

***REPORT TO THE UNIVERSITY SENATE***

TO: University Senate

FROM: Michael A. Bernstein, Provost and Senior Vice President for Academic Affairs

DATE: Monday, September 11, 2017

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***Appointment of Director of Academic Assessment***

Dr. D. Kane Gillespie has accepted appointment as the University's first Director of Academic Assessment. In this capacity, as part of the Office of the Provost, Kane will lead efforts to assess the new Stony Brook Curriculum, facilitate the development and utilization of assessment protocols across all academic units, and coordinate University re-accreditation processes with the Middle States Commission on Higher Education.

A native of South Carolina, Kane Gillespie received his Bachelor of Music degree with distinction from the Eastman School of Music at the University of Rochester, a Master of Music degree from Southern Methodist University, and a Doctor of Musical Arts degree from Stony Brook University. A graduate assistantship in the Stony Brook College of Arts and Sciences Dean's Office led to a full-time appointment for Kane in the Office of the Registrar in 2002. From 2004 to 2015, Kane served as the Assistant Dean for Curriculum in the College of Arts and Sciences. In 2015, he was appointed the College's Senior Assistant Dean of Academic Affairs. Throughout this period, Kane was actively engaged in professional activities serving the College, the University, and SUNY.

***Appointment of Provost's Scholar for Leadership and Transformation in Diversity***

David Ferguson, Distinguished Service Professor in the Department of Technology and Society of the College of Engineering and Applied Sciences, has been appointed Provost's Scholar for Leadership and Transformation in Diversity. In this new academic role, Dave will work to expand collaborative research and evidence-based practices to advance diversity and inclusion at Stony Brook and to strengthen STEM (Science, Technology, Engineering, and Mathematics) educational outcomes for under-represented constituencies. Having concluded his duty as Department Chair in Technology and Society, a capacity in which he served since 2002, Dave will now have the opportunity to further his nationally-visible scholarship on the challenges of learning and teaching in mathematics and the sciences.

David Ferguson holds a Ph.D. from the University of California, Berkeley where he studied mathematics and mathematics education. He is a SUNY-Distinguished Service Professor. In addition to his work as Department Chair, Dave served as Associate Provost for Diversity and Inclusion from 2012 to 2016. He has also, over the years, taken up many assignments on behalf of committees and panels of the National Science Foundation (NSF), the New York State Education Department (NYSED), and other local and national agencies on matters of STEM education, applications of advanced learning technologies, and improvements of learning

outcomes at both the undergraduate and graduate levels. In all his efforts, Dave has emerged as a national leader in programs to enhance the participation of under-represented groups in science and engineering. He directs two NSF-funded projects in this area: The SUNY Louis Stokes Alliance for Minority Participation (LSAMP) and the Alliance for Graduate Education and the Professoriate — Transformation (AGEP-T) project. He is the Principal Investigator for Stony Brook’s Science and Technology Entry Program (STEP) and Collegiate Science and Technology Entry Program (CSTEP) — both funded by NYSED. Dave is the Co-PI for an NSF project on Science Education for New Civic Engagements and Responsibilities (SENCER). He is also recipient of several awards and honors, including the U.S. Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM); the Archie Lacey Award of the New York Academy of Sciences; and the Engineering Educator Award of the Joint Committee on Engineering of Long Island.

### ***Attendance Record-Keeping Process***

To remain in compliance with federal regulations involving financial aid for our students, Stony Brook University must determine if a student maintains eligibility for “Title IV Financial Aid.” Such eligibility is determined in part by a student’s attendance in class.

To document student financial aid eligibility, a new record-keeping process has been implemented as follows:

- Early each term, instructors will be asked to indicate if a student enrolled in a course has attended at all.
- After final grades have been posted, for any students receiving a failing grade, instructors will be asked to note if the student has not attended at all or has not attended since a specific date.

More information and instructions on how to submit this information may be found at this link:

<http://www.stonybrook.edu/commcms/registrar/policies/tracking.html>

Instructors will be directed to the appropriate reporting steps at the beginning and end of each semester by the Registrar’s Office. For any questions regarding this new process, please email [registrar\\_attendance@stonybrook.edu](mailto:registrar_attendance@stonybrook.edu).

### ***Interdisciplinary Teams at Stony Brook Awarded Seed Funding for Cancer Research***

Stony Brook University’s College of Engineering and Applied Sciences (CEAS) and School of Medicine (SOM) have collaborated to advance engineering-driven medicine. Together with the Stony Brook University Cancer Center, CEAS and SOM convened a gathering of clinicians, scientists, and engineers to share ideas and stimulate creative collaboration aimed at some of the toughest challenges in cancer. Following this convergence science workshop, 15 collaborative proposals were submitted from teams across the entire University integrating a broad range of disciplines and expertise.

The following winning teams were selected to receive a total of \$250K in seed funding to advance a range of innovative ideas at the intersection of engineering, physical sciences, and oncology:

**Developing a novel high throughput spatial genomics technology by in-tissue barcoding**

*Eric Brouzes, Biomedical Engineering*

*Jingfang Ju, Pathology*

This team's goal is to develop a platform that will enable direct mapping of genomic information onto tumors, thus maintaining spatial information that is crucial to understanding the interactions of cancer cells within their microenvironment. This strategy is designed to marry traditional pathology and state-of-the-art sequencing to develop better ways to understand and diagnose cancer.

**Development of cancer-on-a-chip technology for the in-vivo study of tumor metabolism**

*Helmut H. Strey, Biomedical Engineering*

*David Rubenstein, Biomedical Engineering*

*Geoffrey Girnun, Pathology*

*Adam Rosebrock, Pathology*

The interaction of cancer cells with their environment, especially regarding how they metabolize nutrients, plays an important role in their ability to grow and spread throughout the body (invasion and metastases). However, studying the metabolic interaction of cancer cells within a defined area is currently not feasible. This team of biologists and engineers is developing "cancer-on-a-chip" technology to recreate tumor-like environments in the laboratory. This technology is designed to help determine the nutrient requirements of individual cancer cells and ultimately the development of new metabolic biomarkers based on metabolic requirements.

**Identification of gene regulatory networks for direct conversion of fibroblasts into bladder epithelia**

*Flaminia Talos, Urology and Pathology*

*Daifeng Wang, Biomedical Informatics*

This project integrates computational and experimental efforts to discover the core gene regulatory networks contributing to bladder epithelia development. Like an engineering system, these core regulatory networks are organized based on certain engineering principles and coordinate as circuits to control bladder development. Any aberrant events in the network will drive the abnormal activities (i.e. bladder cancer). The team will provide the engineering principles of bladder gene circuits to be exploited in tissue reprogramming of fibroblasts into

bladder epithelia for regenerative medicine applications needed for organ rehabilitation post-cystectomy in cancer patients and as a new platform for studies of bladder cancer initiation.

### ***2017-2018 Biomedical Engineering Seminar Series***

The schedule for the 2017-2018 Biomedical Engineering Seminar Series has been announced.

This year's series features:

**September 13, 2017: The Cell's Bunsen Burner: How Transcriptional Fluctuations Regulate Fate**, *Leor Weinberger, PhD, Professor of Biochemistry and Biophysics, UC San Francisco*

**October 25, 2017: Molecularly Tunable Fluorescent Quantum Defects**, *Yuhuang Wang, PhD, Department of Chemistry and Biochemistry, University of Maryland*

**November 15, 2017: Watching gene's activity in conscious rat brain**, *Zhicheng Lin, PhD, Director of Laboratory of Psychiatric Neurogenomics, Harvard Medical School, Mclean Hospital*

**December 6, 2017: Multiscale and patient-specific blood systems biology**, *Scot Diamond, PhD, Arthur E. Humphrey Professor Chemical and Biomolecular Engineering, Bioengineering, University of Pennsylvania*

**February 14, 2018: Light and Sound: Integrating Photonics with Ultrasonics for Biomedical Applications**, *Matthew O'Donnell, PhD, Professor of Bioengineering, University of Washington*

**March 7, 2018: Optical Tools for Unraveling Whole-brain Neuronal Circuit Dynamics Underlying Behavior**, *Alipasha Vaziri, PhD, Associate Professor of Neurotechnology and Biophysics, Rockefeller University*

**April 18, 2018: Single-cell functional proteomics: small devices for big impact**, *Rong Fan, PhD, Associate Professor of Biomedical Engineering, Yale School of Engineering & Applied Sciences*

**April 25, 2018: Ackerman Lecture- Searching for Novel Strategies to Enhance Bone Repair: Lessons Learned**, *Jay Lieberman, MD, Professor & Chair, Department of Orthopaedic Surgery, Keck School of Medicine, Director of the Institute of Orthopaedics, Keck Medical Center, University of Southern California*

All lectures will take place at 4:00 PM in Lecture Hall 101.