

THE FIRST P2M ROUEN INTERNATIONAL SYMPOSIUM

ROUEN SCHOOL OF HEALTH SCIENCES
UFR SANTÉ ROUEN

INTERNATIONAL SYMPOSIUM

P2M

PATHWAYS PRECISION MEDICINE



MARCH 28 | 29 2019

ROUEN NORMANDIE FRANCE

Pathways to **PRECISION MEDICINE** FROM RARE TO COMMON DISEASES

www.p2m-symposium.com





SYMPOSIUM PRESIDENT

Prof. Soumeya BEKRI

SCIENTIFIC COMMITTEE

Prof. Soumeya BEKRI - *Chair*
Dr. Abdellah TEBANI
Prof. Stéphane ALLOUCHE
Prof. Stéphane MARRET

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DEAN'S WELCOME MESSAGE

Dear all,

Precision Medicine, also known as individualized medicine or patient-centered medicine, is a paradigm shift that is reshaping medical practice. It involves disease stratification, treatment and prevention based on accurate definition of the molecular, biological and environmental identity of each individual. Based on this shift, medical treatments will gradually move from the "one size fits all" paradigm to a more personalized approach. Thus, patients will increasingly be prescribed the therapy that best matches their biological and environmental attributes.

By customizing medical practices, treatment efficacy and disease monitoring will be enhanced. Tremendous technological advances in omics, imaging, nanotechnology, chemistry, informatics and computing are driving the design of this promised individually tailored therapies and preventive measures. Precision medicine is intrinsically cross-disciplinary and involves translational and clinical research, molecular and synthetic biology, image processing, engineering, mathematical modeling and simulation of biophysical, physiological, and biomedical systems. The high-throughput clinical and molecular data generation requires more and more high performance computing and advanced high dimensional statistical analysis to fully embrace the big data era challenges. Precision medicine encompasses also extraordinary challenges for scientists and health care providers in both academia, pharmaceutical and diagnostics industries but opens big opportunities as well.

It is in this spirit of amazing possibilities that Rouen School of Health Sciences (UFR Santé Rouen) will be hosting this first international Rouen P2M symposium (Pathways to Precision Medicine), bringing together international distinguished researchers, health professionals and thought leaders from academia, healthcare, and industry to discuss, share, collaborate and develop actionable pathways to improve human health.

We look forward to seeing you all in Rouen for what promises to be a memorable event!



Prof. Pierre FREGER

Dean
UFR Santé Rouen (Rouen School of Health Sciences)
Rouen Normandie University

WELCOME MESSAGE FROM THE PRESIDENT OF THE SYMPOSIUM

Dear all,

We are delighted to invite you to the **1st International Rouen P2M Symposium on Precision Medicine "Pathways to Precision Medicine"** which will be held at Rouen Health Sciences School, Rouen, France on **March 28-29, 2019** Normandie (near Paris).

Precision medicine capitalizes on both conceptual paradigm shifts and technological disruptive advancements to reach a more integrative and holistic definition of health and disease states. It relies on both biological individuality and populational knowledge which mutually nurture each other. It stands on two main pillars: data generation and data modeling. High-throughput technologies (sensors, imaging and omics) allow now the retrieval of comprehensive, dynamic and holistic biological information, whereas computational capabilities enable high-dimensional data modeling and, therefore, accessible and clinically actionable information.

The program of this symposium will gather international distinguished leaders in precision medicine from academia, healthcare and industry and will feature cutting-edge innovative technologies in the field. The invited speakers will share their thoughts and visions about the latest developments, advancements and international initiatives in precision medicine. The themes will include biobanking, laboratory medicine, biomarkers, drug discovery and companion diagnostics, omics, medical imaging, radiomics, critical care, inherited metabolic diseases, bioinformatics, electronic health records and big data. Ethical and societal challenges will also be discussed regarding the ever-changing healthcare ecosystem and regulatory landscape.

— AGENDA HIGHLIGHTS

- Dissecting the key drivers of precision medicine
- Biobanking and large-scale cohorts
- Omics-based biomarkers; opportunities and challenges
- Radiomics and the future of medical imaging
- Companion diagnostics and drug discovery
- The Human Protein Atlas roles in shaping precision medicine
- Big data, electronic health records and digital health
- Data sciences and predictive analytics
- Informatics and pathways to clinical actionability
- Data integrity, standardization, and data sharing
- Ethical and societal challenges
- Imagining the future of Precision Medicine!

We look forward to welcoming you in March 2019 for the P2M symposium!

Save the date and stay tuned...



Prof. Soumeya BEKRI

Symposium President
Head of the Department of Metabolic Biochemistry
Team 4 – INSERM U1245
Rouen University Hospital / Rouen Medical School / Rouen - France

SPEAKERS



Prof. Susanne MICHL

Charité, University Medical
Center Berlin, GERMANY



Dr. Catherine BOURGAIN

INSERM, Cermes3, Paris,
FRANCE



Prof. Joseph NADEAU

Pacific Northwest Research
Institute, Seattle, USA



Dr. Abdel B. HALIM

Biomarkers and Companion
Diagnostics Taiho
Oncology, NJ, USA



Prof. Olli CARPEN

Helsinki University, Helsinki,
FINLAND



Prof. Nicolas VUILLEUMIER

Geneva University Hospital,
Geneva, SWITZERLAND



Prof. Jürgen BROCKMÖLLER

Göttingen University,
Göttingen, GERMANY



Dr. Abdellah TEBANI

Science for Life Laboratory,
KTH, Stockholm, SWEDEN
Rouen University, FRANCE



Prof. Philippe LAMBIN

Maastricht University,
Maastricht, NETHERLANDS



Prof. Peter LAUSSEN

Hospital for Sick Children -
University of Toronto, Toronto,
CANADA



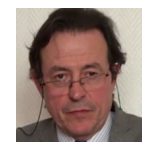
Prof. Stefan SCHULZ

Medical University of Graz,
AUSTRIA
Averbis GmbH, GERMANY



Prof. Ron WEVERS

Radboud University Medical
Centre, Nijmegen,
NETHERLANDS



Prof. Jean-Louis GUEANT

Lorraine University, Nancy,
FRANCE



Prof. Mathias UHLEN

Science for Life Laboratory, KTH
Royal Institute of Technology,
Stockholm, SWEDEN

DAY 1 THURSDAY MARCH 28TH, 2019

12:00 PM - 01:00 PM REGISTRATION

Lunch / 12:00 PM - 01:10 PM / Welcome buffet

01:15 PM - 01:55 PM **WELCOME CEREMONY**
Chairs: Soumeya BEKRI / Abdellah TEBANI

Session 1 **The promise of Precision Medicine**
Moderators: Stéphane MARRET / François LABARTHE

02:00 PM - 02:45 PM **Historical Perspectives of Individualized Medicine**
Susanne MICHL - Charité, University Medical Center Berlin, GERMANY

02:50 PM - 03:20 PM **Societal and Ethical Challenges of Precision Medicine**
Catherine BOURGAIN - INSERM, Cermes3, Paris, FRANCE

Coffee Break / 03:25 PM - 03:55 PM / Networking

04:00 PM - 05:00 PM **SATELLITE EVENT SHIRE**

Child-Adult Transition in patients with an inborn error of metabolism Moderator: Hervé LEVESQUE

04:00 PM - 04:30 PM **The transition: The pediatrician's point of view**
François LABARTHE - Tours University Hospital, Tours, FRANCE

04:30 PM - 05:00 PM **The transition: The internist's point of view**
François MAILLOT - Tours University Hospital, Tours, FRANCE

Session 2 **From rare to common diseases**
Moderator: Guillaume SAVOYE

05:05 PM - 05:50 PM **The continuum from mendelian to complex diseases**
Joseph NADEAU - Pacific Northwest Research Institute, Seattle, USA

Dinner / 07:30 PM - 09:30 PM / Networking



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DAY 2 FRIDAY MARCH 29TH, 2019

Session 1 **Key drivers to achieve Precision Medicine (1)**
Moderators: Dominique GUERROT / Hervé PUY

08:40 AM - 09:20 AM **The Role of Biomarkers in PM: opportunities and challenges**
Abdel B. HALIM - Biomarkers and Companion Diagnostics Taiho Oncology, NJ, USA

09:25 AM - 09:55 AM **Biobanking in Precision Medicine**
Olli CARPEN - Helsinki University, Helsinki, FINLAND

10:00 AM - 10:30 AM **Laboratory Medicine as a Key Driver in Precision Medicine**
Nicolas VUILLEUMIER - Geneva University, Geneva, SWITZERLAND

Coffee Break / 10:35 AM - 11:05 AM / Networking

Session 2 **Key drivers to achieve Precision Medicine (2)**
Moderators: Linn FAGERBERG / Gilles GARGALA

11:10 AM - 11:40 AM **The Role of Drug Monitoring in Precision Medicine**
Jürgen BROCKMÖLLER - Göttingen University, Göttingen, GERMANY

11:45 AM - 12:10 PM **Data Sciences and Predictive Analytics in Precision Medicine**
Abdellah TEBANI - SciLifeLab - KTH, Stockholm, SWEDEN
Rouen University, Rouen, FRANCE

01:00 PM - 02:00 PM **SATELLITE EVENT PerkinElmer**

Newborn screening of inborn errors of metabolism
Moderator: Soumeya BEKRI

01:00 PM - 01:30 PM **Newborn screening for Lysosomal Storage Disorders using Tandem Mass Spectrometry: Latest updates and innovations**
Enzo RANIERI - South Australian Neonatal Screening Centre, Adelaide University, Adelaide, AUSTRALIA

01:30 PM - 02:00 PM **Newborn screening national programs: French perspectives**
Didier LACOMBE - Bordeaux University Hospital, Bordeaux, FRANCE

Session 3 **From Data to Insights**
Moderators: Annie LAQUERRIERE / Carlos AFONSO

02:15 PM - 02:45 PM **Radiomics: Bridging Medical Imaging and Precision Medicine**
Philippe LAMBIN - Maastricht University, Maastricht, NETHERLANDS

02:50 PM - 03:20 PM **The Patient's Journey in Intensive Care**
Peter LAUSSEN - Hospital for Sick Children - University of Toronto, Toronto, CANADA

03:25 PM - 03:55 PM **Clinical Informatics Challenges in Precision Medicine**
Stefan SCHULZ - Medical University of Graz, AUSTRIA
Averbis GmbH, GERMANY

Coffee Break / 04:00 PM - 04:30 PM / Networking

Session 4 **Connecting the dots through panomics**
Moderators: Stéphane ALLOUCHE / Jérôme AUSSEIL

04:35 PM - 05:05 PM **The Human Protein Atlas - implications for human biology, drug development and precision medicine**
Mathias UHLEN - SciLifeLab - KTH, Stockholm, SWEDEN

05:10 PM - 05:40 PM **A multi-omic approach reveals a new type of inherited errors of vitamin B12 metabolism**
Jean-Louis GUEANT - Lorraine University, Nancy, FRANCE

05:45 PM - 06:30 PM **The genome, the metabolome and beyond**
Ron WEVERS - Radboud University, Nijmegen, NETHERLANDS

06:30 PM - 06:40 PM **CONCLUDING REMARKS** Soumeya BEKRI

