



Friday, September 27

12:00–13:30 New tools in genomics – Sponsors' Satellite Session

Session Chair: Udo Schimmel, Alphametrix Biotech GmbH, Rödermark

- 12:00–12:15 **Tom Kamphans** (GeneTalk GmbH, Bonn, Germany)
“Enabling PEDIA: integration of next-generation phenotyping scores into frameworks for variant analysis”
- 12:15–12:30 **Ben Liesfeld** (Limbus Medical Technologies GmbH, Rostock, Germany)
“The VARVIS software platform: aggregating and sharing clinical evidence”
- 12:30–12:45 **Brian Caudill** (Integrated DNA Technologies Germany GmbH, Munich, Germany)
“Quality meets efficiency: how to benefit NGS labs with xGen lockdown capture solution”
- 12:45–13:00 **Georg Papoutsoglou** (BioNano Genomics Inc., San Diego, CA, USA)
“Next-generation cytogenomics: optical mapping enables novel applications for cancer and genetic disease”
- 13:00–13:15 **Jan Rohde** (Takara Bio Europe S.A.S., Saint-Germain-en-Laye, France)
“ICELL8: the open platform for single cell genomics”
- 13:15–13:30 **Michael Hannus** (siTOOLS Biotech GmbH, Planegg, Germany)
“riboPOOLS: efficient and flexible depletion of ribosomal RNA for sequencing samples”

13:30–14:00 Coffee Break, Industrial Exhibition and Poster Viewing

The following companies' sponsorship is gratefully acknowledged

10x GENOMICS B. V.	Limbus Medical Technologies GmbH
Agilent Technologies Deutschland GmbH	Oxford Nanopore Technologies Ltd
AlphaMetrix Biotech GmbH	QIAGEN GmbH
ATLAS Biolabs GmbH	siTOOLS Biotech GmbH
BioNano Genomics Inc.	SOPHiA GENETICS SA
GeneTalk GmbH	Takara Bio Europe S.A.S.
Illumina GmbH	Twist Bioscience Corporation
Integrated DNA Technologies	



Friday, September 27

14:00–14:15 Welcome and Opening of Symposium

Peter Nürnberg, President of the AGD

Peter Krawitz, Chair of the Program Committee

14:15–16:30 Session 1 – Leveraging NGS for science and society

Session Chair: Peter Krawitz, University Hospital Bonn, Bonn, Germany

- 14:15–14:45 **Axel Visel** (JGI, Berkeley, USA)
“Beyond sequencing – strategic perspectives for genome science centers”
- 14:45–15:00 **Joachim L. Schultze** (LIMES Institute, Bonn, Germany)
“The German network of NGS competence centers”
- 15:00–15:15 **Peter Nürnberg** (Cologne Center for Genomics, Köln, Germany)
“The West German Genome Center”
- 15:15–16:00 Reports of Special Interest Groups (SIGs)
- 16:00–16:30 **Heidi Bentzen** (University of Oslo, Oslo, Norway)
“Balancing protection and free movement of personal data”

16:30–17:00 Coffee Break, Industrial Exhibition and Poster Viewing

17:00–19:00 Session 2 – AI in genetic diagnostics and analyses

Session Chair: Peter Nürnberg, Cologne Center for Genomics, Köln, Germany

- 17:00–17:30 **Ali Torkamani** (Scripps Research Translational Institute, La Jolla, CA, USA)
“Population genetics with deep learning”
- 17:30–18:00 **Peter Krawitz** (University Hospital Bonn, Bonn, Germany)
“Identifying facial phenotypes of genetic disorders”
- 18:00–18:30 **Felix Grassmann** (Karolinska Institutet, Stockholm, Sweden)
“Deep learning for prediction of age-related eye disease severity”
- 18:30–19:00 **Saeed Omid** (SOPHiA GENETICS SA, Saint Sulpice, Switzerland)
“Novel approach for gene fusion detection in clinical transcriptomics”

19:00–19:45 Keynote lecture by Peter N. Robinson (The Jackson Laboratory for Genomic Medicine, CT, USA)
“The Human Phenotype Ontology: New Directions, New Algorithms”

19:45–20:45 Buffet, Industrial Exhibition and Poster Viewing

20:45–21:45 Concert "Man muss die Musik des Lebens hören..." (Theodor Fontane)

Saturday, September 28

8:30–10:30 Session 3 – Graph approaches to genomes

Session Chair: Björn Usadel, RWTH Aachen University, Aachen, Germany

- 08:30–09:00 **Alexander Dilthey** (University Hospital Düsseldorf, Düsseldorf, Germany)
“Graph-based inference of complete human genomes”
- 09:00–09:30 **Alice McHardy** (Helmholtz Centre for Infection Research, Braunschweig, Germany)
“Computational inference of microbial genotype-phenotype relationships”
- 09:30–10:00 **Erol Kavvas** (University of California, San Diego, CA, USA)
“Biochemically-interpretable machine learning for tackling antibiotic resistance”
- 10:00–10:30 **Tim Martin** (Illumina Cambridge Ltd, Little Chesterford, UK)
“DRAGEN IT solution for improving the speed and accuracy of secondary data analysis”

10:30–11:00 Coffee Break, Industrial Exhibition and Poster Viewing

11:00–13:00 Session 4 – AI in single-cell analyses

Session Chair: Peter Krawitz, University Hospital Bonn, Bonn, Germany

- 11:00–11:30 **Frank Schacherer** (QIAGEN GmbH, Hilden, Germany)
“Single-cell sequencing – tools and data”
- 11:30–12:00 **Malte Spielmann** (Charité, Berlin, Germany)
“Single-cell transcriptional landscape of mammalian organogenesis”
- 12:00–12:30 **Martin Kircher** (BIH, Berlin, Germany)
“Interpreting genetic variation across the human genome”
- 12:30–13:00 **Holger Hennig** (IBM Healthcare & Life Sciences, Hamburg, Germany)
“Deep learning and liquid biopsy”

13:00–13:30 Oral presentations of poster prize winners

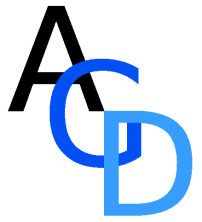
13:30–14:30 Buffet, Industrial Exhibition and Poster Viewing

14:30–16:00 AGD General Assembly

16:00 End of Meeting

Artificial intelligence meets genomics

Arbeitsgemeinschaft für Gen-Diagnostik e.V.



Program of the Annual AGD Meeting 2019, Potsdam Sept. 27–28



custom oligos • qPCR • next generation sequencing • RNAi • genes & gene fragments • CRISPR genome editing