

## Speakers

### Dr. Makoto Arita

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Ingo Autenrieth

Institute of Medical Microbiology and Hygiene, UKT

### Prof. Dr. Julia-Stefanie Frick

Institute of Medical Microbiology and Hygiene, UKT

### Dr. Shin-ichiro Fujii

Center for Integrative Medical Sciences, RIKEN

### Dr. Chung-Chau Hon

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Daniel Huson

Department of Computer Science, University of Tübingen

### Prof. Dr. Oliver Kohlbacher

Department of Computer Science, University of Tübingen

### Dr. Haruhiko Koseki

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Stefan Laufer

Pharmaceutical Chemistry, University of Tübingen

### Prof. Dr. Nisar Malek

Department of Internal Medicine I, UKT

### Dr. Sven Nahnsen

Quantitative Biology Center, Tübingen

### Dr. Hidewaki Nakagawa

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Konstantin Nikolaou

Department of Diagnostic and Interventional Radiology, UKT

### Dr. Hiroshi Ohno

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Stephan Ossowski

Institute of Medical Genetics and Applied Genomics, UKT

### Prof. Dr. Nico Pfeifer

Department of Computer Science, University of Tübingen

### Prof. Dr. Bernd Pichler

Department of Preclinical Imaging and Radiopharmacy, UKT

### Dr. Kazuhiro Sakurada

Medical Sciences Innovation Hub Program, RIKEN

### Dr. Jun Seita

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### Dr. Jay W. Shin

Center for Integrative Medical Sciences, RIKEN

### Dr. Takashi Tanaka

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Jan Wehkamp

Department of Internal Medicine I, UKT

### Dr. Tadashi Yamamoto

Center for Integrative Medical Sciences, RIKEN

### Prof. Dr. Lars Zender

Department of Internal Medicine VIII, UKT

## More information

### Meeting venue

Gesundheitszentrum (GZT)

Conference Room 1+2

University Hospital Tübingen

Hoppe-Seyler-Str. 6, 72076 Tübingen



### Organizers

- Dr. H. Koseki, IMS RIKEN
- Prof. Dr. N. P. Malek, ZPM Tübingen

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### Imprint

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## Center for Personalised Medicine (ZPM)



## ZPM-RIKEN Symposium

Integrative Personalised Medicine -  
Connecting genomics, microbiomics and  
metabolomics

16<sup>th</sup>-17<sup>th</sup> July 2018

Gesundheitszentrum (GZT)

University Hospital Tübingen, Germany



## Agenda

### Monday, July 16 2018

- 08:30 Welcome (*I. Autenrieth*)  
08:50 Cutting edge research in RIKEN IMS  
(*T. Yamamoto*)  
09:10 ZPM and M3 overview (*N. Malek*)

#### Session I: Microbiome and regulation of inflammation

Chairs: *H. Ohno and I. Autenrieth*

- 09:30 Personalized Infection Medicine by metagenomic analysis of the intestinal microbiome. *I. Autenrieth*  
09:50 Flagellin hypervariable domain structure contributes to either symbiotic or pathobiotic properties of commensal *Escherichia coli* strains. *J.-S. Frick*  
10:10 Small intestinal microbes act in concert pathogenesis in experimental autoimmune encephalomyelitis, an animal model for multiple sclerosis  
*H. Ohno*  
**10:30 Coffee break**  
11:00 Therapeutic targeting of microbiome to treat inflammatory diseases using endogenous host peptides  
*J. Wehkamp*  
11:20 Microbiota-dependent development of non-alcoholic steatohepatitis (NASH) in PDLIM2-deficient mice. *T. Tanaka*  
11:40 Advanced lipidomics strategy to identify bioactive lipids. *M. Arita*

#### Session II: Data integration and systems biology

Chairs: *K. Sakurada and O. Kohlbacher*

- 12:00 The description of biological phenomena as an open system. *K. Sakurada*

## Agenda

- 12:20 How machine learning can help us tackle problems in personalized medicine  
*N. Pfeifer*  
12:40 Objective gene expression profiling by gene expression commons  
*J. Seita*  
**13:00 Lunch break**  
14:15 Fast and mobile microbiome analysis  
*D. Huson*  
14:35 Comprehensive metabolic profiling: new approaches to the analysis of untargeted metabolic profiling data from LC-MS.  
*O. Kohlbacher*  
14:55 Human long non-coding RNAs: origins and functional evidence  
*C.-C. Hon*  
15:15 Data infrastructure enabling large-scale biomedical applications. *S. Nahnsen*  
**15:35 Coffee break**  
**Social event**  
16:15 Departure in Tübingen at the GZT by bus  
17:00 Visit of the Hohenzollern Castle  
19:00 Dinner at the Restaurant "Burg Hohenzollern"  
22:30 Arrival in Tübingen at the GZT

### Tuesday, July 17 2018

#### Session III: Signaling and cancer therapy

Chairs: *H. Koseki and N. Malek*

- 08:30 Cell cycle control and DNA damage  
*N. Malek*  
08:50 CCC and microbiota  
*L. Zender*  
09:10 Dissecting atopic dermatitis  
*H. Koseki*

## Agenda

- 09:30 Cell death and CCR4-NOT, an mRNA decay machinery  
*T. Yamamoto*  
09:50 NKT-based immunotherapy  
*S.-i. Fujii*  
10:10 Design, synthesis and biological evaluation of novel type I $\frac{1}{2}$  p38 $\alpha$  MAP kinase inhibitors: implication for cancer- and CNS-applications. *S. Laufer*  
**10:30 Coffee break**  
**11:00 Break-out sessions in small groups**  
**13:00 Lunch break**

#### Session IV: Imaging and genomic technologies

Chairs: *H. Nakagawa and B. Pichler*

- 14:30 Imaging of tumor-infiltrating immune cells and implications for cancer immunotherapy. *B. Pichler*  
14:50 Imaging in precision medicine: new frontiers and challenges  
*K. Nikolaou*  
15:10 Exploiting single-cell genomic technologies to decode gene regulation  
*J. W. Shin*  
15:30 Positive and negative selection in tumor evolution  
*S. Ossowski*  
15:50 Cancer whole genome sequencing and immuno-genomic analysis  
*H. Nakagawa*  
**16:15 Coffee break**  
**16:45 Summary of break-out sessions and final remarks**  
**19:00 Speakers dinner**  
**(Bootshaus am Neckar, Tübingen)**