Kyoto University LifeScience ShowCase @UCSD2020

Agenda Feb 28 (Fri), 2020

<u>Venue</u>

Roth Auditorium, Sanford Consortium for Regenerative Medicine 2880 Torrey Pines Scenic Drive, La Jolla, CA 92037



Activity

Scientists and/or CEOs of startup companies affiliated with Kyoto University who have cutting-edge medical technologies and interest in development and commercialization will present their technologies and business plan. A reception will be held in the afternoon to facilitate networking for all participants.

Program

| 9:00 | Registration |
|-------|---|
| 9:30 | Opening remark |
| 9:50 | Showcase presentations, and discussions (3 companies) |
| 12:00 | Lunch |
| 13:00 | Showcase presentations, and discussions (2 companies) |
| 14:30 | Reception (Networking) |
| 16:30 | Adjourn |
| | |

Participants

- Scientists and CEOs of startup companies affiliated with Kyoto University
- Investors, Venture capitalists, Angels
- Pharmaceutical companies, Medical device companies
- Guest commentators
- Faculty and staff from Kyoto University and UCSD

Sponsored by

Kyoto University Graduate School of Medicine Kyoto University Research Center, San Diego (KURC-SD)

Kyoto University Hospital Institute for

Advancement of Clinical and Translational Science (iACT)

Kyoto University Research Administration Office (KURA)

Co-sponsored by

Life Science Innovation Network Japan (LINK-J)







Supported by

Japan Agency for Medical Research and Development (AMED)

Foundation for Biomedical Research and Innovation at Kobe (FBRI)

Japan External Trade Organization (JETRO)

Japan Forum for Innovation and Technology (JFIT) at UCSD

Japan Science and Technology Agency (JST) Science and Innovation for the Next Generation

(SING) at UCSD Kyoto SPARK





<u>9:50-10:30</u>

Department of Drug Discovery for Lung Diseases, Kyoto University



Showcase (AM) Agenda

Innovate the Drug Discovery for Respiratory Diseases Using iPS-cell Technology

We are in the project for a start-up using iPS cell-based technology for accelerating drug discovery for respiratory diseases such as idiopathic pulmonary fibrosis, cystic fibrosis, and chronic obstructive pulmonary diseases. We can generate various types of in vitro models including lung organoids, which are highly predictive for "real" human respiratory diseases. By using that specialized "disease-simulator" for target ID, screening, and validation in drug discovery, we will enable pharmaceutical companies to efficiently develop candidates whose therapeutic potential for respiratory diseases are ensured before clinical development.

<website in preparation>

<u>10:30-11:10</u>

Therabiopharma Inc.



Development of curcumin monoglucuronide (CMG) as an anticancer drug for Phase I/II clinical trials of refractory and rare cancers, glioblastoma and drug-resistant multiple myeloma

The CMG(curcumin monoglucuronide) as an anti-cancer drug has been developed with targeting to license out within 3-4years and approval in 2028 for intractable:

-Glioblastoma Multiforme (GBM)

-Multiple Myeloma (MM) (bortezomib-resistant)

Human Neural Stem Cells "OligoGenie"

CMG is an injectable prodrug and could achieve at least 1,000 times higher bioavailability than the curcumin oral in-take. In vivo, CMG (3weeks treatment) clearly demonstrates its efficacy for GBM and could improve the survivals dose-dependently and survival median was 59days (orthotopic model). CMG could also reduce the tumor volume (36% on 21st day) significantly for the Bortezomib-resistant MM although bortezomib shows 40% tumor growth in vivo.

<http://www.therabio.co.jp>

11:20-12:00

Oligogen, Inc.

🔘 Oligogen

We developed novel human neural stem cells "OligoGenie" that can differentiate into oligodendrocytes at nearly 100% efficiency in demyelinated brain and stay in undifferentiated state, called NG2 glia, in non-demyelinated brain. OligoGenie has many features as like cytoprotection, angiogenesis, anti-inflammation and will be effective in treating congenital cerebral hypomyelination, spinal cord injury/traumatic brain injury, multiple sclerosis, stroke, vascular dementia, Alzheimer disease and so on. We are developing OligoGenie as cell therapy products for these diseases. In addition, we are looking for partners with pharmaceutical companies to utilize OligoGenie for drug screening against multiple sclerosis, depression, Alzheimer disease and autism.

Development of Drug and Cell Therapy Products using Novel

<http://www.oligogen.jp/en_top.html>

Showcase (PM) Agenda

| <u>13:00-13:40</u> | Offering epilepsy patients world's first clinically approved seizure prediction software |
|--------------------|--|
| Quadlytics Inc. | We will offer a SaMD (software as medical device) app for smartphones that will predict epileptic seizures BEFORE their onset, potentially the first of its kind globally. The phone will be wirelessly paired with a non-invasive wearable EKG (electrocardiogram), and will analyze the continuous stream |
| <u>Quadlytics</u> | of EKG signals real-time, based on machine learning AI algorithm. The patient, and caregivers as needed, will be alerted for imminent seizure, typically 30 seconds to 10 minutes preceding seizure onset, thus allowing for preventive measures as appropriate, and in the future, time window to take rapidly-acting antiepileptic medications when they become available. |
| | <https: www.quadlytics.com=""></https:> |
| | Innovative therapeutic drug development for cervical |
| <u>13:40-14:20</u> | intraepithelial neoplasia (CIN) through industry-university collaboration |
| KinoPharma, Inc. | |
| | KinoPharma is a clinical-stage pharmaceutical company taking a targeted |
| 🥕 KinoPharma | approach in the development of small molecule therapeutics to treat virus infections and neurodegenerative diseases. RKP00156, which selectivity inhibits CDK9, showed outstanding safety in GLP tox studies and pre-clinical efficacy against human papillomaviruses (HPV). A phase 1/2 clinical trial for cervical intraepithelial neoplasia (CIN) has started enrolling subjects in Japan by our academic partner, Kyoto University. There is potential to pursue multiple indications beyond CIN including common warts, epidemic keratoconjunctivitis and Hepatitis B. |



Rieko Yajima, PhD (Director for Drug Discovery Innovation with the Stanford University SPARK)



Charles E Prussak, PhD (Director of the Cell Therapy Translational Laboratory (CTTL), UCSD)



Jay Kunin, PhD (Boards of PharmaSecure, Inc. and Sironis, Inc.)



Lada Rasochova, PhD, MBA

(Executive Director, California Institute for Innovation and Development, Rady School of Management, UCSD)



Susie Harborth (COO, BioLabs; COO/CFO, Mission BioCapital)

List of commentators

Dr. Yajima is the Director for Drug Discovery Innovation with the Stanford University SPARK Translational Research Program. Her efforts focus on human-centered drug discovery and translational research. Previously, Rieko was a Research Scholar at the Center for Design Research at Stanford. With support from the National Endowment for the Arts, she investigated how design practices can catalyze scientific research and innovation. Her interests lie at the intersection of science, policy, and design. She was an Associate Program Director at the American Association for the Advancement of Science (AAAS) in Washington, DC, where she advised the scientific community on interdisciplinary research collaboration, implementation, and evaluation. She has a Ph.D. in chemical biology (RNA catalysis & structural biology) and served as a science policy fellow at the U.S. National Academy of Sciences. In 2015, she was elected to the Global Young Academy, an organization for outstanding young scientists to lead international, interdisciplinary, and intergenerational dialogue with the goal to make global decision-making evidence-based and inclusive.

Dr. Charles Prussak (Chuck) has over 25 years pharmaceutical industry experience and knowledge taking multiple products from R&D into advanced clinical trials. He has had chief responsibility for the overall coordination of pre-clinical research and direct management of product and clinical development. He has been the founder of three biotech companies and has been responsible for the development of business and corporate partnering strategies and product sales and marketing. Dr. Prussak has extensive knowledge of the pharmaceutical industry including small molecule formulation and production and biological scale-up and purification technologies. Additionally, he has experience in all aspects of biologic product development from R&D to product manufacturing and final fill and finish. He has developed, coordinated and directed the production, purification, formulation and manufacture of over 25 biologic products under the cGMP for pre-clinical and clinical trials in the United States and Europe.

Dr. Jay Kunin has over 30 years' experience as an entrepreneur, consultant and investor, has founded or co-founded seven companies, and served as executive officer of multiple other entrepreneurial ventures. Two of his startups were acquired by Fortune 500 companies, and one did an IPO. He is Managing Director of Professional Health Technologies (USA) LLC, a strategic consulting firm that assists early-stage healthcare and healthtech companies with US market entry. Kunin & Associates, founded in 1998, has provided consulting and advisory services in all areas of pharmaceutical, medical device, diagnostic and health care software and systems. He currently serves on the Boards of PharmaSecure, Inc. (drug anti-counterfeiting systems) and Sironis, Inc. (anesthesiology systems), and is the Strategic Alliance Officer for The Diary Corp. (care management software), managing business development in Australia, New Zealand, Japan and the US. He has been an investor, Director and advisor of numerous entrepreneurial companies in markets.

Dr. Rasochova is the Executive Director of the California Institute for Innovation and Development, Managing Director of the Rady Venture Fund, and Director of award-winning StartR accelerators at the Rady School of Management at UC San Diego. She has been involved in commercialization of pharmaceutical and biotechnology products for the past 20 years. She spent more than 15 years in private sector where she held various scientific, management, and leadership positions, most recently as the R&D Leader of Human Vaccines and Director of New Business Development in the Dowpharma division of the Dow Chemical Company. Prior to Dow, she was with Mycogen, a San Diego biotechnology startup acquired by Dow Chemical in 1998. In addition, she is the Chief Executive Officer of Dermala Inc., an early stage consumer dermatology company that utilizes data analytics, human microbiome, and behavior science to develop and market personalized over the counter treatments and skincare products for acne, eczema, and skin aging. Dr. Rasochova is the advisory board member for the Qualcomm Institute, Center for Drug Discovery Innovation and the Center for Center for Aerosol Impacts on Climate and the Environment.

Susie Harborth is a serial entrepreneur, operations executive and early-stage venture and angel investor with over 20 years of experience. She is currently COO and CFO of venture capital firm, Mission BioCapital; COO of BioLabs, the premier network of shared lab and office spaces; and is an active business advisor to tech and biotech startups, splitting her time between CA and MA. Susie is the founder of LaunchBio, a non-profit organization focused on STEM education, social impact, innovation and inclusive entrepreneurship; and she sits as an advisory member of CONNECT, Ad Astra Ventures and LabCentral.

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