**Office of the Vice Provost for Research**
Rutgers, The State University of New Jersey
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# Life Sciences Alliance (LSA) Forum
## April 18, 2024 | 1:00pm–6:00pm | Proteomics Building
## 174 Frelinghuysen Rd., Piscataway, NJ 08854

### Agenda

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| 1:00pm–1:15pm | **Introduction**<br><br>Sheila Borges Rajguru, PhD<br>Director, Research Development and Strategy<br><br>**Welcome**<br><br>Jean Baum, PhD<br>Vice Provost for Life Sciences Research and Partnerships |
| 1:15pm–2:45pm | **Lighting Talks: Session 1** [14 participants]<br>Moderators<br><br>Wendie Cohick, PhD<br>Co-Chair, LSA PST Executive Steering Committee<br><br>James Knowles, PhD, MD<br>Co-Chair, LSA PST Executive Steering Committee |
| 2:45pm–2:55pm | **Office for Research Innovation Ventures**<br><br>Vincent Smeraglia, JD<br>Executive Director, New Ventures<br><br>Pragati Sharma, PhD<br>Associate Director, Commercialization Funding |
| 2:55pm–3:20pm | **Coffee Networking Break** |
| 3:25pm–4:55pm | **Lighting Talks: Session 2** [16 participants]<br>Moderator<br><br>Valerie Tutwiler, PhD<br>Senior Provost Leadership Research Fellow<br>Office of the Vice Provost for Research |
| 5:00pm–6:00pm | **Life Sciences Alliance Mixer** |

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# List of Presentations Session 1

Lightning Talks: Session 1 (1:15pm–2:45pm)

1. S. Murthy, A. Gormley, and M. Dutt, “Accelerating the Discovery of Nanobiomaterials by Integrating Experimental Observations with Computational Modeling Using AI Tools”
2. T. Roepke, S. Campbell, and I. Shmarakov, “A Preclinical Mouse Model of Gender-Affirming Hormone Therapy: Metabolic and Behavioral Outcomes”
3. L. Yu and J. Roberge, “Novel Therapeutics for Chronic Neuropathic Pain”
4. D. Metaxas, S. Burley, and R. Pasqualini, “Integration of In Vivo Phage Display and Artificial Intelligence, a Multidisciplinary Approach for Ligand-Receptor Mapping of the Mammalian Vasculature”
5. K. Lee, Y. Kim, M. Jang, Y. Kim, and Y. Xu, “Transforming Diagnosis in Neurological Diseases: The Promise of Liquid Biopsy Using Nanobiotechnology”
6. G. Dignon, “Molecular Interactions and Biomolecular Phase Separation: What Controls Condensate Composition?”
7. B. Schuster, “Enhancing the Rigor and Physiological Relevance of In Vitro Biomolecular Condensate Experiments”
8. D. Bhattacharya, S. Chundawat, and S. Khare, “Sargassum Seaweed as a Future Renewable Feedstock for Sustainable Biomanufacturing”
9. N. Fahrenfeld, G. Mainelis, and T. Han, “Antibiotic Resistance in Wastewater Bioaerosols”
10. S. Kolattukudy, A. Neimark, K. Stine, E. Bauer, and M. Nichols, “In Silico Design of Curcumin-Derived Inhibitors for SARS-Cov 2 by Multiscale Molecular Simulations and Machine Learning”
11. S. Gunderson, R. Goraczniak, S. Ganesan, M. Arabzadeh, and G. Bhanot, “OncoU1 Genes in Cancer”
12. J. Friedman, J. Thaw, R. Dobkin, N. Schultz-Kahwaty, P. Quinn, and C. O’Connell, “Gaitkeeping: A Digital Person-with-Parkinson's Designed Walking Intervention”
13. S. Chundawat, S. Khare, D. York, and M. Javanmard, “RU–SWEET: RUtgers Synthetic biology and sWeet sEnsors design and engineEring Toolkit for advancing glycosciences”
14. Z. Lindenfeld, “Trends in the Availability of Comprehensive Services within Outpatient Substance Use Treatment Facilities from 2018 to 2022”

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# List of Presentations Session 2

Lightning Talks: Session 2 (3:25pm–4:55pm)

1. H. Sampath, "Interactions between Intestinal Lipid Metabolism and Immune Function"
2. V. Abraira, "Building an Interdisciplinary Team for Advancing Drug-Screening Technologies in Preclinical Mouse Models"
3. C. Dismukes and M. Zander, "Improving Photosynthesis under Elevated Temperatures by Multigene Bioengineering"
4. J. Xing, "Understanding the Impact of Genomic Variation"
5. R. Ramachandran, J. Ortiz, I. Androulakis, and W. Guo, "Artificial Intelligence in Personalized Drug Delivery Design for 'Next-Gen' Patient Healthcare"
6. C. Shuck, "2D MXenes for Biological and Biomedical Applications"
7. I. Androulakis, T. Anthony, R. Cao, and C. Ellison, "What and When Should I Eat? Diet and Circadian Rhythms for Improved Precision Nutrition"
8. K. Michmizos and P. Parker, "Translating Neuronal Mechanisms for Brain Function to Computing Primitives for Artificial Intelligence"
9. K. Schindler, S. Xiao, and J. Yang, "Unraveling the Protective Role of SIRT7 in Female Reproductive Aging"
10. S. Bunting, "Mouse B Cells as a System to Study DNA Replication and Repair"
11. L. Quadro, Y. Kim, E. Madonna, and N. Isoherranen, "Vitamin A and Cardiac Growth Adaptations"
12. J. Marcone and M. Dominguez-Bello, "Human Microbiota Conservation and Indigenous Peoples"
13. N. Fitzgerald, S. Setoguchi-Iwata, and A. Kalbag, "Food is Medicine for South Asians"
14. M. Xu, M. Xie, and S. Wang, "Performance Guaranteed Statistical Learning on Networks and Structured Models"
15. M. Vazquez, N. Bello, and B. Firestein, "Ahead for Women: Advancing Health Equity in Age-Related Neurodegenerative Diseases in Women"
16. J. Miller, W. Hu, D. Zald, and G. Roslan, "Nutritional Strategies for Prevention or Slowing of Age-Related Cognitive Decline"