

**21st Future of Health Technology Summit®**  
**Connected Drugs**  
May 22-23, 2019



at Bartos Theatre, Wiesner Bld E-15, Massachusetts Institute of Technology  
20 Ames St, Cambridge, MA

**FHTI 2019 - Connected Drugs**

Produced by the Future of Health Technology Institute - FHTI  
Conference Chair, Renata G. Bushko, @FutureofHealth bushko@fhti.org  
Founder, Future of Health Technology Institute since 1996

Updated on: 5/17/2019

<b>Day I</b>	<b>May 22, 2019</b>
<b>8:00 - 8:30</b>	<b>Breakfast</b>
<b>8:30 - 8:45</b>	<b>Opening Remarks: Connected Drugs - New Relationship between Pharma, Patients, Doctors and Drugs</b> <b>Renata Bushko M.S.</b> Founder, Future of Health Technology Institute Editor, "Strategy for the Future of Health" & "World Health Strategy"
<b>8:45 - 9:05</b>	<b>Future of 3D Bioprinting and Organs-on-a-chip</b> <b>Su-Ryon Shin Ph.D.</b> Instructor, Department of Medicine, Brigham and Women's Hospital Harvard-MIT Health Science & Technology Harvard Medical School
<b>9:05 - 9:25</b>	<b>Vision for a Sustainable Biocatalyst-based Pharmaceutical Industry</b> <b>Jing-Ke Weng Ph.D.</b> Member, Whitehead Institute for Biomedical Research Assistant Professor of Biology, Massachusetts Institute of Technology
<b>9:25 - 9:45</b>	<b>Preventive Genomics Now!</b> <b>Robert Green M.D., MPH</b> Professor of Medicine (Genetics) Director, Genomes2People Research Program Brigham and Women's Hospital, Broad Institute, Harvard Medical School
<b>9:45 - 10:05</b>	<b>How Blockchain Revolutionizes Drug Development Today &amp; Tomorrow</b>

**Jason Cross Ph.D. JD**  
Co-founder & Chief Strategy Officer  
Rymedi

**10:05 - 10:25 Break - Discussion**

**10:25 - 10:45 Future of Stem Cell Engineering**

**Dario Lemos Ph.D.**  
Principal Investigator  
Harvard Institutes of Medicine  
Brigham and Women's Hospital  
Harvard Medical School

**10:45 - 11:05 Federal and State Data Linkage Efforts to Address the Opioid Crisis.**

**Sylvia Demetra Hobbs MPH**  
Manager  
Massachusetts Center for Health Information and Analysis

**11:05 - 11:25 Future of Pharmacology**

**Joseph Gonzalez-Heydrich M.D.**  
Chief of Psychopharmacology  
Children's Hospital  
Associate Professor of Psychiatry  
Harvard Medical School

**11:25 - 11:45 Future Nonpharmacologic Drugs - Digital Therapeutics - Interview**

Future of Health Technology Institute Product Recognition: Embrace2 by Empatica Inc.

**Rosalind Picard ScD, FIEEE**  
Professor, MIT Media Laboratory  
Director, Affective Computing Research Faculty Chair, MIT  
Mind+Hand+Heart  
Co-founder & Chief Scientist, Empatica Inc., Co-founder, Affectiva Inc.

**Renata Bushko M.S.**  
Founder, Future of Health Technology Institute  
Editor, "Strategy for the Future of Health" & "World Health Strategy"

**11:45 - 12:05 Future Drugs, Diagnostics, and Digital Therapeutics Development**

**Luba Greenwood J.D.**  
Strategic Business Development and Corporate Ventures,  
Verily (Google Life Sciences)  
Google

**Ketan Paranjape MS MBA**  
Vice President  
Diagnostics Information Solutions  
Roche Diagnostics

**George Likourezos Esq**  
Partner, Intellectual Property Counsel  
Carter, DeLuca, Farrell & Schmidt

**Jason Cross Ph.D. JD**  
Co-founder & Chief Strategy Officer  
Rymedi

**12:05 - 12:40 Lunch - Networking**

**12:40 - 1:00 Molecular NanoSystems and their Applications in Medicine**

**Guillermo Ulises Ruiz Esparza MD, PhD, FRSA**

Director of the Molecular NanoSystems Research Group  
Division of Engineering in Medicine  
Harvard-MIT Program in Health Sciences and Technology  
Brigham and Women's Hospital; Harvard Medical School

**1:00 - 1:20 Strategic AI-driven Vision of the Future of Health and Drugs**

**Luba Greenwood J.D.**

Strategic Business Development and Corporate Ventures,  
Verily (Google Life Sciences)  
Google

**1:20 - 1:40 Future Asthma, Eczema, and Food Allergy Herbal Medicines**

**Xiu-Min Li M.D., M.S.**

Professor, Department of Microbiology and Immunology  
New York Medical College

**1:40 - 2:00 Living Drug Factories for in vivo Drug Production**

**Daniel G. Anderson Ph.D.**

Associate Professor, Department of Chemical Engineering  
Institute for Medical Engineering and Science  
Harvard-MIT Division of Health Sciences & Technology  
David H. Koch Institute for Integrative Cancer Research

**2:00 - 2:20 Discussion - Break**

**2:20 - 2:40 Future Drug Development New Perspectives**

**Ketan Paranjape MS MBA**

Vice President  
Diagnostics Information Solutions  
Roche Diagnostics

**2:40 - 3:00 Future IP and Legal Issues in AI-driven Drug Development**

**George Likourezos Esq**

Partner, Intellectual Property Counsel  
Carter, DeLuca, Farrell & Schmidt

**3:00 - 3:20 From Connection Science to Connected Drugs - Interview**

**Alex (Sandy) Pentland Ph.D.**

Director, Human Dynamics Group,  
MIT Media Laboratory  
Co-leader the World Economic Forum Big Data and Personal Data  
initiatives

Author of "Honest Signals" and "Social Physics"

**Renata Bushko M.S.**

Founder, Future of Health Technology Institute  
Editor, "Strategy for the Future of Health" & "World Health Strategy"

**3:20 - 3:40 Prevent Major Mental Health Episodes: A Digital Answer**

Future of Health Technology Institute's Product Recognition for  
Companion(TM)

**Subhrangshu Datta MBA SM**

CEO, CompanionMx, Inc.

**3:40 - 4:00 Discussion - Break**

**4:00 - 4:30 Future Nonpharmacologic Therapeutics - VR and Music**

**Peggy Coddling Ph.D.**

Professor, Department: Music Therapy  
Berklee College of Music

- Eran Orr MBA**  
CEO, VRHealth USA Inc.
- 4:30 - 5:00** **Statistical Classification of High-throughput Multi-omics Human Cancer Data on Classical and Quantum Computing Architectures**  
**Tom Chittenden PhD, DPhil, PStat**  
Chief AI Scientist  
Founding Director, Advanced Artificial Intelligence Research Laboratory  
WuXi NextCODE Genomics  
Lecturer on Pediatrics, Harvard Medical School
- 5:00 - 5:30** **Synthesis - New Trajectory for Health and Pharma Industries**  
**Gordon Winston**  
Founder and Managing Director  
Inventive Capital  
**Mahala Burn Ph.D.**  
Director  
Corporate Development and Strategic Financing  
bioMerieux  
**Haipeng Zhang M.D.**  
Medical Director,  
Digital Innovation Hub  
Brigham and Women's Hospital  
**Renata Bushko M.S.**  
Founder, Future of Health Technology Institute  
Editor, "Strategy for the Future of Health" & "World Health Strategy"
- 5:30 - 6:00** **Discussion**
- 6:00 - 8:00** **Gala Future of Health Dinner**

<b>Day II</b>	<b>May 23, 2019</b>
<b>8:00 - 8:15</b>	<b>Breakfast</b>
<b>8:15 - 8:30</b>	<b>Opening Remarks</b>
<b>8:30 - 8:50</b>	<b>Bridging the Gap: Healthcare Innovation &amp; Academic-Entrepreneurs</b> <b>Michael Fenn Ph.D.</b> Director, Healthcare and Life Sciences Harvard Innovation Labs
<b>8:50 - 9:10</b>	<b>Future Drugs and Diagnostics for Neglected Tropical Diseases</b> <b>Renna Bushko</b> Teaching Fellow, Graduate Program in Biological Sciences The Williams Lab - Molecular Biology of Neglected Tropical Diseases Smith College
<b>9:10 - 9:30</b>	<b>Lessons from the Liver: Uncovering Novel Approaches for Regenerative Medicine</b> <b>Kristin Knouse M.D. Ph.D.</b> Whitehead Fellow Whitehead Institute for Biomedical Research
<b>9:30 - 9:50</b>	<b>Future Genomics</b> <b>John Quackenbush PhD</b> Professor of Computational Biology and Bioinformatics

Chair, Department of Biostatistics  
Harvard School of Public Health

- 9:50 - 10:10** **Cancer Progression: Failure of Resolution of Inflammation**  
**Dipak Panigrahy M.D.**  
Assistant Professor of Pathology  
Center for Vascular Biology Research  
Beth Israel Deaconess Medical Center  
Harvard Medical School
- 10:10 - 10:30** **Break - Poster's Review & Discussion**
- 10:30 - 10:50** **Putting 3D Bioprinting to the Use of Medicine**  
**Yu Shrike Zhang Ph.D.**  
Assistant Professor of Medicine,  
Harvard Medical School,  
Associate Bioengineer, Division of Engineering in Medicine,  
Brigham and Women's Hospital
- 10:50 - 11:10** **Learning about Cancer from Images and Text**  
**Adam Yala MS**  
Computer Science Ph.D. Program  
Massachusetts Institute of Technology
- 11:10 - 11:30** **Precise and Expansive Genomic Positioning with CRISPR**  
**Noah Jakimo Ph.D.**  
MIT Media Lab  
Molecular Machines Group
- 11:30 - 11:45** **Nanoparticle-based Drug Delivery for the Treatment of Polycystic Kidney Disease**  
**Mildred G Jimenez-Rodriguez**  
Molecular NanoSystems Research Group  
Division of Engineering in Medicine  
Brigham and Women's Hospital; Harvard Medical School
- 11:45 - 12:00** **ChromA-ExM: a novel tool for nanoscale imaging of higher order chromatin organization using regular optical microscopy**  
**Maria Fernanda Reyes**  
Technology Institute of Monterrey  
**Joel Hernandez Ramos**  
Technology Institute of Monterrey
- 12:00 - 12:30** **Lunch - Networking**
- 12:30 - 12:45** **Development of a NanoSystem for Intracellular Delivery of Genetic Material**  
**Gabriela Guemes-Aguilar**  
Molecular NanoSystems Research Group  
Division of Engineering in Medicine  
Brigham and Women's Hospital; Harvard Medical School
- 12:45 - 1:00** **Non-invasive Diagnosis of a Rare Heart Disease by Machine Learning**  
**Rebekka Burkholz Ph.D.**  
Postdoctoral Fellow, Department of Biostatistics  
Harvard T.H. Chan School of Public Health
- 1:00 - 1:15** **Nanoengineered Hydrogel for Tissue Regeneration**  
**Lorena Sanchez-Melgar**  
Molecular NanoSystems Research Group

Division of Engineering in Medicine  
Brigham and Women's Hospital; Harvard Medical School

**1:15 - 1:30** **Extracts and compounds of *Rubia cordifolia* and *Fructus Arctii* synergistically inhibit IgE secretion by human myeloma cells in vitro**

**Anish R. Maskey**  
PhD Program,  
Department of Microbiology and Immunology  
New York Medical College

**1:30 - 1:45**

**Discussion**

**1:45 - 2:00**

**A 3D Printed Hybrid Nasal Cartilage with Functional Electronic Olfactory Epithelium**

**Yasamin A. Jodat**  
Division of Engineering in Medicine,  
Harvard Medical School, Brigham and Women's Hospital,  
Department of Mechanical Engineering,  
Stevens Institute of Technology

**2:00 - 2:15**

**Nanostructured Drug Delivery Hydrogel for the Prevention of Postoperative Adhesions.**

**Xichi Wang MD, Ph.D.**  
Molecular NanoSystems Research Group  
Division of Engineering in Medicine  
Brigham and Women's Hospital; Harvard Medical School

**2:15 - 2:35**

**Future Rejuvenation Drugs**

**Aubrey de Grey Ph.D.**  
Chief Scientific Officer  
SENS Foundation  
Author of "Ending Aging"

**2:35 - 3:00**

**Can we do better than eye drops and injections to treat ocular diseases?**

**Joseph Ciolino MD**  
Associate Professor of Ophthalmology  
Harvard Medical School  
**Lokendrakumar Bengani Ph.D.**  
Postdoctoral Fellow  
Schepens Eye Research Institute  
of Massachusetts Eye & Ear  
Harvard Medical School