SUBMITTED BY: **STEPHEN M. LANIER, VICE PRESIDENT FOR RESEARCH**

UNIVERSITY CONTRACT TO LICENSE A TECHNOLOGY TO SERAPH BIOSCIENCES, LLC, A COMPANY OWNED BY A COLLEGE OF ENGINEERING/SCHOOL OF MEDICINE FACULTY

RECOMMENDATION

The Administration recommends the Board of Governors authorize the President or his designee to contract with Seraph Biosciences, LLC, a subsidiary of Medical Engineering Partners, LLC to exclusively license for commercialization the intellectual property encompassing the technology entitled "Hand-Held Micro-Raman Based Detection Instrument and Method of Detection" (WSU 14-1215).

BACKGROUND

Greg Auner, Ph.D., Strauss Endowed Chair, Department of Electrical and Computer Engineering; Biomedical Engineering and Materials Science in the College of Engineering and a professor in the School of Medicine, Michelle Brusatori, Ph.D. (former) research associate professor, Electrical and Computer Engineering; David Sant, Research Assistant, Electrical and Computer Engineering, Charles Shanley, M.D., professor, Oakland University William Beaumont School of Medicine and WSU Department of Surgery, and Tara Twomey having no University affiliation (collectively, the "Inventors"), have developed a hand-held Raman spectroscopy-based otoscope that provides for a rapid and cost effective screening of bacterial, virtual and fungal particles as well as identifying tissue abnormalities (the "Technology"). The device is nonintrusive and fully automated to enable providers to render more timely management decisions, reduce costs and optimize clinical outcomes.

Medical Engineering Partners, LLC ("MEP"), which was registered in the State of Michigan in 2011, is a biomedical device and future technologies company specializing in applied smart sensor innovation, bioengineering, prototyping and early commercialization. Seraph Biosciences, LLC is a subsidiary of MEP and was registered in Michigan in 2014. Drs. Auner and Shanley are majority shareholders of both MEP and Seraph Biosciences. Additionally, Donald Weaver, M.D., chair, Department of Surgery, Wayne State University and J. Edson Pontes, M.D., professor, Department of Surgery, Wayne State University are on the Advisory Board of MEP.

Visca, LLC ("Visca") was founded by Dr. Auner in 2004 to develop products and services based on MEMS technologies and wireless sensing systems. Visca was subcontracted by MEP to perform certain work that contributed to the development of the Technology. On August 7, 2013, MEP had filed a United States provisional patent application entitled "Hand-Held Micro-Raman Based Detection Instrument and Method of Detection"

describing the Technology (the "Patent Application"). All persons employed by Visca under the subcontract were required to assign their rights to the Technology to MEP. Accordingly, each of the Inventors did assign his/her rights to the Patent Application to MEP and such assignment was recorded with the United States Patent and Trademark Office. Subsequent to the filing of the Patent Application and the recording of the assignment document, the Technology was disclosed to the University in a disclosure entitled "Hand-Held Micro-Raman Based Detection Instrument and Method of Detection" (WSU 14-1215) and University was informed of the Patent Application. Accordingly, University initiated an inquiry to determine University's ownership interest in the Technology and the Patent Application.

At the time of the invention (Summer, 2013):

- Dr. Brusatori and Mr. Sant were fractional employees of University. Both were simultaneously employees of Visca. Upon current information and belief, none of Brusatori's and/or Sant's activities related to the conception, making, design, development, manufacture, or marking of the Technology or any improvements thereto occurred on the University's campus or used any University resources (including, but not limited to, salary, funds, facilities, equipment, or services).
- Dr. Auner, a 9-month tenured faculty of University, was on unpaid summer leave at the time of his activities for MEP and Visca that related to the conception, making, design, development, manufacture, or marking of the Technology or any improvements thereto. However, the Technology is not outside the field of knowledge for which Dr. Auner is employed at University. Raman spectroscopy for pathogen and cancer detection is noted on Dr. Auner's University homepage (http://engineering.wayne.edu/profile/gregory.auner/; Last Accessed May 29, 2014). Dr. Auner has published papers and presented seminars related to the development and use of hand held raman probes.
- Dr. Shanley was employed part-time by the University's Department of Surgery, although he also maintains full-time clinical service at Beaumont Hospital.
- Dr. Tara Twomey, an employee of Visca, was not an employee of WSU at the time of the activities related to the Technology.

Based upon the above information and the University's Patent and Copyright Policy, the University is a *co-owner* with MEP of the right, title and interest in the Technology and the related Patent Application. Since MEP is currently the owner of record with the United States Patent and Trademark Office of the Patent Application, MEP has or will assign rights to the Technology and Patent Application to WSU to reflect the co-ownership of the same.

Michigan Conflict of Interest law requires specific sunshine procedures in order for a University employee, or a company owned by a University employee, to contract directly or indirectly with the University:

(A) The employee must disclose any pecuniary interest in the contract to the Board and the disclosure must be made a matter of record in the Board's proceedings.

(B) The contract must be approved by a vote of not less than two-thirds of the full membership of the Board in open session.

(C) The Board's minutes must report:

(i) The name of each party involved in the contract.

(ii) The terms of the contract, including duration, financial consideration between the parties, facilities or services of the public entity included in the contract, and the nature and degree of assignment of employees of the public entity for fulfillment of the contract.

(iii) The nature of any pecuniary interest.

If the Board approves this Recommendation, the minutes will report as follows:

The Board of Governors authorized the President, or his designee, to contract with Seraph Biosciences, LLC, of which Dr. Greg Auner and Dr. Charles Shanley, both University employees, hold an equity position, to grant Seraph Biosciences, LLC an exclusive license to the University's ownership interest in the intellectual property known as "Hand-Held Micro Raman Based Detection Instrument and Method of Detection" (WSU 14-1215).

(i) The parties involved in the contract are Wayne State University and Seraph Biosciences, LLC.

(ii) The contract will provide:

(a) Scope: Exclusive, worldwide license with the right to grant sublicenses;

(b) Field of Use: Pathogen detection;

(c) Duration for the life of any patents on the University's licensed intellectual property or ten years following the first commercial sale of products utilizing the University's licensed intellectual property, whichever is later;

(d) Financial consideration of:

(1) License issue fee of $2,500;

(2) Royalty on net revenue of sales of products and services utilizing or covered by the licensed intellectual property: 1.5%; and

(3) Sublicensing royalty on all revenues or other consideration received, excluding royalties and research funding, as a result of Seraph Biosciences, LLC sublicensing its rights to the licensed intellectual property:

10% for the first three years of the license; and

7% for all years thereafter.

(e) No University facilities or services of the University are included in the contract; and

(f) No University employees are assigned in connection with the contract.

(iii) Dr. Auner's pecuniary interest consists of 32% ownership of each of MEP and Seraph Biosciences and he will therefore have the potential to financially benefit from the commercial success of the company, including the commercialization of the University's co-owned intellectual property described above. Additionally, Dr. Shanely's pecuniary interest consists of 32% ownership of each of MEP and Seraph Biosciences and he will therefore have the potential to financially benefit from the commercial success of the company, including the commercialization of the University's co-owned intellectual property described above.