

## **INDEPENDENT CONTRACTOR AGREEMENT**

THIS INDEPENDENT CONTRACTOR AGREEMENT ("Agreement") is made and entered into as of the 31<sup>st</sup> day of July, 2015 ("Effective Date"), by and between Carilion Medical Center with a business address of 1906 Belleview Avenue, Roanoke, VA 24014 ("CMC") and Okmin Pyon with a mailing address of 1309-8 University Blvd., Blacksburg, VA 23060 ("Ms. PYON").

### **Recitals:**

A. CMC is performing a research study in accordance with the protocol entitled "**Using Wireless Accelerometers to Quantify General Movements**" (the "Project"), attached hereto and incorporated by reference herein as Exhibit A; and

B. CMC wishes to subcontract certain parts of the Project to MS. PYON, and the parties wish to enter into this Agreement for the performance of the Project;

NOW, THEREFORE, in consideration of the mutual promises and the agreement herein contained, CMC and MS. PYON hereby agree as follows:

1. **INDEPENDENT CONTRACTOR RELATIONSHIP.** In the performance of the services pursuant to this Agreement, MS. PYON shall be at all times performing as an independent contractor. CMC shall not provide MS. PYON with any (i) health, life or dental insurance, (ii) paid vacation, (iii) paid sick leave or (iv) other benefits of CMC employees. CMC shall have no obligation or responsibility for the collection or payment of federal or state taxes, of unemployment compensation, withholding tax, social security or any other employment related tax or benefit on behalf of MS. PYON, and MS. PYON shall indemnify, defend, and hold harmless CMC from and against any and all liability incurred by CMC for taxes, assessments and penalties of any type whatsoever due to the local, state or federal governmental agency which may arise as a result of the relationship between CMC and MS. PYON pursuant to this Agreement. MS. PYON is not authorized to bind or act on behalf of CMC in any capacity.

2. **TERM.** This Agreement shall begin on the Effective Date, and terminate upon the completion of the Project, unless earlier terminated as provided herein.

3. **DUTIES.** MS. PYON shall provide the services set forth in the Statement of Work attached hereto as Exhibit B and incorporated by reference herein.

4. **TERMINATION OF AGREEMENT.** Notwithstanding anything stated herein to the contrary, the following provisions shall apply under the conditions stated therein:

4.1 CMC shall have the right to terminate this Agreement for any reason, with or without cause, upon fifteen (15) days prior written notice to MS. PYON.

4.2 MS. PYON shall have the right to terminate this Agreement for any reason, with or without cause, upon fifteen (15) days prior written notice to CMC.

4.3 Upon any such termination, CMC shall be released from any and all further obligations under this agreement.

5. **COMPENSATION.** CMC shall not pay MS. PYON for work performed hereunder in accordance with Exhibit B. All work performed in relation to Project shall be done so in-kind.

6. **CONFIDENTIALITY.**

A. In providing services pursuant to this Agreement, MS. PYON shall have access to certain patient, business, medical, and scientific information of CMC (the "Confidential Information"). During the term of this Agreement and thereafter, MS. PYON shall not, without the prior written consent of CMC, directly or indirectly, (i) divulge, furnish or make accessible to any other person, firm, associate, CMC or other entity, or copy, take or use in any manner, any of the Confidential Information; (ii) take any action which might reasonably or foreseeably be expected to compromise the confidentiality or proprietary nature of any of the Confidential Information; or (iii) fail to follow the reasonable requests of CMC from time to time regarding the confidentiality and proprietary nature of the Confidential Information. "Confidential Information" shall include, but is not limited to, patient names, patient lists, patient records, patient information, operation methods and information, accounting and financial information, marketing and pricing information and materials, internal publications and memoranda and other matters considered confidential by CMC. The Parties will execute a separate business associate agreement, attached hereto as Exhibit C and incorporated by reference herein.

B. The Parties agree that a breach by MS. PYON of any of the provisions of Section 6.A. of this Agreement would cause irreparable damage to CMC. Therefore, CMC shall be entitled to preliminary and permanent injunctions restraining MS. PYON from breaching or continuing any breach of any of the provisions of Section 6.A. The existence of any claim or cause of action on the part of MS. PYON against CMC, whether arising from this Agreement or otherwise, shall not constitute a defense to the granting or enforcement of this injunctive relief. If CMC is required to enforce any of its rights under this Agreement, CMC shall be entitled to recover all attorneys' fees, court costs and other expenses incurred by CMC in connection with the enforcement of those rights. The remedies available to CMC under this Agreement are cumulative. CMC may, at its sole discretion, elect to pursue all or any of such remedies. Such remedies are in addition to any others given by law or in equity and may be enforced successively or concurrently.

7. **INTELLECTUAL PROPERTY.** Any and all intellectual property (including, but not necessarily limited to inventions, whether or not patentable or patented, discoveries, copyrights, technical information, software, mask works and know how) arising from the performance of the Project ("IP") shall be solely owned by CMC. MS. PYON hereby irrevocably assigns ownership of all IP to CMC. MS. PYON will, at CMC's expense, execute any and all applications, further assignments or other instruments and give testimony which CMC shall reasonably deem necessary to apply for and obtain letters of patent of the United States or of any country outside of the United States or to otherwise protect CMC's interest therein.

8. **NON-WAIVER.** No waiver of any term or condition of this Agreement by any party shall be deemed a continuing or further waiver of the same term or condition or a waiver of any other term or condition of this Agreement.

9. **GOVERNING LAW.** This Agreement is made and entered into in the Commonwealth of Virginia and shall be governed and construed in accordance with the laws of the Commonwealth of

Virginia.

10. **ASSIGNMENT; SEVERABILITY.** This Agreement shall not be assigned in whole or in part by any party hereto without the express written consent of the other parties. In the event that any portion of this Agreement shall be determined to be invalid or unenforceable, the remainder of this Agreement shall be deemed to continue to be binding upon the parties hereto in the same manner as if the invalid or unenforceable provision were not a part of this Agreement.

11. **AMENDMENT.** This Agreement may be amended at any time by a written agreement signed by the parties hereto.

12. **NOTICE.** Any notice required or allowed to be given hereunder shall be deemed to have been given upon deposit in the United States mail, registered or certified, with return receipt requested and addressed to the party to this Agreement to whom notice is given, at the following address:

If to CMC: Jeannie Miranda Perkins, MS, CCRP  
Clinical Trials Director  
Carilion Clinic/Office of Sponsored Projects  
101 Elm Ave, SE, 2nd Floor  
Roanoke, VA 24013

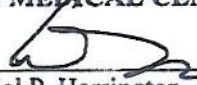
If to MS. PYON: Okmin Pyon  
1309-8 University Blvd  
Blacksburg, VA 23060  
Ph: 540-394-1988

13. **ENTIRE AGREEMENT; BINDING AGREEMENT.** This Agreement constitutes the entire agreement between the parties and contains all of the agreements between the parties with respect to the subject matter hereof and supersedes any and all other agreements, either oral or in writing, between the parties hereto with respect to the subject matter hereof. This Agreement shall be binding upon the successors or assigns of the parties hereto.


[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as by law provided on the day and year first above written.

**CARILION MEDICAL CENTER**

By:   
Name: Daniel P. Harrington, MD  
Title: VP – Academic Affairs  
Date: 7-21-15

**OKMIN PYON**

By:   
Name: Okmin Pyon  
Title: Independent Contractor  
Date: July /30th/ 2015

Physician Signature: Okmin Pyon  
CRN: 00000000000000000000  
NPI: 00000000000000000000  
Date: 20150730 12:00:00

Exhibit A  
Protocol

Early biomechanical patterns (general movements) of infants can be analyzed to determine proper neurological development. Abnormalities in general movements at 3 months of age have been correlated with development of cerebral palsy and other more subtle neurological disorders. Current methods of evaluation are quite subjective and labor intensive. This study will evaluate the feasibility of a methodology whereby accelerometer data from the limbs of infants is analyzed and compared with current means of determining patterns consistent with general movements. Automation of the evaluation of general movements and various methods for presenting data for clinical interpretation will be accomplished.

Exhibit B  
Statement of Work

Quantitative method is needed to diagnose the fidgety movements. Data is collected from 3-axis accelerometers which are connected to each limb of the infant. Signal processing the collected data using short time Fourier Transforms along with the formation of time-dependent transfer functions and coherence properties is the key to the diagnosis approach. Combinations of each limb's movement and their relationships can represent the fidgety movement. Data collected from healthy babies is used to develop the techniques for identifying the fidgety movement. The researcher will collect the data from the healthy infants with accelerometers and do the signal processing to detect biomechanical patterns with the methods referred.

Exhibit C  
Business Associate Agreement

**CARILION MEDICAL CENTER**  
**BUSINESS ASSOCIATE AGREEMENT**

This Agreement is made and entered into effective as of this \_\_\_\_ day of \_\_\_\_\_, 2015 (the "Effective Date") between Carilion Clinic, including each of the entities controlled by Carilion Clinic, (collectively, "Covered Entity"), and Okmin Pyon ("Business Associate"). Covered Entity and Business Associate are each a Party to this Agreement and are referred to collectively herein as the "Parties."

**A.** Carilion Clinic, or an entity controlled by Carilion Clinic, and Business Associate desire to enter into or have entered into an agreement pursuant to which Business Associate provides certain services to, for or on behalf of Covered Entity (the "Underlying Agreement").

**B.** The Underlying Agreement may from time to time require that Business Associate create, receive, maintain or transmit Protected Health Information, as defined in 45 C.F.R. § 160.103, on behalf of Covered Entity.

**C.** The Parties desire to enter into this Agreement to comply with applicable requirements of the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191 ("HIPAA"), and the regulations promulgated thereunder by the United States Department of Health and Human Services ("HHS") codified at 45 C.F.R. Parts 160 and 164, as amended by the Privacy and Security Provisions set forth in Section 13400 of the Health Information Technology for Economic and Clinical Health Act, Public Law 111-5 ("HITECH Act") and the rules promulgated thereunder (collectively referred to herein as the "HIPAA Rules").

NOW THEREFORE, in consideration of the mutual promises below, and the exchange of PHI pursuant to the terms of this Agreement, the Parties agree as follows:

**1. Definitions.**

Unless otherwise defined in this Agreement, all capitalized terms used herein have the meanings ascribed to them under the HIPAA Rules. For purposes of this Agreement:

(a) "PHI" shall mean only such Protected Health Information, as defined in 45 C.F.R. § 160.103, that Business Associate creates, receives, maintains or transmits on behalf of Covered Entity as Covered Entity's Business Associate.

(b) "ePHI" shall mean only such Electronic Protected Health Information, as defined in 45 C.F.R. § 160.103, that Business Associate creates, receives, maintains or transmits on behalf of Covered Entity as Covered Entity's Business Associate.

**2. Obligations and Activities of Business Associate.**

(a) Business Associate agrees to not use or further disclose PHI other than as permitted or required by this Agreement, or as Required by Law.

(b) Business Associate agrees to use appropriate safeguards to prevent use or disclosure of PHI other than as permitted or required by this Agreement. Further, Business Associate agrees to implement and maintain administrative, physical, and technological safeguards that reasonably and appropriately protect the confidentiality, integrity and availability of ePHI.

(c) Business Associate agrees to implement reasonable systems for the discovery and prompt reporting to Covered Entity of any Breach of Unsecured PHI, any Security Incident or any other use or disclosure of PHI not permitted under this Agreement (collectively, a "HIPAA Breach"), or of any reasonable belief that a HIPAA Breach may have occurred. Business Associate shall, no later than five (5) business days following the discovery of an actual or suspected HIPAA Breach, report such HIPAA Breach to Covered Entity, unless Business Associate is prohibited from doing so under 45 C.F.R. §164.412 concerning law enforcement investigations. For purposes of reporting a HIPAA Breach to Covered entity, the discovery of a HIPAA Breach shall occur as of the first day on which such HIPAA Breach is known to Business Associate or, by exercising reasonable diligence, would have been known to the Business Associate. Business Associate will be considered to have had knowledge of a HIPAA Breach if the HIPAA Breach is known or, by exercising reasonable diligence, would have been known to any person (other than the person committing the HIPAA Breach) who is an employee, officer or other agent of the Business Associate. Business Associate shall, no later than ten (10) business days following the discovery of an actual or suspected HIPAA breach, provide Covered Entity with such information necessary for Covered Entity to notify Individuals, HHS' Office of Civil Rights, the media or others, as Covered Entity deems appropriate, regarding the HIPAA Breach in accordance with the HIPAA Rules. Following the discovery of a HIPAA Breach, Business Associate shall have an continuing obligation to cooperate with Covered Entity in the investigation of the HIPAA Breach and to notify Covered Entity of any new information learned by Business Associate regarding the HIPAA Breach.

(d) Business Associate agrees to mitigate, to the extent practicable and unless otherwise requested by Covered Entity in writing, any harmful effect that is known to Business Associate of a HIPAA Breach, as defined in Subsection 2(c), above.

(e) Business Associate agrees to ensure that any agent or subcontractor to whom it provides PHI agrees in writing to the same restrictions and conditions that apply through this Agreement to Business Associate with respect to such information. Without limiting the foregoing, Business Associate shall ensure that any such agent or subcontractor agrees in writing to implement reasonable and appropriate safeguards to prevent use or disclosure of PHI other than as permitted or required by this Agreement.

(f) Upon the request of Covered Entity or the written request of the Individual or his or her personal representative, as defined under the HIPAA Rules, Business Associate agrees to provide to the Covered Entity, Individual or personal representative, as applicable, access to PHI or ePHI in a Designated Record Set in a prompt and reasonable manner in compliance with 45 C.F.R. §164.524.

(g) Business Associate agrees to make any amendment(s) to PHI in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 C.F.R. §164.526 in a prompt and reasonable manner in accordance with the HIPAA Rules.

(h) Business Associate agrees to make its internal practices, books, and records relating to the use and disclosure of PHI, including policies and procedures and PHI, to the Secretary, in the time and manner designated by the Secretary, for purposes of the Secretary determining Covered Entity's compliance with the HIPAA Rules.

(i) Business Associate agrees to document disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI in accordance with 45 C.F.R. §164.528, and to maintain such documentation on an ongoing basis for a minimum period of six (6) years. Business Associate agrees to provide to Covered Entity, within ten (10) days of Covered Entity's written request, information collected by Business Associate in accordance with this Subsection 2(i) in order to permit Covered Entity to respond to a request by an Individual for an accounting of disclosures of PHI in accordance with 45 C.F.R. §164.528.

(j) When using or disclosing PHI or requesting PHI from Covered Entity, Business Associate agrees to make reasonable efforts to limit the PHI used, disclosed or requested to the minimum necessary for Business Associate to perform its services under the Underlying Agreement, in accordance with 45 C.F.R. §164.502(b) and 514(d).

### **3. Permitted or Required Uses and Disclosures by Business Associate.**

(a) *General Use and Disclosure.* Except as otherwise limited in the Underlying Agreement and this Agreement, Business Associate may use or disclose PHI to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in the Underlying Agreement and in this Agreement, provided that such use or disclosure of PHI would not violate the HIPAA Rules, including the Minimum Necessary standard set forth in 45 C.F.R. §164.502(b), if done by Covered Entity.

(b) *Additional uses and disclosures.*

(i) Except as otherwise limited in the Underlying Agreement and this Agreement, Business Associate may use PHI for the proper management and administration of the Business Associate or to carry out the legal responsibilities of the Business Associate.

(ii) Except as otherwise limited in the Underlying Agreement and this Agreement, Business Associate may disclose PHI for the proper management and administration of the Business Associate, provided that such disclosures are Required By Law, or Business Associate obtains reasonable assurances from the person to whom the information is disclosed that it will remain confidential and be used or further disclosed only as Required By Law or for the purpose for which it

was disclosed to the person, and the person notifies the Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached.

(iii) Except as otherwise limited in the Underlying Agreement or this Agreement, Business Associate may use PHI to provide Data Aggregation services to Covered Entity as permitted by 45 C.F.R. §164.504(e)(2)(i)(B).

(iv) Business Associate may use PHI to report violations of law to appropriate Federal and State authorities, consistent with 45 C.F.R. §164.502(j)(1).

(v) Business Associate may de-identify any PHI, provided such de-identification conforms to the requirements of 45 C.F.R. §164.514(b), and use and disclose such de-identified information in its discretion, provided that such use or disclosure is consistent with the terms of the Underlying Agreement. De-identified information does not constitute PHI and is not subject to the terms of this Agreement.

#### **4. Obligations of Covered Entity.**

(a) Covered Entity shall notify Business Associate in writing of any changes in, or revocation of, the Authorization by Individual or his or her personal representative to use or disclose PHI, if such changes affect Business Associate's uses or disclosures of PHI.

(b) Covered Entity shall notify Business Associate in writing of any restriction to the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 C.F.R. §164.522, if such changes affect Business Associate's uses or disclosures of PHI.

#### **5. Permissible Requests by Covered Entity.**

Covered Entity shall not request Business Associate to use or disclose PHI or ePHI in any manner that would not be permissible under the HIPAA Rules if done by Covered Entity.

#### **6. Term and Termination.**

(a) *Term.* The term of this Agreement (the "Term") shall commence as of the Effective Date and terminate when all PHI in the possession of Business Associate or its agents or subcontractors is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy such PHI, protections are extended to such information, in accordance with the termination provisions in this Section.

(b) *Termination for Cause.* Without limiting the termination rights of the Parties pursuant to

the Underlying Agreement, the Parties agree that either Party may terminate this Agreement and the Underlying Agreement upon a material breach of this Agreement by the other Party, provided that the non-breaching Party gives the breaching Party thirty (30) days advance written notice and opportunity to cure such breach. If the material breach is not cured within the thirty (30) day period, the non-breaching Party may terminate this Agreement and the Underlying Agreement immediately. In the event it is not possible to cure such material breach, the non-breaching Party may terminate this Agreement immediately.

(c) *Effect of Termination.* Upon termination of this Agreement for any reason, Business Associate shall return or destroy all PHI in its possession, or in the possession of any of its agents or subcontractors. If Business Associate determines that return or destruction of such PHI is not feasible, Business Associate shall extend the protections of this Agreement to such PHI and limit further use or disclosure of such PHI to those purposes that make the return or destruction of the PHI infeasible, for so long as Business Associate maintains such PHI.

## **7. Miscellaneous.**

(a) *Regulatory References.* A reference in this Agreement to any section of the HIPAA Rules means the section as in effect or as amended, and for which compliance is required.

(b) *Amendment.* This Agreement may not be amended except by the mutual written agreement of the Parties. Notwithstanding the foregoing, the Parties agree to work together in good faith to take such action as is necessary to make technical amendments to this Agreement from time to time if necessary for either Party to comply with the HIPAA Rules, as such laws or regulations may be amended from time to time. However, should any state or federal law or regulation now existing or enacted after the Effective Date of this Agreement, including without limitation the HIPAA Rules, be amended or interpreted by judicial decision or a regulatory body in such a manner that either Party reasonably determines renders any provision of this Agreement to be in violation of such law or regulation or adversely affects the Parties' abilities to perform their obligations under this Agreement, the Parties agree to negotiate in good faith to amend this Agreement so as to comply with such law or regulation and to preserve the viability of this Agreement.

(c) *Survival.* The respective rights and obligations of Business Associate under Section 6 of this Agreement shall survive the termination of this Agreement.

(d) *Interpretation.* Any ambiguity in this Agreement shall be resolved in favor of a meaning that permits Covered Entity to comply with the HIPAA Rules. In the event of any inconsistency or conflict between this Agreement and any other agreement between the Parties, including without limitation the Underlying Agreement, the terms, provisions and conditions of this Agreement shall govern and control. Except as so supplemented and/or amended by this Agreement, the Underlying Agreement shall continue unchanged and shall apply with full force and effect to govern the matters addressed in this Agreement and in the Underlying Agreement.

(e) *No third party beneficiary.* Nothing expressed or implied in this Agreement or in the Underlying Agreement is intended to confer, nor shall anything herein confer, upon any person other than the Parties and the respective successors or assignees of the Parties, any rights, remedies, obligations, or liabilities whatsoever.

(f) *Indemnification.* Each Party (the “Indemnifying Party”) agrees to indemnify and hold harmless the other Party and its officers, directors, members, employees and agents, against any and all losses, claims, damages, actions, liabilities, fines, penalties, expenses and costs (including without limitation reasonable attorneys’ fees and, with respect to Covered Entity only, Covered Entity’s costs related to providing notifications of a Breach in accordance with 45 C.F.R. §§ 404-408 and any applicable state laws)(collectively the “Breach Claims”) arising from or related to (1) any HIPAA Breach, as defined in Section 2(c) of this Agreement, caused or committed by the Indemnifying Party or any of its employees, agents or, in the case of Business Associate, its subcontractors, or (2) a breach of this Agreement by the Indemnifying Party.

(g) *Counterparts.* This Agreement may be executed in two or more counterparts, each of which shall be an original, but all of which taken together shall constitute one and the same agreement. The delivery of a PDF copy of the signature of either Party via facsimile or electronic mail shall have the same binding effect as the delivery of an original signature on an original document.

**[Remainder of page intentionally left blank. Signature page follows.]**

IN WITNESS WHEREOF, the Parties hereto have entered into this Agreement on the dates set forth below.

**Carlilion Clinic**

**Business Associate**

Sign: 

Sign:  Digitally signed by Okmin Pyon  
DN: cn=Okmin Pyon, o=Carlilion Clinic  
email=okmin.pyon@carlilion.com, c=US

Print Name: Daniel Harrington, MD

Print Name: Okmin Pyon

Title: VP Academic Affairs

Title: Independent Contractor

Date: 7-31-15

Date: July/20th/2015

Business Address:

1309-8 University Blvd  
Blacksburg, VA 23060