# THE BENCH & BEYOND

# Newsletter of San Diego Biomedical Research Institute

Giving Every Patient A Fighting Chance



When San Diego Biomedical Research Institute first opened in 2014, the founder envisioned a space where researchers of different disciplines and specialties could come together to fight against some of the worst diseases that patients battle. We began as a small institute of 12 employees, 4 faculty members, and focused on 4 areas of research. Over the years, SDBRI has expanded its research breadth and faculty, with many talented and dedicated scientists joining the institute. We are astonished by the dedication and enthusiasm of our staff, both scientific and non-scientific, for their contribution to our mission.

After a small move in 2018 to a larger space, it was clear within a year, that SDBRI needed far more space to maintain the growth of our projects and staff. Today, after nearly two years of hard work, we are very excited to unveil recent improvements that have been made to the institute, including new research programs, a larger facility, and a new logo.

#### Introducing San Diego BioMed

Talk of relocating SDBRI started in January 2020, only weeks before COVID-19 caused a global shutdown. While SDBRI temporarily transitioned into a remotely run institute, this did not stop the search for a new and improved facility. In the last year and a half, we found, designed, and oversaw the building of a new space that would continue to foster our productive and collaborative environment.

## San Diego BioMed Cont.

The new institute, which is nearly 30,000 square feet, is triple the size of the previous SDBRI facility. It contains larger lab spaces and conference areas, more dedicated equipment space, core facilities, and more offices, each of which has at least one wall that can serve as a white board. While the new space not only accommodates our growing staff, it also allows for larger scale projects and discussions to take place between our scientists.













### San Diego BioMed Cont.

As we began to transition through this exciting new phase of development, it became apparent that we needed more than just a change in address to reflect our advancing institute. As a result we have acquired a new name and logo.

We are happy to announce that we are now San Diego BioMed and we have adopted the new, vibrant logo

you see below!



# **NEW FACULTY AT San Diego BioMed**

Not only have we expanded our facilities, but we have also added to the San Diego BioMed family. We are excited to welcome our two newest investigators, Dr. Roberto Baccala and Dr. Dave Gilbert!

#### The Baccala Lab

Dr. Roberto Baccala received his Ph.D. in Immunology from the University of Paris, France for work conducted at the Pasteur Institute. His research focuses on the mechanisms of immunopathology in autoimmune (systemic lupus erythematosus, SLE), and antiviral responses. Baccala's research group focuses on three main issues: 1) the primary role of the immune system in systemic autoimmunity, 2) the contribution of microenvironmental activating immune cells that autoimmunity, and 3) the role of the immune system in virus -induced immunopathology. Prior to joining San Diego BioMed, Dr. Baccala was a Research Group Leader and Director of the Molecular Diagnostic Unit of Hematology Division at the University Hospital of Lausanne in Switzerland and Associate Professor of Immunology at The Scripps Research Institute.



Joining Dr. Baccala is Dr. Rosana Gonzalez-Quintial!

Dr. Rosana Gonzalez-Quintial obtained a degree in Veterinary Sciences and a Ph.D. in Biochemistry from the University of Zaragoza, Spain. After completing her postdoctoral work in the laboratory of Stratis Avrameas at the Pasteur Institute in Paris, France, she embarked on additional training with Argyrios Theofilopoulos at The Scripps Research Institute. Rosana then joined the Hematology Division of the University Hospital of Lausanne, Switzerland, as research group leader and co-director of the molecular diagnostic unit before returning to Scripps to continue her scientific career as a member of the laboratories of Argyrios Theofilopoulos, Dwight Kono, and Roberto Baccala. Her main focus in the Baccala lab at San Diego BioMed will be on studies assessing the role of viral and environmental agents in the pathogenesis of SLE and other systemic autoimmune diseases.



#### The Gilbert Lab

Dr. Dave Gilbert received his Ph.D. in Genetics from Stanford University and has nearly 40 years' experience with genome engineering in mammalian cells and large-scale chromosome architecture. His research focuses on the mechanisms regulating DNA replication during the cell cycle and the relationship between DNA replication and structural and functional organization of chromosomes. Before joining us at San Diego BioMed, Dr. Gilbert was a J. Herbert Taylor Distinguished Professor of Molecular Biology in the Department of Biological Science at Florida State University. He was also the Co-founder and Associate Director of the Center for Genomics and Personalized Medicine.

Dr. Gilbert has been joined by Drs. Takayo Sasaki and Phoolwanti Rani!



Dr. Phoolwanti Rani received her doctorate from the Indian Institute of Science and has recently relocated from India to San Diego to join the Gilbert research group as a post-doctoral fellow. At San Diego BioMed she will be assisting Dr. Gilbert on the NIH 4D Nucleome Project, using various techniques to measure histone modification and binding. She will relate these measurements to functional mapping of DNA replication timing, transcription, and steady state gene expression.



Dr. Takayo Sasaki received her Ph.D. from Hiroshima University in Japan for the analysis of mammalian cell cycle mutant cell lines. She completed her first post-doctoral fellowship at Mitsubishi-Kagaku Institute for Life Sciences where she analyzed the specification of the initiation sites of DNA replication during a stage of embryogenesis. While presenting her work at a Cold Spring Harbor Laboratory meeting, she met Dr. Dave Gilbert who lab she later joined as a post-doctoral fellow and was later promoted to lab manager. Her work in the Gilbert group consists of developing and improving genome wide replication timing profiling by next generation sequencing.



This edition of our newsletter contains just a short summary of the exciting changes taking place here at San Diego BioMed. While the decision to make these changes did not come easily, they were a necessary step in the development of the institute. With these changes we have confidence that the institute is now more equipped than ever to achieve its goal of giving every patient a fighting chance.