Exhibit 10.5.1  
 MEDICAL EXPERT/KEY OPINION LEADER  
CONSULTING AGREEMENT  
 THIS CONSULTING AGREEMENT (this “Agreement”) is made and entered into as of May 12, 2018 (the “Agreement Date”), by and between Lucid Diagnostics Inc., a Delaware corporation (the “Company”), and Xxxxxxx Xxxxxxxxx, MD an individual residing in\_\_\_\_\_\_\_(the “Consultant”).  
 RECITALS  
 WHEREAS, the Company is a medical device company organized to conceive, develop and commercialize a diversified pipeline of innovative products (the “Products”);  
 WHEREAS, the Company and the Consultant desire to enter into a consulting arrangement whereby the Consultant will serve as a medical expert/key opinion leader to perform certain services for the Company related to the Products upon the terms and conditions set forth below;  
 WHEREAS, certain confidential, proprietary and trade secret information of the Company, including but not limited to, the “Confidential Information” as defined in Section 5.1 of this Agreement, may be disclosed to the Consultant in connection with his performance of the consulting services; and  
 WHEREAS, the Company is willing to enter into this consulting arrangement only if the Consultant consents to the nondisclosure and other obligations set forth in Section 5 and Section 6 of this Agreement.  
 AGREEMENT  
 NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants and agreements hereinafter contained and other good and valuable consideration, the receipt and sufficiency of which the Company and the Consultant hereby acknowledge, the parties hereby agree as follows:  
 1. DUTIES OF THE CONSULTANT.  
 1.1. Services. The Consultant agrees to serve as a medical expert/key opinion leader to the Company, and acknowledges and agrees that the Company may identify the Consultant as a medical expert/key opinion leader of the Company’s on its website, in any public filings it makes with the Securities and Exchange Commission or in other materials describing the Company’s medical experts or key opinion leaders. In such capacity, the Consultant will provide technical, clinical and strategic consulting, general advisory and other services (collectively, the “Services”) to or on behalf of the Company as may be reasonably requested and otherwise relevant to serving on the Company’s needs. The general nature of the Services is more specifically set forth in Exhibit A attached hereto and incorporated into this Agreement. The Consultant will employ his commercially reasonable efforts and endeavor in good faith to render the Services which are the subject of this Agreement, and will perform such other reasonable duties and services as may be consistent with the responsibilities of the position. The Consultant will not, at any time, be required to use or recommend the Company’s products. The parties acknowledge the rights of patients to select the device suppliers of their choice and consistent with Consultant’s professional responsibilities, Consultant will honor the patient’s choice.  
 1.2. Time Commitment; Priority of CWRU Obligations. The Consultant agrees to devote a sufficient portion of his business time, attention and energies to the performance of the Services as necessary for the Consultant to perform such Services faithfully, diligently and in accordance with Consultant’s abilities. Notwithstanding the foregoing, the Company acknowledges that the Consultant is a member of the faculty of Case Western Reserve University and the medical staff of University Hospitals Cleveland Medical Center and that his primary professional obligations are to perform his duties in these capacities and agrees that the Consultant’s doing so shall not constitute a violation of this Agreement.  
 2. COMPENSATION.  
 2.1 Generally. The Company shall pay the Consultant for the Services hereunder at an hourly rate of $500 per hour up to a daily maximum of $4,000. If there is travel required to perform Services, the Company shall pay Consultant $200 per hour of actual travel time. The Consultant will invoice Company for such Consulting Services and expenses on the last day of each month. Payments for services and expenses shall be made by Company within fifteen (15) days after receiving the xxxx.  
 2.2 Stock Option Awards. As additional compensation for the Services hereunder, (i) the Company will grant to Consultant options to purchase up to 100,000 shares of common stock of the Company, in the form of the Stock Option Agreement provided to Consultant in connection herewith (the “Stock Option Agreement”), and (ii) PAVmed Inc. will grant to Consultant options to purchase up to 25,000 shares of common stock of PAVmed Inc., in substantially the same form of Stock Option Agreement used by PAVmed Inc. in making stock option grants to its officers and directors.  
 3. EXPENSES.  
 3.1. Travel. The Company will also reimburse the Consultant for all customary, reasonable and necessary expenses paid or incurred by the Consultant in the performance of the Consultant’s duties; provided that airfare shall be reimbursed only if it is purchased in advance in coach class or otherwise with the Company’s prior consent. The Consultant shall submit all receipts and other documentation. If services are rendered coinciding with an industry meeting Consultant would otherwise be attending, the Company will reimburse for 50% of air travel expense and a one-night hotel stay.  
 4. INDEPENDENT CONTRACTOR STATUS. It is expressly understood and agreed that the Consultant is and shall be an independent contractor and not an employee of the Company with respect to the services contemplated by this Agreement. As an independent contractor, the Consultant shall not be entitled to any pension, profit sharing, health or similar or other benefits, if any, that are or may be available to employees of the Company. Further, the Consultant shall pay any and all payroll or income taxes of any nature whatsoever, including, without limitation, FICA taxes and federal, state, provisional and local taxes, imposed upon the fees paid to the Consultant under this Agreement. The Consultant shall have no authority to bind the Company to any contract, agreement or arrangement.  
 5. CONFIDENTIALITY.  
 5.1. Confidential Information. “Confidential Information” means information or data of the Company or any of its affiliates concerning its or its affiliates business, financial statements, sales and marketing plans, customers, products, proposed products, plans, ideas, drawings, designs, concepts, inventions, discoveries, improvements, patent applications, know-how, trade secrets, prototypes, processes, techniques and other proprietary information, and any notes, analyses, compilations and other materials prepared by the Consultant that contain, are based on, or otherwise reflect or are derived, in whole or in part, from any of the foregoing, but does not include information that: (a) is already lawfully in the possession of the Consultant through independent means at the time of disclosure thereof; (b) is or later becomes part of the public domain through no fault of the Consultant; or (c) is lawfully received by the Consultant from a third party having no obligations of confidentiality to the Company.  
 5.2. Acceptance and Use of Confidential Information. Except in the performance of the Services hereunder, and as otherwise expressly authorized in writing by this Agreement, during the term of this Agreement and thereafter, (a) the Consultant will not disclose the Confidential Information to any unauthorized persons or entity or use it for his own benefit or the benefit of any third party; and (b) the Consultant will use all reasonable care, but in no event less care than the Consultant takes to protect his own Confidential Information of similar importance, to protect the Confidential Information of the Company from unauthorized use, disclosure and publication. The Consultant further agrees that he (a) shall use the Confidential Information only for, and in the course of providing services for the Company pursuant to the terms of this Agreement, and (b) shall, immediately upon the earlier of the termination of this Agreement or the request of the Company, deliver to the Company any and all originals and all copies of the Confidential Information.  
 5.3 Permitted Disclosure. If the Consultant determines in good faith on the advice of legal counsel that he is required to disclose any Confidential Information, by order of a governmental agency or by a court of competent jurisdiction, the Consultant shall (to the extent legally permitted) provide the Company with prompt written notice of such requirement so that the Company may seek (at the Company’s expense) a protective order or other remedy, and provide reasonable assistance (at the Company’s expense) in opposing such disclosure or seeking a protective order or other limitations on disclosure. If, after providing such notice and assistance as required herein, the Company remains so required to disclose any Confidential Information, the Company shall disclose no more than that portion of the Confidential Information which, on the advice of legal counsel (at the Company’s expense), the Consultant is required to disclose and shall use commercially reasonable efforts to seek assurances from the applicable court or agency that such Confidential Information will be afforded confidential treatment.  
 5.4. Company Data.  
 (a) “Company Data” as used in this Section 5.4 means any information, data, numbers, percentages, formulas, or any research results which are generated at as a result of or in connection with the Services which the Consultant is to provide to the Company under this Agreement.  
 (b) All Company Data shall be the sole and exclusive property of the Company and shall be considered Confidential Information subject to the provisions of this Section 5, and except as necessary to perform the Services, the Consultant hereby agrees not to use the Company Data in any way, or in any form, without the Company’s written consent.  
 6. INVENTIONS.  
 6.1. Inventions. “Inventions” as used in this Section 6, means any inventions, discoveries, improvements, ideas, drawings, designs, concepts, patent applications, know-how, trade secrets, prototypes, techniques, processes, software codes and documentation (whether or not they are in writing or reduced to practice) or works of authorship (whether or not they can be patented or copyrighted) that the Consultant makes, authors, or conceives (either alone or with others) and that concern or are related to the Company’s Products and result from any work the Consultant performs for the Company. Notwithstanding the foregoing, nothing in this Agreement shall be construed as transferring or conveying, or requiring Consultant to transfer or convey, the intellectual property rights of Case Western Reserve University and/or its clinical affiliates to the Company.  
 6.2. Company Rights. Subject to the last paragraph of this Section 6.2 and the last sentence of Section 6.1, the Consultant agrees that all Inventions made by the Consultant during the term of this Agreement will be the Company’s sole and exclusive property, and to the extent applicable, shall be deemed to be “works for hire” under the copyright laws of the United States. The Consultant will, with respect to any Invention:  
 (a) keep current, accurate, and complete records, which will belong to the Company and be kept and stored on the Company’s premises;  
 (b) promptly and fully disclose the existence and describe the nature of the Invention to the Company in writing (and without request);  
 (c) to the extent exclusive title and/or ownership rights may not originally vest in the Company, assign (and the Consultant does hereby assign, transfer and convey) to the Company all of the Consultant’s rights, title and interest to any Inventions, any applications the Consultant makes for patents or copyrights in any country, and any patents or copyrights granted to the Consultant in any country; and  
 (d) acknowledge and deliver promptly to the Company any written instruments, and perform any other acts necessary in the Company’s opinion to preserve property rights in any Inventions against forfeiture, abandonment or loss and to obtain and maintain patents and/or copyrights on any Inventions and to vest the entire right and title to any Inventions in the Company. Such execution and assistance shall be at no charge to the Company, but at the Company’s expense and the Company shall reimburse the Consultant for reasonable out-of-pocket expenses incurred.  
 The requirements of this Section 6.2 do not apply to an Invention which was developed entirely on the Consultant’s own time, and (1) which does not relate directly to the Company’s Products or (2) which does not result from any work the Consultant performed for the Company. With respect to any obligations performed by the Consultant under this Section 6.2 following termination of this Agreement, the Company will pay or reimburse all reasonable out-of-pocket expenses.  
 7. EQUITABLE REMEDIES AND ENFORCEMENT. The Consultant agrees and acknowledges that breach by the Consultant of his obligations under this Agreement shall cause irreparable injury to the Company and shall entitle the Company to the entry of any temporary or permanent injunctive relief, or any other equitable remedy as may be necessary in the circumstances. The pursuit or securing of any such injunctive relief shall not prohibit or limit the Company’s right to seek or obtain any other remedy provided under this Agreement or by law.  
 8. TERM AND TERMINATION.  
 8.1. Term. The term of this Agreement will commence as of the date first set forth above (the “Agreement Date”) and will continue for a term of thirty six (36) months from the Agreement Date, unless earlier terminated as provided in Section 8.2.  
 8.2. Method of Termination. This Agreement may be terminated with or without Cause (defined below) as follows:  
 Either Company and Consultant may each terminate this Agreement upon thirty (30) days prior written notice to the other party, and the Company may terminate this Agreement immediately for cause, at which time Company’s obligations pursuant to Sections 2 and 3 herein shall no longer be in effect, except for reimbursement of expenses incurred and payment for services rendered, prior to the termination of this Agreement.  
 For purposes of this Agreement and any Stock Option Agreement entered into between Consultant and the Company (or its affiliates), “Cause” means (i) the conviction of, or plea of guilty or no contest to, a felony or a crime involving moral turpitude or the commission of any other act involving willful malfeasance or material fiduciary breach with respect to the Company or an affiliate; (ii) gross negligence or willful misconduct with respect to the Company or an affiliate; (iii) Consultant’s material breach of any obligation under this Agreement or any other written agreement between Consultant and the Company; or (iv) material violation of state or federal securities laws.  
 8.3. Effect Of Termination. The effect of the termination of this Agreement shall be as follows:  
 (a) Except as expressly provided in this Agreement, termination of this Agreement shall not relieve or release either party from its obligation to make any payments which it may owe the other party under the terms of this Agreement, or from any other liability which either party may have to the other party arising out of this Agreement or the breach of this Agreement, and  
 (b) In the event of termination, the Consultant shall promptly furnish the Company with reasonably detailed information as to the status of all efforts pertaining to the services called for under this Agreement.  
 8.4. Survival Of Provisions. The provisions of Section 5 (Confidentiality), Section 6 (Inventions) and any other section of this Agreement directly or indirectly addressing or relating to post-termination remedies, Section 7 (Equitable Remedies and Enforcement), Section 8 (Term and Termination), Section 9 (Compliance with Law), Section 12 (Disputes) and Section 13 (Miscellaneous Provisions) shall survive the expiration or any earlier termination of this Agreement, unless otherwise indicated.  
 9. COMPLIANCE WITH LAW. The Consultant shall comply in all material respects with and perform his duties and obligations under this Agreement in compliance with all applicable laws, rules, or regulations in all material respects. Notwithstanding anything contained in this Agreement to the contrary, Consultant shall make any disclosures, take any actions and/or refrain from taking any actions that are reasonably necessary for him to comply in all material respects with any applicable law, rule, or regulation, which will include, without limitation, the Health Insurance, Portability, and Accountability Act, and any other privacy or health care regulatory law or code and/or ethical standards governing Consultant’s profession. The Consultant shall comply in all material respects with all policies of the Consultant’s employer, the American Medical Association or any medical society or association governing Consultant’s profession that apply to the Consultant’s relationship with the Company, including any such policies requiring the Consultant to disclose his financial relationship with the Company. The Company shall comply with and perform its duties and obligations under this Agreement and to conduct its business in compliance with all applicable laws, rules, or regulations, including, but not limited to, any privacy and/or health care regulatory laws, rules, and regulations.  
 10. NO CONSULTANT BENEFITS. The Consultant shall not be entitled to participate in or receive any benefits applicable to employees of the Company. Consultant shall not receive any special pricing on the purchase of Company products based on his use or recommendation of Company products.  
 11. RESERVED.  
 12. DISPUTES. The parties agree to effect all reasonable efforts to resolve any and all disputes between them in connection with this Agreement in an amicable manner through negotiation or mediation including at least two meetings involving the Consultant and the principal executive officer of the Company. To the extent this mediation process does not resolve the conflict, any dispute or claim arising out of or relating to this Agreement or the validity, interpretation, enforceability, or breach thereof, including any dispute over whether a provision of this Agreement has been breached, shall be subject to jurisdiction of the United States federal district court for the District of Minnesota, and jurisdiction is hereby conferred upon such court. Each party agrees to and consents to submit to the exclusive jurisdiction, venue and process of said court for all actions, suits or proceedings arising out of this Agreement.  
 13. MISCELLANEOUS PROVISIONS.  
 13.1. Notices. Any notice, request, instruction or other document to be given thereunder by any party hereto to any other party will be in writing and delivered personally, including by any recognized national courier service, or sent by facsimile transmission, telex, or registered or certified mail, return receipt requested.  
 Either party hereto may designate any other address for notices given to it hereunder, by written notice to the other party given at least ten (10) days prior to the effective date of such change, in accordance with this Section 13.1. Notices delivered by hand will be deemed delivered on the date so delivered. Notices sent by mail will be deemed received on the date of receipt indicated by the return verification provided by the U.S. Postal Service. Notices sent by facsimile or telex will be deemed received the day on which sent, and will be conclusively presumed to have been received in the event that the sender’s copy of the facsimile transmission or telex contains the answerback of the other party’s facsimile or telex device.  
 13.2. Nonwaivers Of Rights. No failure or delay on the part of a party in exercising any right hereunder will operate as a waiver of, or impair, any such right. No single or partial exercise of any such right will preclude any other or further exercise thereof or the exercise of any other right. No waiver of any such right will be effective unless given in a signed writing. No waiver of any such right will be deemed a waiver of any other right hereunder.  
 13.3. Validity Of Provisions; Severability. If any provision of this Agreement is, or becomes, or is deemed, invalid, illegal, or unenforceable in any jurisdiction: (a) such provision will be deemed amended to conform to applicable laws of such jurisdiction so as to be valid and enforceable or, if it cannot be so amended without materially altering the intention of the parties, it will be stricken; (b) the validity, legality and enforceability of such provision will not in any way be affected or impaired thereby in any other jurisdiction; and (c) the remainder of this Agreement will remain in full force and effect.  
 13.4. Governing Law. This Agreement will be governed by the laws of Delaware as to validity, construction and performance without reference to principles of conflicts of laws.  
 13.5. Assignments. Except for the permitted assignment as provided below, neither this Agreement nor any right or obligation arising hereunder may be assigned by any party hereto, in whole or in part, without the prior written consent of each other party hereto, which may be withheld in the absolute discretion of such other party. Any attempted assignment in violation of the terms hereof will be null and void and of no force or effect. The Company may assign its rights and delegate its duties hereunder to any entity which it controls, is controlled by or with which it is under common control. Subject to the foregoing sentence, this Agreement will be binding upon and inure to the benefit of the parties and their respective successors and assigns.  
 13.6. Entire Agreement; Amendments. This Agreement and the exhibits hereto constitute the entire agreement among the parties relating to the subject matter hereof, and all prior negotiations, representations, agreements and understandings are superseded hereby. No agreements altering, amending or supplementing the terms hereof may be made except by means of a written document signed by the parties hereto.  
 13.7. Counterparts. This Agreement may be executed in any number of counterparts each copy of which shall for all purposes be deemed an original. Facsimile or email pdf execution and delivery of this Agreement shall be legal, valid and binding execution and delivery for all purposes.  
 [Signature page follows]  
 IN WITNESS WHEREOF, the Company and the Consultant have executed this Agreement as of the day and year first written above.  
 LUCID DIAGNOSTICS INC. CONSULTANT  
 By: /s/ Xxxxxx Xxxxx,MD   
Name: Xxxxxx Xxxxx,MD Xxxxxxx Xxxxxxxxx, MD  
Title: Executive Chairman   
 [Signature page to Lucid Diagnostics Inc. Consulting Agreement]  
 IN WITNESS WHEREOF, the Company and the Consultant have executed this Agreement as of the day and year first written above.  
 LUCID DIAGNOSTICS INC. CONSULTANT  
 By: /s/ Xxxxxxx Xxxxxxxxx,MD  
Name: Xxxxxxx Xxxxxxxxx, MD  
Title:   
 [Signature page to Lucid Diagnostics Inc. Consulting Agreement]  
 EXHIBIT A  
 In addition to the duties and responsibilities outlined elsewhere in this Agreement, the Consultant agrees that it will render the following general advisory and other services to the Company, the Company’s employees, and any other parties to whom the Company may request the Consultant render such services relating to the Company’s products.  
 (1) Clinical Services. Services including, but not limited to, advising and participating in activities involving the clinical adoption and utilization of the products, marketing strategies and outreach targeting key specialties and specialty societies, ongoing and new clinical research activities including study design and data analysis, regulatory strategy activities including preparation of U.S. and international regulatory submission documents.  
 (2) Technology Services. Services including, but not limited to, ongoing and new benchtop research activities related to cancer biomarker assays within the field of use of the licensed technologies, laboratory assay development and enhancement, improvements in laboratory assay performance, cost, and efficiency.  
 (3) General Assistance to the Company. Services related to such issues, and in such manners, as the Company may reasonably request from time to time during the term of the Agreement.