

# Haploid Markers 2016

*Update on DNA variation*

Berlin, May 20-21

## Programme



# Programme

## Friday, May 20<sup>th</sup>

### Welcome and Opening

09:00-09:15 Lutz Roewer & Walther Parson

### Panel 1 - Population Genetics (09:15-10:30, Chairs: Leonor Gusmão & Walther Parson)

09:15-09:45 [T01] Studies of Y-chromosomal variation from whole-genome sequences (Chris Tyler-Smith)

09:45-10:00 [T02] Birth, expansion and death of a human Y chromosome palindrome (Andrea Massaia, Sandra Louzada, Yali Xue, Juliet Handsaker, Fengtang Yang, Chris Tyler-Smith)

10:00-10:15 [T03] Dynamic of sex-linked genes in a large population and lessons for forensic genetics (Alexandra Doyon, Claudia Moreau, Damian Labuda, Emmanuel Milot)

10:15-10:30 [T04] Helena's many daughters: massively parallel sequencing reveals unexpected mitogenome diversity behind the most common West Eurasian mtDNA control region haplotype (Martin Bodner, Christina Strobl, Simone Nagl, Catarina Xavier, Gabriela Huber, Irene Cardinali, Hovirag Lancioni, Ornella Semino, Anna Olivieri, Francesca Gandini, Alessandro Achilli, Antonio Torroni, Walther Parson)

### 10:30-11:00 Coffee break, Poster Exhibition

### Panel 2 - Population Genetics (11:00-12:00, Chairs: Leonor Gusmão & Walther Parson)

11:00-11:15 [T05] Y Haplogroup A00 in Cameroon (Thomas Krahn, Bonnie Schrack, Forka Leypey, Mathew Fomine, Astrid-Maria Krahn)

11:15-11:30 [T06] Y chromosome sequences from southern Africa: diversity, coalescence times, and rate variation (Chiara Barbieri, Alexander Hübner, Enrico Macholdt, Shengyu Ni, Sebastian Lippold, Roland Schröder, Sununguko Wata Mpoloka, Josephine Purps, Lutz Roewer, Mark Stoneking, Brigitte Pakendorf)

11:30-11:45 [T07] Genetic background of Somalis by analysis of complete mtDNA sequences (Vania Pereira, Claus Børsting, Niels Morling)

11:45-12:00 [T08] Dissecting E-M81 haplogroup to understand North African population history (Neus Solé-Morata, Carla García-Fernández, Vadim Urasin, David Comas, Francesc Calafell)

### 12:00-13:30 Lunch Seminars, Poster Exhibition

**Thermo Fisher Scientific lunch symposium:** Expanding your Forensic Casework Workflow with the Proven Performance of CE & the Power of NGS

An introduction to the Ion Torrent™ Precision ID System for Human Identification – system, content and software. *Thierry Jurado, HID technical specialists' leader, EMEA*

Improving the analysis of challenging casework samples with the Applied Biosystems Yfiler® Plus PCR Amplification Kit and the new 3500 HID Genetic Analyzer with Data Collection v3.1. *Andrea Carbonaro, HID senior product manager, USA*

### Promega Lunch symposium

Update on latest news and technology from Promega, *Stefan Kutranov, Forensic Regional Account Manager, UK*

Introduction to the Spectrum CE System, Promega's upcoming 8-colour capable CE instrument *Benjamin Krenke, Product Manager Genetic Identity, Madison, USA*

### Panel 3 - Population Genetics (13:30-15:00, Chairs: Mechthild Prinz & Lutz Roewer)

13:30-14:00 [T09] Exploring 1000 Years of Dutch genetic (dis)continuity using MPS of Y-SNPs and mtDNA SNPs (Peter de Knijff, Eveline Altena, Risha Smeding, Kristiaan van der Gaag)

14:00-14:15 [T10] Supporting the 'Out of Africa' Theory: The African Affinity of Orang Asli in Peninsular Malaysia using Y-STR Analysis (Sharifah Nany Rahayu Karmilla Syed Hassan, Zafarina Zainuddin)

14:15-14:30 [T11] Maternal genetic ancestry in Rio de Janeiro: correlation with Y chromosomal and autosomal information (Filipa Simão, Juliana Jannuzzi, Ana Paula Ferreira, Anna Carolina Chaves, Jeppe D. Andersen, Vânia Pereira, Elizeu Fagundes de Carvalho, Leonor Gusmão)

14:30-14:45 [T12] Shedding light on rare Peruvian mitochondrial DNA lineages (Catarina Xavier, Martin Bodner, Julia Halper, Christina Strobl, Francesco Carrano, Simone Nagl, Claudia Barletta, Leonor Gusmão, Walther Parson)

14:45-15:00 [T13] Dissection of the DF27 paternal lineage in South-Western Europe (Patricia Villaescusa, Neus Solé-Morata, Angel Carracedo, Karen Rouault, Claude Férec, Orla Hardiman, Ana Santurtun, Susana Jiménez, Maria Fátima Pinheiro, Begoña María Jarreta, Francesc Calafell, Maríán Martínez de Pancorbo)

#### **15:00-15:30 Coffee break, Poster Exhibition**

#### **Panel 4 - Casework (15:30-16:45, Chairs: Mechthild Prinz & Lutz Roewer)**

15:30-15:45 [T14] The past, present and future of Y STR DNA analysis in New Zealand. (Jayshree Patel)

15:45-16:00 [T15] Routine analysis of sexual assault cases in Brasília, Brazil, using 23 Y chromosomal markers (Samuel T.G. Ferreira, Karla A. Paula, Flávia A. Maia, Arthur E. Svidizinski, Marinã R. Amaral, Silmara A. Diniz, Maria E. Siqueira, Adriana V. Moraes, Leonor Gusmão, Lutz Roewer)

16:00-16:15 [T16] Y extra? (Katharina Hochmuth, Rebecca Schütt, Marc Trimborn)

16:15-16:30 [T17] Analysis of Massive Parallel Sequencing data from mitochondrial DNA for forensic casework (K.J. van der Gaag, J. Hoogenboom, N.E. Weiler, T. Sijen)

16:30-16:45 [T18] Then and now - a study of Polish Y-STRs before and after the Second World War (Marta Kus, Andrzej Ossowski, Grazyna Zielinska, Maria Szargut)

#### **16:45-17:00 Short coffee break**

#### **Panel 5 - Population Genetics & Casework (17:00-18:15, Chairs: Mechthild Prinz & Lutz Roewer)**

17:00-17:15 [T19] Haploid data of biohistorical materials and contemporary privacy concerns - The forensic case of King Albert I (Larmuseau Maarten H.D., Bekaert Bram, Baumers Maarten, Tom Wenseleers, Pascal Borry, Dieter Deforce, Ronny Decorte)

17:15-17:30 [T20] A successful familial search based on a single autosomal allele, Y-STRs, Y-SNPs and surnames (Arnoud Kal, Lindy Clarisse, Charissa van Kooten, Peter de Knijff, Ronny Decorte)

17:30-17:45 [T21] Surname prediction from Y-chromosome lineages in Catalonia (Spain) (Neus Solé-Morata, Jaume Bertranepit, David Comas, Francesc Calafell)

17:45-18:00 [T22] Exploring the Spanish Y chromosome 3G Network: the correlation between Genetics, Geography and Genealogy (Conrado Martinez-Cadenas, Alejandro Blanco-Verea, Maria Brion, Antonio Salas, Cristian Capelli)

18:00-18:15 [T42] Enhanced Analysis of Forensic Casework Samples using Next Generation Sequencing (N. Oldroyd Clark, J. Varlaro, K. Stephens, and C.L. Holt)

#### **19:00 Social dinner**

### **Saturday, May 21<sup>st</sup>**

#### **Panel 6 - Mutations (09:00-10:30, Chairs: Peter M. Schneider & Sascha Willuweit)**

09:00-09:30 [T23] Mutability of Y-STRs and consequences for their forensic usage (Manfred Kayser)

09:30-09:45 [T24] Differentiating Male Relatives Using 27 Y-STR Loci (Ying Wang, Hongyu Sun)

09:45-10:00 [T25] Development of RM Y-STR haplotype database for Arabian Peninsula populations (Rashed Alghafri, Mohammad Al Enizi, Aqeela Abuidrees, Wafaa Al Harrasy, Eida Al Mohammed, Dina Al Salafi, Fatmah Al Tamimi, Hamdeh Bin Turkiah, Maryam Almheiri)

10:00-10:15 [T26] mtDNA sequence specific variation rate in human hairs at positions 16093 and 16183 (Desmyter Stijn, Dognaux Sophie, De Cock Greet, Decroyer Valérie, Prieto Lourdes, Noël Fabrice)

10:15-10:30 [T27] Analysis of Repeat Region Sequence Variation in the 24 Y-STRs of the Illumina ForenSeq DNA Signature Kit (Chris Phillips, Vanessa Alvarez-Iglesias, Laurence Devesse, David Ballard, Denise Syndercombe Court, Ángel Carracedo, Maria Victoria Lareu)

#### **10:30-11:00 Coffee break, Poster Exhibition**

#### **Panel 7 - Technology (11:00-12:00, Chairs: Peter M. Schneider & Sascha Willuweit)**

11:00-11:15 [T28] Evaluation of Massively Parallel Sequencing Technologies for Expanded DNA Identification Capabilities at the Federal Bureau of Investigation Laboratory (Michael Brandhagen, Lilliana Moreno, Michelle Galusha, Rebecca Just, Jodi Irwin)

- 11:15-11:30 [T29] Next-Generation Mitochondrial Genome Sequencing at the Armed Forces DNA Identification Laboratory (Charla Marshall, Kimberly Sturk-Andreaggi)
- 11:30-11:45 [T30] Advancing forensic applications in Next Generation Sequencing with custom SNP panels and specialized bioinformatics solutions. (Benjamin R. Turner, Cecila Boysen, Patrick Dekker, Michelle A. Peck, Kimberly S. Andreaggi, Charla K. Marshall, Andreas Tillmar)
- 11:45-12:00 [T31] DNASEQEX - Introducing a collaborative EU project (Sascha Willuweit, Walther Parson, Lutz Roewer, Bruce Budowle, Antonio Alonso)

### **12:00-13:00 Lunch, Poster Exhibition**

#### **Panel 8 - Technology & Statistics (13:00-14:45, Chairs: Marion Nagy & Michael Krawczak)**

- 13:00-13:30 [T32] Inference and Prediction: The two sides of Bayes (Michael Krawczak)
- 13:30-13:45 [T33] The global and local temporal behaviour of Y-STR loci (Amke Caliebe, Arne Jochens, Uwe Rösler, Michael Krawczak)
- 13:45-14:00 [T34] Combined evidential value of multiple partial Y-chromosomal DNA profiles from the same item (Jacob de Zoete, Marjan Sjerps)
- 14:00-14:15 [T35] Y Chromosomal STR Markers: Assessing Evidential Value (Mikkel Meyer Andersen, Poul Svante Eriksen, Niels Morling)
- 14:15-14:30 [T36] Equivocation-based Y-STR marker selection at the population level (Sabine Siegert, Lutz Roewer, Michael Nothnagel)
- 14:30-14:45 [T37] Validation of a Highly Discriminating 10-locus Y-STR System For Forensic Applications. (Maria Eugenia D'Amato, Mohaimin Kasu)

### **14:45-15:00 Short coffee break**

#### **Panel 9 - Technology (15:00-16:00, Chairs: Marion Nagy & Michael Krawczak)**

- 15:00-15:15 [T38] A collaborative EDNAP exercise on the use of a SNaPshot™ tool for typing the mtDNA control region (Titia Sijen, N.E.C. Weiler, K. Baca, D. Ballard, F. Balsa, M. Bogus, C. Borsting, F. Brisighelli, J. Červenáková, L. Chaitanya, V. Decroyer, S. Desmyter, K. van der Gaag, K. Gettings, C. Haas, J. Heinrich, M. João Anjos, A. Kal, K. Kiesler, A. Kúdelová, A. Mosquera, F. Noel, W. Parson, V. Pereira, C. Philips, P.M. Schneider, D. Syndercombe-Court, M. Turanska, A. Vidaki, P. Woliński, L. Zatkalíková)
- 15:15-15:30 [T39] A target enrichment approach to massively parallel sequencing of mitochondrial DNA and autosomal markers. (Magdalena Buś, Chiara Rasi, Marie Allen)
- 15:30-15:45 [T40] Exploring maximally informative and independent Y chromosome STR markers for the Y-haplogroup prediction (Yingnan Bian, Suhua Zhang, Chengtao Li)
- 15:45-16:00 [T41] Detection of hidden relationship within regional population based on Y-STR, genealogies and historic demographic data (Radim J. Vasut, Vlastimil Stenzl)

### **Closing**

16:00 Lutz Roewer & Walther Parson

## **Venues**

### **Scientific workshop (Friday & Saturday):**

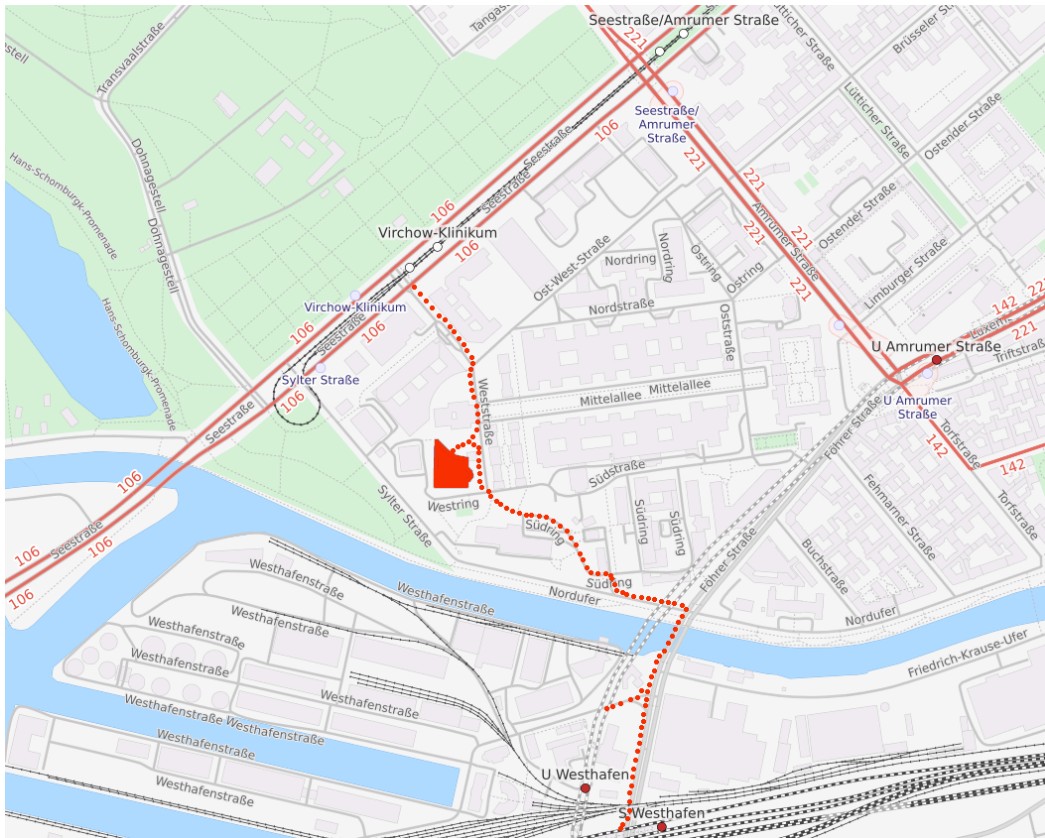
Charité Campus Virchow Klinikum, Forum 3, Augustenburger Platz 1, 13353 Berlin, Germany

### **Social dinner (Friday evening):**

Event Location Wasserwerk, Hohenzollerndamm 208a, 10717 Berlin, Germany

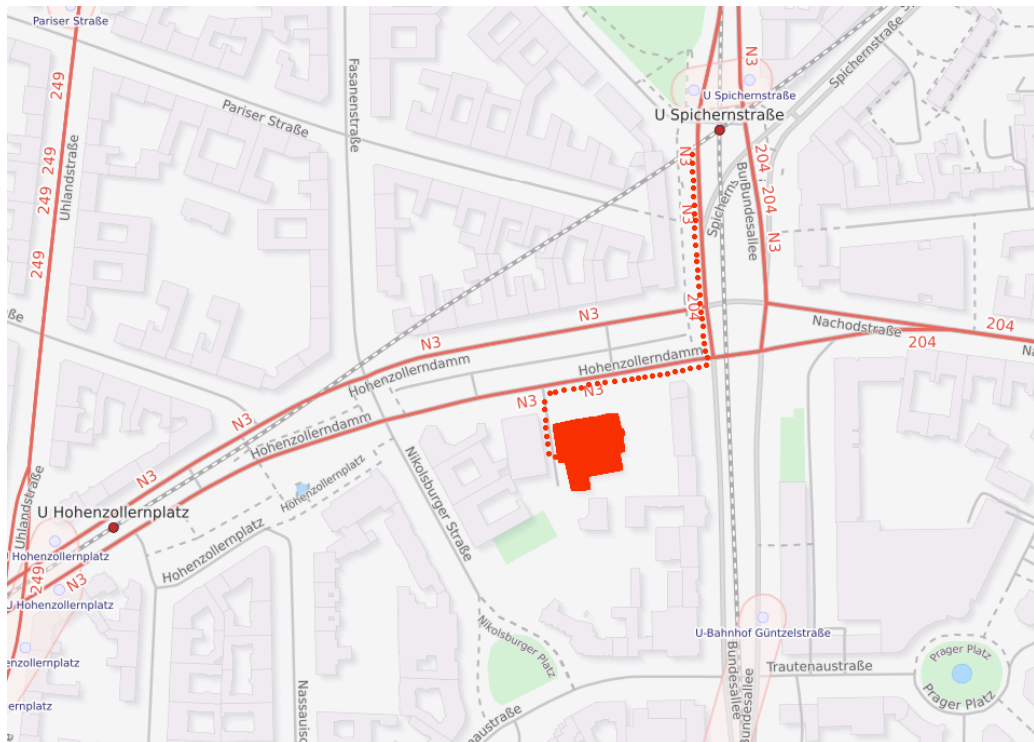
## Maps & Directions

**Workshop venue**  
 Charité Campus Virchow Klinikum, Forum 3  
 Augustenburger Platz 1, 13353 Berlin, Germany



Walking directions from S-Bahn S41/S42 or underground/metro U9 (stop "Westhafen") or bus 106 (stop "Virchow-Klinikum"); take the "Charité Virchow Klinikum" or "Westhafenstraße" exit

**Social dinner venue**  
 Event Location Wasserwerk, Hohenzollerndamm 208a  
 10717 Berlin, Germany



Walking directions from underground (metro) U3/U9 (stop "Spichernstraße"); take the "Pariser Straße" or "Hohenzollerndamm" exit.

