

NAGOYA × STANFORD

INTERNATIONAL RESEARCH COLLABORATION WORKSHOP



GREETINGS

名古屋大学呼吸器内科 教授 石井誠 / Makoto Ishii
13:30 ~ 13:35

TOPIC 1

Expectations for International Collaboration
between Nagoya and Stanford.

名古屋大学呼吸器内科 教授 石井 誠 / Makoto Ishii
13:35 ~ 13:55 (20min)

TOPIC 2

Detection of differentially regulated systems
behind personalized omics profiling data.

愛知県がんセンター 山口類 / Rui Yamaguchi
(Moderator) Makoto Ishii

13:55 ~ 14:15 (20min)

SPECIAL LECTURE 1

Metagenome analysis leads a paradigm shift
in health/medical care

東京大学医科学研究所副所長 井元清哉 / Seiya Imoto
(Moderator) Rui Yamaguchi

14:15 ~ 14:45 (30min)

SPECIAL LECTURE 2

Disrupting healthcare using deep data and
remote monitoring.

スタンフォード大学 遺伝学部門長 Michael Snyder
(Moderator) Rui Yamaguchi

14:45 ~ 15:30 (45min)

PROGRAM

June 20, 2024

6.20 (木) 13:30~15:30 (JST)

名古屋大学医学部 基礎研究棟4階 第4 講義室
ZOOM webinar online (ハイブリッド開催)

言語：英語 (Language: English)

QRコードあるいは下記のURLから 事前登録をお願いいたします。
後日Zoom linkをe-mailでお送りします。

Please register in advance using the QR code or the URL below.
A Zoom link will be e-mailed to you closer to the workshop date.

https://docs.google.com/forms/d/e/1FAIpQLSdgXT6EEdrmmjYvx1mjQJTYnntWmvmal-g7cVcnlwTk8hyZA/viewform?vc=0&c=0&w=1&flr=0&usp=mail_form_link



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石井誠 教授

Makoto Ishii

Professor, Department of
Respiratory Medicine, Nagoya
University Graduate School of
Medicine



愛知県がんセンター 山口類 分野長
(名古屋大学連携教授)

Rui Yamaguchi

Chief, Division of Cancer
System Biology, Aichi Cancer
Center Research Institute



東京大学 医科学研究所 副所長
井元清哉 教授

Seiya Imoto

Vice dean and Professor of the
Institute of Medical Science,
The University of Tokyo



スタンフォード大学 遺伝学部門長
Michael Snyder 教授

Michael Snyder

Chair, Department of Genetics,
Director, Center for Genomics
and Personalized Medicine,
Stanford School of Medicine



スタンフォード大学 遺伝学部門長



Michael Snyder 教授

As a pioneer of Precision Medicine, Dr Michael Snyder has invented many technologies enabling the 21st century of healthcare including systems biology, RNA sequencing, and protein chip. Dr Snyder has initiated the Big Data approach to healthcare through his work using omics to detect early stage disease, including wearables to detect infectious diseases like COVID-19, and at-home microsampling to measure hundreds of molecules from a single drop of blood. He is the first researcher to gather petabytes of data on individuals, which is 1 Million - 1 trillion times more data than the average clinician collects. He has published over 800 papers and is one of the most cited scientists. In terms of commercial success, Mike has co-founded 17 companies (including 2 unicorns) with combined enterprise value of over \$6 billion.



Disrupting healthcare using deep data and remote monitoring

Our present healthcare system focuses on treating people when they are ill rather than keeping them healthy. We have been using big data and remote monitoring approaches to monitor people while they are healthy to keep them that way and detect disease at its earliest moment presymptomatically. We use advanced multiomics technologies (genomics, immunomics, transcriptomics, proteomics, metabolomics, microbiomics) as well as wearables and microsampling for actively monitoring health. Following a group of 109 individuals for over 13 years revealed numerous major health discoveries covering cardiovascular disease, oncology, metabolic health and infectious disease. We have also found that individuals have distinct aging patterns that can be measured in an actionable period of time. Finally, we have used wearable devices for early detection of infectious disease, including COVID-19 as well as microsampling for monitoring and improving lifestyle. We believe that advanced technologies have the potential to transform healthcare and keep people healthy.