

**THE FIRST P2M ROUEN
INTERNATIONAL SYMPOSIUM**

ROUEN SCHOOL OF HEALTH SCIENCES
UFR SANTÉ ROUEN

INTERNATIONAL SYMPOSIUM



MARCH 28 | 29 2019
ROUEN NORMANDIE FRANCE

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

www.p2m-symposium.com





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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 Diagnostics
Consulting, NJ, USA



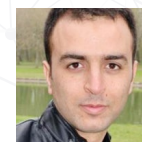
—
Prof. Olli CARPEN
Helsinki University, Helsinki,
FINLAND



—
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
Toronto University, Toronto,
CANADA



—
Prof. Stefan SCHULZ
Graz University, Graz, AUSTRIA



—
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 EVENTS

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



INTERNATIONAL SYMPOSIUM
P2M
PATHWAYS PRECISION MEDICINE

DAY 2 FRIDAY MARCH 29TH, 2019

Session 1

Key drivers to achieve Precision Medicine (1)

Moderators: Stéphane ALLOUCHE / Hervé PUY

08:40 AM - 09:20 AM The Role of Biomarkers in PM: opportunities and challenges

Abdel B. HALIM - Biomarkers and Diagnostics Consulting, 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

12:15 PM - 02:10 PM LUNCH / SATELLITE EVENTS

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 - Toronto University, Toronto, CANADA

03:25 PM - 03:55 PM Clinical Informatics Challenges in Precision Medicine

Stefan SCHULZ - Graz University, Graz, AUSTRIA

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

Session 4

Connecting the dots through panomics

Moderators: Dominique GUERROT / 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 Panomics Revolution in Inherited Metabolic Diseases

Ron WEVERS - Radboud University, Nijmegen, NETHERLANDS

06:30 PM - 06:40 PM CONCLUDING REMARKS

Soumeya BEKRI