SATURDAY, DECEMBER 14, 2019

1:30 PM-3:30 PM Ocean Lanai Terrace Registration

3:30-5:30 PM Haleakala Ballroom

Session Chair – Dan Wattendorf
Bill and Melinda Gates Foundation

AFTERNOON PANEL DISCUSSION
Non-viral vector delivery methods to targeting immune cells
Panelists: Dan Anderson (MIT); Kerry Benenato (Moderna); James Dahlman (GA Tech)

5:45 PM–6:55 PM Aloha Pavilion Welcome Reception

EVENING PLENARY SESSION

7:00 PM-7:05 PM- Introduction: Robert Langer and Yasuhiko Tabata

Discussion Leaders: Molly Stevens and Frank Szoka

7:05 PM-7:40 PM – Katsuto Tamai
Osaka University Graduate School of Medicine
*Systemic administration of synthesized HMGB1 peptide increases ectoderm-derived mesenchymal stem/progenitor cells in the blood for necrotic tissue repair*

7:40 PM-8:15 PM – Mark E. Davis
California Institute of Technology
*Designing nanoparticles to cross the blood-brain barrier*

8:15 PM-8:30 PM - Refreshment Break

8:30 PM-9:05 PM – Marsha Moses
Boston Children’s Hospital/Harvard Medical School
*Rationally designed precision theranostics for cancer and its metastases*

9:05 PM-9:40 PM – Hidetoshi Masumoto
Kyoto University
*Drug delivery system-based cardiovascular regenerative medicine: From bench to bedside*

9:40 PM-10:15 PM— Tony Voiers and William Daunch
Advanced Chemotherapy Technologies
*Active drug delivery of chemotherapeutics via iontophoresis: Bypassing the barriers to traditional pancreatic cancer treatment*
**Sunday, December 15, 2019**

**MORNING PLENARY SESSION**

**Discussion Leaders:** Ana Jaklenec and Steve Kern

8:00 AM-8:35 AM – Dan Hartman  
Bill and Melinda Gates Foundation  
*CMC innovation for global health: Why high-tech solutions fit in the low income world*

8:35 AM-9:10 AM – Philip Welkhoff  
Bill and Melinda Gates Foundation  
*Pathway to eradication: An innovation agenda for achieving a malaria-free world*

9:10-9:45 AM—Kei Katsuno  
Global Health Innovative Technology Fund  
*Introduction to GHIT Fund*

9:45 AM-10:15 AM – Refreshment Break (30 mins)

10:15AM-10:50 AM-- Mark Prausnitz  
Georgia Institute of Technology  
*Microneedle technologies for drug delivery*

10:50 AM-11:25AM– Samir Mitragotri  
Harvard University  
*Ionic liquids for drug delivery*

11:25 AM-12:00 PM– Giovanni Traverso  
Massachusetts Institute of Technology  
*Gastrointestinal device development in a few movements*

**AFTERNOON UNSCHEDULED**

**EVENING PLENARY SESSION**

**Discussion Leaders:** Sung Wan Kim and Rami Suzuki

7:00 PM-7:35 PM — Chae-Ok Yun  
Hanyang University  
*Reprogrammed oncolytic adenovirus as cancer immunotherapy*

7:35 PM-8:10 PM – Takahiro Ochiya  
Tokyo Medical University  
*EV as a novel DDS for cancer therapeutics*

8:10 PM-8:35 PM- Refreshment Break

8:35 PM-9:10 PM — Christopher Loose  
Frequency Therapeutics, Inc.  
*Progenitor cell activation: A potential disease modifying approach for hearing loss and other degenerative conditions*

9:10 PM-9:45 PM ---- Chad Mirkin  
Northwestern University  
*Opening the fields of digital medicine and rational vaccinology with spherical nucleic acids*

9:45 PM-10:20 PM – Masaya Nakamura  
Keio University School of Medicine  
*Regenerative medicine for spinal cord injury using iPS cells*
THE 15TH US-JAPAN SYMPOSIUM ON DRUG DELIVERY SYSTEMS
DECEMBER 14-18, 2019

MONDAY, DECEMBER 16, 2019

MORNING PLENARY SESSION

Discussion Leader: Yosi Kost and Howie Rosen

8:00 AM-8:35 AM – Shinsuke Sando
University of Tokyo
Artificial growth factors for controlling cellular functions and fates

8:35 AM-9:10 AM – Joachim Kohn
Rutgers University
Delivery of epigenetic modifiers as a promising alternative to the use of cytokines and growth factors in regenerative medicine

9:10 AM-9:45 AM – Tatiana Novobrantseva
Verseau Pharmaceuticals
Completing the immunity cycle by developing myeloid immunotherapies

9:45 AM-10:15 AM – Refreshment Break

10:15 AM-10:50 AM – Juinichi Kikuta
Osaka University Graduate School of Medicine
Intravital imaging technology dissecting cellular dynamics in inflammation and cancers in vivo

10:50 AM-11:25 AM – Joseph DeSimone
Carbon, Inc.
Digital manufacturing for healthcare applications

11:25 AM-12:00 PM – Hideyoshi Harashima
Hokkaido University
Multifunctional envelope-type nano device for gene/nucleic acids delivery: Concept and application to nanomedicine

AFTERNOON UNSCHEDULED

Discussion Leader: Nicholas Peppas

EVENING POSTER SESSION 1

7:30 PM – 10:00 PM Oral Presentation of Posters - Selected from Poster Session #1

Refreshment Break: 8:30 PM

Session ends at approximately 10:00 PM
TUESDAY, DECEMBER 17, 2019

MORNING PLENARY SESSION

Discussion Leader: Shelley Weinstock and Bruce Zetter

8:00 AM-8:35 AM – Rogerio Vivaldi
Sigilon Therapeutics
Correcting blood disorders by implementation of ex vivo gene-modified allogeneic (human) cells shielded with novel biomaterials

8:35 AM-9:10 AM – Zhen Gu
University of California, Los Angeles / Zenomics, Inc.
Glucose-responsive smart insulin delivery

9:10 AM-9:45 AM – Rosemary Kanasty
Lyndra Therapeutics
Making the most of each oral dose

9:45 AM-10:15 AM - Refreshment Break

10:15 AM-10:50 AM – Henry Brem
Johns Hopkins University
Novel Therapeutics for Brain tumor therapy

10:50 AM-11:25 AM – Patrick Anquetil
Portal Instruments
Connected, needle-free drug delivery—medical injections transformed

11:25 AM-12:00 PM – Ryo Kojima
Pharmaceutical Research and Technology Labs., Pharmaceutical Technology, Astellas Pharma Inc.
Drug delivery application of exosome/extracellular vesicles

AFTERNOON UNSCHEDULED

EVENING PLENARY SESSION

Discussion Leader: Hideyoshi Harashima and Paulina Hill

7:00 PM-7:35 PM--- Yosuke Hiraoka
Biomaterial group, R&D Center, Nitta Gelatin Inc.
Unlocked potential of gelatin—old but new material

7:35 PM-8:10PM – Upma Sharma
Arsenal Medical
Name of presentation TBD

8:10 PM-8:35 PM – Refreshment Break

8:35 PM-9:10 PM – Sabrina M. Johnson
Daré Bioscience, Inc.
Personalizing drug delivery for women: A vaginal ring to rule them all

9:10 PM-9:45 PM – Thomas von Erlach
Vivtex
Using the gastrointestinal organ robotic interface system for oral drug delivery applications

9:45 PM-10:20 PM—James Hedrick
Azul 3D
Unlocking high area rapid 3D printing for manufacturing
WEDNESDAY, DECEMBER 18, 2019

MORNING PLENARY SESSION

Discussion Leader: Susan Langer and Rodney Pearlman

8:00 AM - 8:35 AM — Lloyd Johnston
Selecta Biosciences
Tolerogenic nanoparticles to enable repeat dosing of gene therapy

8:35 AM - 9:10 AM — David Pernock and Adrian Hepner
Eagle Pharmaceuticals
Eagle Pharmaceuticals’ role in scientific advancements

9:10 AM - 9:45 AM — Natalie Artzi
MIT/ HMS/ BWH
Combination cancer (immuno)therapy

9:45 AM - 10:15 AM — Refreshment Break

10:15 AM - 10:50 AM — Yasuhiro Matsumura
EPOC National Cancer Center
Cancer stromal targeting (CAST) therapy

10:50 AM - 11:25 AM — Hiroshi Kikuchi
Shonan Research Laboratories, LTT Bio-Pharma
Species difference problem on DDS formulation design and the established commission for the solution

11:25 AM - 12:00 PM — John Patton
Aerami Therapeutics
So, you want to do a drug delivery company? Some stuff I’ve learned – Yikes!

AFTERNOON UNSCHEDULED

EVENING POSTER SESSION 2

Discussion Leader: Sungho Han and Hiroshi Kikuchi

7:30 PM Oral Presentation of Posters - Selected from Poster Session #2

Refreshment Break: 8:30 PM

Session ends at approximately 10:00 PM

THANK YOU FOR PARTICIPATING - WE HOPE TO SEE YOU AGAIN AT THE 16TH SYMPOSIUM IN 2021