial Officer (Principal Financial and Accounting Officer)	October 3, 2025
<u>/s/ Thomas J. Errico, M.D.</u> Thomas J. Errico, M.D.	Chairman of the Board	October 3, 2025
<u>/s/ Elena Bonfiglioli</u> Elena Bonfiglioli	Director	October 3, 2025
<u>/s/ John P. Gandolfo</u> John P. Gandolfo	Director	October 3, 2025
<u>/s/ Julie A. Goldstein</u> Julie A. Goldstein	Director	October 3, 2025
<u>/s/ Thomas M. Patton</u> Thomas M. Patton	Director	October 3, 2025
<u>/s/ James C. Theofilos</u> James C. Theofilos	Director	October 3, 2025
<u>/s/ Patricia Wilber</u> Patricia Wilber	Director	October 3, 2025

DENTONS

Dentons US LLP
1221 Avenue of the Americas New
York, NY 10020-1089
United States

dentons.com

October 3, 2025

electroCore, Inc.
200 Forge Way, Suite 205
Rockaway, NJ 07866

Re: electroCore, Inc. Registration Statement on Form S-3

Ladies and Gentlemen:

In our capacity as counsel to electroCore, Inc., a Delaware corporation (the “**Company**”), we have been asked to render this opinion in connection with a Registration Statement on Form S-3, filed by the Company with the Securities and Exchange Commission (the “**Commission**”) on October 3, 2025 (the “**Registration Statement**,” and the prospectus which forms a part of the Registration Statement, the “**Prospectus**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), covering the resale by selling securityholder named in the Prospectus of up to an aggregate of 762,508 shares of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”), consisting of (i) up to 295,420 shares of Common Stock (the “**Conversion Shares**”) issuable upon conversion of up to \$2,500,000 of the outstanding principal amount under the note or notes (the “**Notes**”) issued by the Company pursuant to the Loan and Security Agreement dated August 4, 2025 (the “**Loan and Security Agreement**”), between the Company and Avenue Venture Opportunities Fund II, L.P. (“**Avenue**”) and the Supplement (as defined below) thereto, (ii) up to 106,351 shares of Common Stock (the “**Private Placement Shares**”) previously issued to Avenue in connection with the Loan and Security Agreement, in a private placement, pursuant to a Subscription Agreement dated August 4, 2025 (the “**Subscription Agreement**”), between the Company and Avenue, and (iii) 360,737 shares of Common Stock (the “**Private Shares**”) issued by the Company to certain institutional and accredited investors in private placements, pursuant to purchase agreements, each dated September 30, 2025 (the “**Purchase Agreements**”), between the Company and investors signatories thereto.

This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act.

In connection with rendering this opinion, we have examined and are familiar with (i) the Company’s certificate of incorporation, as amended; (ii) the Company’s bylaws, as amended and restated; (iii) the Registration Statement, including the Prospectus; (iii) the Loan and Security Agreement, (iv) the supplement to the Loan and Security Agreement dated August 4, 2025, between the Company and Avenue (the “**Supplement**”); (v) the Subscription Agreement; (vi) the Purchase Agreements; (vii) corporate proceedings of the Company relating to the issuance of the securities described herein; and (viii) and such other instruments and documents as we have deemed relevant under the circumstances.

We have assumed the genuineness and authenticity of all documents examined by us and all signatures thereon, and the conformity to originals of all copies of documents examined by us.

Based on the foregoing, we are of the opinion that: (i) the Private Placement Shares and the Private Shares have been duly authorized and validly issued and are fully paid and nonassessable; and (ii) the Conversion Shares, when issued and delivered upon the conversion of the Notes in accordance with the terms of the Notes and the Loan and Security Agreement, will be duly authorized, validly issued, fully paid and non-assessable.

Our opinions are subject to the effect of federal and state bankruptcy, insolvency, reorganization, arrangement, moratorium, fraudulent conveyance and other laws relating to or affecting the rights of secured or unsecured creditors generally (or affecting the rights of only creditors of specific types of debtors), with respect to which we express no opinion.

We express no opinion as to the laws of any jurisdiction other than Delaware general corporation law and the federal laws of the United States of America.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption “Legal Matters” in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Dentons US LLP

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 12, 2025 relating to the financial statements appearing in the Annual Report on Form 10-K of electroCore, Inc. and Subsidiaries for the year ended December 31, 2024 and 2023. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Marcum LLP

Morristown, NJ
October 3, 2025

Calculation of Filing Fee Tables

Form S-3
(Form Type)**electroCore, Inc.**
(Exact Name of Registrant as Specified in its Charter)**Table 1: Newly Registered and Carry Forward Securities**

											Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	
Newly Registered Securities											
Fees to Be Paid	Common Stock, \$0.001 par value per share	Rule 457(c)	295,420(2)	\$ 4.905(4)	\$1,449,035.10	\$0.0001381	\$ 200.11	—	—	—	—
Fees to Be Paid	Common Stock, \$0.001 par value per share	Rule 457(c)	467,088(3)	\$ 4.905(4)	\$2,291,066.64	\$0.0001381	\$ 316.40	—	—	—	—
Total Offering Amounts					\$3,740,101.74		\$ 516.51				
Total Fees Previously Paid							—				
Total Fee Offsets							—				
Net Fee Due							\$ 516.51				

- (1) This registration statement shall also cover any additional securities of the registrant that may become issuable by reason of any stock split, stock dividend or similar transaction or anti-dilution adjustments in accordance with Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”).
- (2) Represents shares of the Registrant’s common stock issuable upon conversion of \$2,500,000 of the outstanding principal amount under the note or notes issued or issuable in accordance with the terms of the Loan and Security Agreement, including Supplement referenced therein (collectively, the “Loan and Security Agreement”), by and between the Registrant and Avenue Venture Opportunities Fund II, L.P. (“Avenue”), as administrative agent and collateral agent, and as lender. The number of shares of common stock registered by the Registrant is calculated by dividing \$2,500,000 by \$6.77, which represents 125% of the lower of (i) the five-day volume-weighted average price of the Registrant’s common stock as calculated on the day prior to the closing date of the financing, or (ii) the closing price of the Registrant’s common stock on the date prior to the closing of the financing (\$6.77), in accordance with the terms of the Loan and Security Agreement.
- (3) Represents the shares of common stock issued to (i) Avenue in a private placement in connection with the Loan and Security Agreement and (ii) to certain institutional and accredited investors in private placements, pursuant to purchase agreements, each dated September 30, 2025, between the Company and investors signatories thereto.
- (4) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) promulgated under the Securities Act on the basis of the average of the high and the low price of Registrant’s common stock as reported on the Nasdaq Capital Market on September 29, 2025.