TMF Workshop

Omics in Medical Research
2nd edition

The workshop will address important topics from omics-based medical research, with a sideways glance at their potential relevance to clinical care. Presentations will highlight the role of omics in cardiovascular disease and oncology in particular, and will also address the emerging use of artificial intelligence in the clinic.

As a special focus, the workshop will take a look at the role of Germany in current international efforts to establish omics-based medical research as a driver of 'next generation medicine' (e.g. Human Cell Atlas, ICGC-ARGO, GA4GH). Distinguished speakers will present the visions underlying these initiatives and examine Germany's readiness to meet the challenges of future medicine.

Since all the above efforts depend upon access to, and use of, high-quality clinical data, the workshop will also explore how systems medicine and bioinformatics may benefit from the 'Medical Informatics Initiative', a recent national funding program by BMBF. More specifically, the workshop will contour the links required between clinical data standards (HL7, LOINC etc.) and the omics world.

The workshop will also address the prerequisites to integrate and responsibly share large amounts of sensitive medical data for research. Since international cooperation is paramount for the translation of basic research into clinical practice, special attention will be paid to the legal framework of collaborative research in genetics and genomics.

Of note, the day after the workshop, the 7th National Biobanking Symposium will take place at the same venue and open under the headline "Fit for purpose – Omics and novel medical models and materials", pinpointing the great demand for high-quality human biomaterial for omics-based research.

Further information:

- Workshop flyer, 2017
  www.biobanken.de
- Workshop summary, 2017
  www.tmf-ev.de

TMF – Infrastructures for Medical Research

TMF is the umbrella organisation for networked medical research in Germany. It is a platform for interdisciplinary exchange, cross-project and multi-site collaboration – with the aim of identifying and resolving the organisational, legal/ethical and technological issues encountered in today's medical research. It makes a number of resources available free of charge to the general public – such as expert opinions, generic concepts, software applications, checklists, practical guides, training, and consulting services.

www.tmf-ev.de

TMF – Technologie- und Methodenplattform
für die vernetzte medizinische Forschung e.V.

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TMF Workshop

Omics in Medical Research
2nd edition

December 10, 2018 | Berlin

TMF – Technology, Methods, and Infrastructure for Networked Medical Research

Programme *(Last update: 13.11.2018)*

10:00 Welcome - Introduction
Michael Krawczak (CAU Kiel, UKSH)

10:15 Session 1:Omics perspectives in the clinic
Chair: Michael Krawczak (CAU Kiel, UKSH)

- Genomics in cardivascular diseases
  Jeanette Erdmann (DZHK Lübeck)
- Molecular diagnostics of cancer using third-generation sequencing
  Philipp Euskirchen (Charité Berlin)
- Tracking down cancer drivers
  Philipp Greif (DKTK LMU München)
- Big omics data integration and management at DKFZ
  Ivo Buchhalter (DKFZ Heidelberg)

11:35 Coffee Break

11:55 Session 1 (continued)

- The omics data integration center within HiGHmed
  Jürgen Eils (UKL-HD Heidelberg & BIH Berlin)
- Omics and real world data challenges in industry and academic clinics
  Dirk Evers (Evers Consulting Enger)
- From cancer to genomics to precision medicine: experience from the MASTER trial
  Benedikt Brors (DKTK DKFZ Heidelberg)

12:55 Lunch

13:55 Session 2: Interoperability, data sharing and performance in bioinformatics
Chair: Holger Hennig (IBM Hamburg)

- Bridging the gap between medical informatics and bioinformatics
  Sylvia Thun (BIH Berlin)
- Code optimization - an important software quality factor in bioinformatics
  Pascal Costanza (imec Leuven, Belgium)
- Responsible data sharing in international genomic medicine co-operations
  Fruzsina Molnár-Gábor (HAdW Heidelberg) & Jan Korbel (EMBL Heidelberg)

15:00 Coffee Break

15:20 Session 3: Future of medical omics - A role for Germany?
Chair: Jürgen Eils (UKL-HD Heidelberg & BIH Berlin)

- International initiative - Human Cell Atlas (HCA)
  Roland Eils (BIH Berlin)
- International initiative - ICGC-ARGO
  Andrew Biankin (ICS Glasgow, Scotland)
- International initiative - Global Alliance for Genomics and Health (GA4GH)
  Peter Goodhand (OICR Toronto, Canada)

16:55 Coffee Break

17:15 Session 4: AI challenges in patient care
Chair: Roman Siddiqui (TMF Berlin)

- AI in medicine: trends and perspectives
  Holger Hennig (IBM Hamburg)
- AI for diagnostics in retina
  Oliver Zeitz (Charité Berlin)
- AI and omics
  Naveed Ishaque (BIH Berlin)
- Addressing the future of healthcare now
  Annette Großmüller (SAP Walldorf)

18:40 Resumé

- Discussion - Outlook - Closing remarks
  Jürgen Eils (UKL-HD Heidelberg & BIH Berlin)

19:00 End of Workshop and Get Together

Organisation

Date
December 10, 2018

Venue
Mercure Hotel MOA Berlin
Stephanstraße 4, 10559 Berlin

Arrival
The hotel is located in Berlin's central Tiergarten district, in the Moabit quarter. The nearest U-Bahn station for line 9 (Birkenstraße) is in short walking distance.
You can use the Deutsche Bahn event offer for TMF workshops. For further information please check www.tmf-ev.de/Termine/DBTicket.

Scientific Organisation
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Registration
The participation fee will be 30€ including refreshments. Please note, however, travel costs cannot be reimbursed.
Please register online at: www.tmf-ev.de/anmelden.

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