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

UNIVERSITY CONTRACT FOR LABORATORY SERVICES
FROM QURGEN, INC., A COMPANY OWNED BY A
SCHOOL OF MEDICINE FACULTY

RECOMMENDATION

The Administration recommends that the Board of Governors authorize the President or his
designee to enter into a contract for laboratory services from Qurgen, Inc., a biotechnology
company located in Suite 447, 440 Burroughs Street, Detroit, MI 48202. The contract will be to
perform laboratory tests and related activities at the direction of Qurgen, Inc.

BACKGROUND

Jianjun Wang, Ph.D., professor of biochemistry, microbiology and immunology at Wayne State
University and Qianqian Li, Ph.D., associate professor - research of biochemistry, microbiology
and immunology at Wayne State University, have developed a methodology related to in vitro
protein transduction and generation of induced pluripotent stem cells. The technology has
been disclosed to the university and is described in WSU Tech ID 07-831, 07-829 and 11-1017
and embodied in issued patent US 8722348 and patent applications PCT/US 2009/04054,
Nationalized PCT/Australia 20009-260528 and PCT/US2012/036051 (collectively, "WSU
Technology"). In addition, Drs. Wang and Li, in collaboration with Guojun Wu, Ph.D.,
Department of Oncology, Wayne State University, Feng Jiang, Pharm.D. and Michael Chopp,
Ph.D., both from Henry Ford Health System, have extended the methodology to protein-
induced in vivo tissue reprogramming for clinical applications as described in WSU Tech ID 12-
1114, 12-1115 and 12-1116 and Provisional Patent Application Serial Number 61/895,562
(collectively, "WSU-HFHS Co-owned Technology"). WSU Technology and WSU-HFHS Technology
are collectively referenced as "Protein Transduction using QQ Delivery Reagent and
Applications Thereof" and has benefited from Wayne State financial, facility and equipment
resources as well as from funding from the National Institutes of Health to Wayne State
University.

QURGEN, Inc. is a startup company spinout from Wayne State University and Henry Ford Health
System and was founded by Drs. Wang, Li, Jiang and Chopp and incorporated in Michigan in
September of 2012. In May 2016, Qurgen, Inc. changed its corporation from Michigan
incorporation to Delaware incorporation. Qurgen, Inc. has obtained an exclusive license
agreement with Wayne State University for the technologies, the terms of which were
presented and approved by the Board of Governors on October 10, 2014. By this exclusive
license agreement, Wayne State becomes a shareholder of Qurgen and Qurgen will pay license
fees, milestone fees and royalty to Wayne State in the near future. Therefore, Wayne State
University has a mutual interest in the development of Qurgen. It is the intent of QURGEN, Inc.
to develop the licensed technologies for research and clinical applications and to become a
leading company in the provision and use of induced pluripotent stem cells and protein-induced
in vivo tissue reprogramming for clinical indications including oncology and cardiovascular disease.

Qurgen, Inc. has recently received major funding from an investor company. This funding allows Qurgen, Inc. to explore a potential new QQ-CRISPR-Cas9 technology that combines the QQ-protein delivery technology with the current CRISPR-Cas9 technology to solve the major challenges of current challenges of CRISPR-Cas9 technology for clinical applications to treat human genetic diseases. This will be achieved by QQ-delivery of the complex of Cas9 protein and guide RNA into the fertilized eggs at a cell culture setting for full genome editing for mutation correction animals or for making knockout or knock-in transgenic animals. QQ-protein delivery also enables delivery the complex of Cas9 protein and guide RNA into the diseased tissues \textit{in vivo} for full genome editing to correct genetic mutation of the tissues to treat genetic diseases in human in the future. Qurgen considers this planned technology under development as one of the second-generation of core technologies that will be developed at Qurgen, Inc.

This planned QQ-CRISPR-Cas9 technology requires an animal facility for the experiments. In addition, this funding also allows Qurgen, Inc. to recruit scientists to work on Qurgen’s mission for the development of its second-generation of core technologies. Qurgen, Inc. wishes to subcontract to Wayne State University to perform certain research studies related to this new QQ-CRISPR-Cas9 technology using the WSU’s patented QQ-protein delivery technology with animal models. In the same subcontract, Qurgen, Inc. wishes to provide opportunities to train Qurgen’s newly recruited scientists for the Qurgen licensed WSU technologies by allowing them to work with the staff members in Dr. Wang’ lab.

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 enter into an agreement to provide laboratory services for Qurgen Inc. at a total cost of $187,500.

(i) The parties involved in the contract are Wayne State University and Qurgen, Inc.

(ii) The contract will provide:

(a) Scope: The University will perform experiments to optimize the formulation, dosage and protocols to develop this new QQ-CRISPR-Cas9 technology. The University will provide opportunities to train Qurgen’s newly recruited scientists for the Qurgen licensed WSU technologies by allowing them to work with the staff members in Dr. Wang’s lab at Wayne State University.

(b) Duration: The services are expected to take twelve months to complete.

(c) Financial Consideration: The amount of the contract is $187,500, which includes indirect costs at a rate of 25%.

(d) University Facilities to be Utilized: Lab and equipment located in Rooms 5113, 5123, 5136 and DLAR animal facility in Scott Hall, located at 540 E. Canfield, Detroit, MI 48201, will be utilized for the services.

(e) Wayne State University Employees Assigned to the Services: Jianjun Wang, Ph.D., professor, Department of Biochemistry, Microbiology and Immunology in the School of Medicine will be the principal investigator for these services. Services funded by this contract will also be provided by Qianqian Li, Ph.D., associate professor - Research as the co-PI and Xiaqing Zhao, Ph.D., a research associate in the Department of Biochemistry, Microbiology and Immunology.

(iii) Dr. Wang and Dr. Li’s pecuniary interest consists of an ownership interest. Dr. Wang, as a Wayne State University employee, holds 15.301% equity interest in Qurgen and Dr. Li, as a Wayne State University employee, holds 14.985% equity in Qurgen. They will therefore have the potential to financially benefit from the commercial success of the company, including the commercialization of the University's Technology known as "Protein Transduction Using QQ Delivery Reagent and Applications Thereof" ("WSU Technology"), "A Protein-induced Pluripotent Stem Cell Technology Uses Thereof" ("WSU Technology") and "Protein-induced in vivo Tissue Reprogramming Technology" ("WSU-HFHS Co-owned Technology").