



# ISABS Conference on Forensic and Anthropologic Genetics and Mayo Clinic Lectures in Individualized Medicine

[www.isabs.net](http://www.isabs.net) **Le Méridien Lav Hotel / Split, June 17-22, 2019**

With the participation of Nobel Laureates



Association of



# Program



## Registration Desk Hours

Le Méridien Lav Hotel

<b>Sunday, June 16</b>	3:00 p.m. – 8:00 p.m.
<b>Monday, June 17</b>	8:00 a.m. – 5:00 p.m.
<b>Tuesday, June 18</b>	7:30 a.m. – 5:00 p.m.
<b>Wednesday, June 19</b>	7:30 a.m. – 6:00 p.m.
<b>Thursday, June 20</b>	7:30 a.m. – 5:00 p.m.
<b>Friday, June 21</b>	7:30 a.m. – 5:00 p.m.

## Exhibit Hall Hours

Le Méridien Lav Hotel

<b>Monday, June 17</b>	8:30 a.m. – 5:00 p.m.
<b>Tuesday, June 18</b>	8:30 a.m. – 5:00 p.m.
<b>Wednesday, June 19</b>	8:30 a.m. – 5:00 p.m.
<b>Thursday, June 20</b>	8:30 a.m. – 5:00 p.m.
<b>Friday, June 21</b>	8:30 a.m. – 5:00 p.m.

English is the official language of the ISABS and its meetings; neither oral nor written translations will be provided. Although precautions are taken to prevent schedule changes, speakers and program schedules may change due to unforeseen circumstances.

*As a courtesy to others, meeting attendees are asked to silence their cell phones when attending the sessions.*

## Sunday, June 16

### 9:00 a.m. - 4:00 p.m. Mayo Clinic Short Course on Epigenomics

9:00 a.m. - 12:00 p.m.	Session 1 Fundamentals	<b>Moderator:</b> <b>Keith D. Robertson</b>	Mayo Clinic, Rochester, MN, USA	
9:00 a.m. - 9:30 a.m.		<b>Keith D. Robertson</b>	Mayo Clinic, Rochester, MN, USA	<b>Fundamental mechanisms underlying the regulation of gene transcription</b>
9:30 a.m. - 10:00 a.m.		<b>Julie M. Cunningham</b>	Mayo Clinic, Rochester, MN, USA	<b>Molecular basis of epigenetic control: epigenetic regulation by post-synthetic DNA and RNA modifications</b>
10:00 a.m. - 10:30 a.m.		<b>Raul A. Urrutia</b>	Medical College of Wisconsin, Milwaukee, WI, USA	<b>Molecular basis of epigenetic control: epigenetic regulation through chromatin modifying complexes</b>
10:30 a.m. - 11:00 a.m.		<b>Haojie Huang</b>	Mayo Clinic, Rochester, MN, USA	<b>Molecular basis of epigenetic control: epigenetic regulation by the RNA world</b>
11:00 a.m. - 11:30 a.m.		<b>Alexandre Gaspar-Maia</b>	Mayo Clinic, Rochester, MN, USA	<b>Molecular basis of epigenetic control: chromatin architecture and nuclear organization</b>
11:30 a.m. - 12:00 p.m.		<b>Tamas Ordog</b>	Mayo Clinic, Rochester, MN, USA	<b>Epigenetic states and inheritance: epigenetic inheritance and environmental epigenetics</b>

### 12:00 p.m. - 1:00 p.m. Break for Lunch + Networking

1:00 p.m. - 4:00 p.m.	Session 2 Applications	<b>Moderator:</b> <b>Keith D. Robertson</b>	Mayo Clinic, Rochester, MN, USA	
1:00 p.m. - 1:30 p.m.		<b>Alexandre Gaspar-Maia</b>	Mayo Clinic, Rochester, MN, USA	<b>Epigenetic states and inheritance: cellular reprogramming</b>
1:30 p.m. - 2:00 p.m.		<b>Jeong-Heon Lee</b>	Mayo Clinic, Rochester, MN, USA	<b>Epigenetics in the lab: epigenomic methodologies</b>
2:00 p.m. - 2:30 p.m.		<b>Hu Li</b>	Mayo Clinic, Rochester, MN, USA	<b>Integrative analysis on epigenome omics datasets for biomedical discoveries</b>
2:30 p.m. - 3:00 p.m.		<b>Gwen A. Lomberk</b>	Medical College of Wisconsin, Milwaukee, WI, USA	<b>Epigenomics in medicine: epigenetic basis of human disease—Cancer</b>
3:00 p.m. - 3:30 p.m.		<b>Tamas Ordog</b>	Mayo Clinic, Rochester, MN, USA	<b>Epigenomics in medicine: epigenetic basis of human disease—Non-cancer</b>
3:30 p.m. - 4:00 p.m.		<b>Grzegorz S. Nowakowski</b>	Mayo Clinic, Rochester, MN, USA	<b>Epigenomics in medicine: epigenetic pharmacology</b>

### 4:00 p.m. - 8:05 p.m. 7<sup>th</sup> Croatian Congress of Human Genetics

## Monday, June 17

### 9:00 a.m. - 10:10 a.m. Opening Ceremony

10:10 a.m. - 12:25 p.m.	Opening Session Opening Plenaries	<b>Moderator:</b> <b>Dragan Primorac</b>	ISABS & *	
10:10 a.m. - 10:55 a.m.		<b>A. Keith Stewart</b>	Mayo Clinic, Scottsdale, AZ, USA	<b>Individualized medicine 2019</b>
10:55 a.m. - 11:40 a.m.		<b>Joshua Akey</b>	Princeton University, Princeton, NJ, USA	<b>Archaic human DNA in the genome of modern humans</b>
11:40 a.m. - 12:25 p.m.		<b>James Landers</b>	University of Virginia School of Medicine, Charlottesville, VA, USA	<b>Microfluidics: science, technology, and applications in forensics and medicine</b>

### 12:25 p.m. - 12:50 p.m. ISABS Millennium Photo

### 12:50 p.m. - 2:00 p.m. Break for Lunch + Networking

2:00 p.m. - 4:45 p.m.	Oral Session 1: Individualized and Regenerative Medicine	<b>Moderator:</b> <b>Gordan Lauc</b>	University of Zagreb, Genos Ltd., Zagreb, Croatia	
2:00 p.m. - 2:25 p.m.		<b>John B. Kisiel</b>	Mayo Clinic, Rochester, MN, USA	<b>Liquid biopsy for early detection of cancer: recent advances and key challenges</b>
2:25 p.m. - 2:50 p.m.		<b>Nilufer Ertekin-Taner</b>	Mayo Clinic, Jacksonville, FL, USA	<b>Comparative – omics in neurodegenerative diseases: pathways of convergence and divergence</b>
2:50 p.m. - 3:15 p.m.		<b>Tamas Ordog</b>	Mayo Clinic, Rochester, MN, USA	<b>Interrogating and manipulating lineage-critical enhancers for therapeutic benefit</b>

### 3:15 p.m. - 3:30 p.m. Break

3:30 p.m. - 3:55 p.m.		<b>Arnold I. Caplan</b>	Case Western Reserve University, Cleveland, OH, USA	<b>Mesenchymal stem cells: time to change the name</b>
3:55 p.m. - 4:20 p.m.		<b>Andre van Wijnen</b>	Mayo Clinic, Rochester, MN, USA	<b>Osteogenic programming by inhibiting epigenetic suppression</b>
4:20 p.m. - 4:45 p.m.		<b>Dragan Primorac</b>	ISABS & *	<b>Articular cartilage regeneration: current and future technologies</b>

### 5:05 p.m. - 10:00 p.m. Conference Social Program

### 5:05 p.m. - 10:00 p.m. Welcome Mixer and Social Program for Invited Speakers and Guests (By Invitation)

### 5:45 p.m. - 7:30 p.m. Welcome Mixer for Registered Attendees and Guests (By Registration)

\* St. Catherine Specialty Hospital, Zabok, Croatia; Universities of Split, Osijek and Rijeka, Croatia; Children's Hospital Srebrnjak, Zagreb, Croatia; Eberly College of Science The Pennsylvania State University, University Park, State College, PA, USA; The Henry C. Lee College of Criminal Justice and Forensic Sciences, University of New Haven, West Haven, CT, USA; Regiomed Kliniken, Coburg, Germany

## Tuesday, June 18

8:30 a.m. - 11:35 a.m.	Oral Session 2: Forensic Genetics	<b>Moderator:</b> <b>James Landers</b>	University of Virginia School of Medicine, Charlottesville, VA, USA	
8:30 a.m. - 8:55 a.m.		<b>Jodi Irwin</b>	Federal Bureau of Investigation, Quantico, VA, USA	<b>MPS implementation in forensic casework</b>
8:55 a.m. - 9:20 a.m.		<b>Daniele Podini</b>	George Washington University, Washington, D.C., USA	<b>Microhaplotypes: a comprehensive forensic DNA marker</b>
9:20 a.m. - 9:45 a.m.		<b>Mitchell M. Holland</b>	The Pennsylvania State University, University Park, State College, PA, USA	<b>DCMPS of mtDNA heteroplasmy: an established tool for forensic investigations</b>
9:45 a.m. - 9:55 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Mollie Comella</b>	The Pennsylvania State University, University Park, State College, PA, USA	<b>Mosquitos and human identity</b>
<b>9:55 a.m. - 10:10 a.m.</b>	<b>Break</b>			
10:10 a.m. - 10:35 a.m.		<b>Antti Sajantila</b>	University of Helsinki, Helsinki, Finland	<b>Use of human and virus DNA for assessing ancestry in forensic and archaeological context</b>
10:35 a.m. - 11:00 a.m.		<b>Catarina Gomes Alves Xavier</b>	Medical University Innsbruck, Innsbruck, Austria	<b>Development and validation of prototype MPS tools to infer appearance, ancestry and age from forensic DNA samples</b>
11:00 a.m. - 11:25 a.m.		<b>Manfred Kayser</b>	Erasmus University Medical Center Rotterdam, Rotterdam, The Netherlands	<b>Improving forensic Y-STR and Y-SNP analysis</b>
11:25 a.m. - 11:35 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Athina Vidaki</b>	Erasmus University Medical Center Rotterdam, Rotterdam, The Netherlands	<b>Taxonomy-independent deep learning microbiome approach allows for accurate classification of forensically relevant human epithelial materials</b>
11:35 a.m. - 1:30 p.m.	Poster Session 1: Individualized Medicine	<b>Moderator:</b> <b>Gwen A. Lomberk</b>	Medical College of Wisconsin, Milwaukee, WI, USA	
<b>12:00 p.m. - 1:30 p.m.</b>	<b>Joint Session: ISABS, Regiomed Kliniken, Germany, University of Split, Croatia (By Invitation)</b>			
12:00 p.m. - 12:20 p.m.		<b>Johannes Brachmann</b>	Regiomed Kliniken, Coburg, Germany	<b>Emerging role of precision medicine in cardiovascular disease</b>
12:20 p.m. - 12:40 p.m.		<b>Zoran Dogas</b>	University of Split School of Medicine, Split, Croatia	<b>Diabetes and sleep: a novel approach in precision medicine</b>
12:40 p.m. - 1:30 p.m.	Questions and Discussion			

## Tuesday, June 18

1:30 p.m. - 5:25 p.m.	Oral Session 3: Genomics and Epigenomics in Medicine	<b>Moderator:</b> <b>Tamas Ordog</b>	Mayo Clinic, Rochester, MN, USA	
1:30 p.m. - 1:55 p.m.		<b>Eric W. Klee</b>	Mayo Clinic, Rochester, MN, USA	<b>The use of multi-omics to resolve undiagnosed rare disease patients</b>
1:55 p.m. - 2:20 p.m.		<b>Arezou A. Ghazani</b>	Brigham and Women's Hospital and Harvard Medical School, Boston, MA, USA	<b>Increasing clinical utility of large scale sequencing in the precision medicine era</b>
2:20 p.m. - 2:45 p.m.		<b>Mark A. Frye</b>	Mayo Clinic, Rochester, MN, USA	<b>Genetics of bipolar disease</b>
2:45 p.m. - 3:10 p.m.		<b>Manolis Kellis</b>	Massachusetts Institute of Technology, The Broad Institute, Cambridge, MA, USA	<b>From genomics to therapeutics: dissection and manipulation of human disease circuitry at single-cell resolution</b>
<b>3:10 p.m. - 3:25 p.m.</b>	<b>Break</b>			
3:25 p.m. - 3:50 p.m.		<b>Rugang Zhang</b>	The Wistar Institute, Philadelphia, PA, USA	<b>Personalized therapeutic approaches to SWI/SNF alterations in ovarian cancer</b>
3:50 p.m. - 4:15 p.m.		<b>Raul A. Urrutia</b>	Medical College of Wisconsin, Milwaukee, WI, USA	<b>Epigenomics of pancreatic cancer</b>
4:15 p.m. - 4:40 p.m.		<b>Magnus Essand</b>	Uppsala University, Uppsala, Sweden	<b>Cancer immunotherapy using genetically engineered viruses and immune cells</b>
4:40 p.m. - 5:05 p.m.		<b>Grzegorz S. Nowakowski</b>	Mayo Clinic, Rochester, MN, USA	<b>Personalized therapy of lymphoma – reversal of translation</b>
5:05 p.m. - 5:15 p.m.	<b>Short talk selected from submitted abstracts</b>	<b>Sarah Moore</b>	University of British Columbia and BC Children's Hospital Research Institute, Vancouver, British Columbia, Canada	<b>Sex differences in DNA methylation across the pubertal transition</b>
5:15 p.m. - 5:25 p.m.	<b>Short talk selected from submitted abstracts</b>	<b>Adna Asic</b>	International Burch University, Sarajevo, Bosnia and Herzegovina	<b>Population study of thrombophilic markers and pharmacogenetic markers of warfarin prevalence in Bosnia and Herzegovina</b>
5:25 p.m. - 5:55 p.m.	<b>Philips Personalised Medicine Session</b>	<b>Jan L.L. Kimpen</b>	Philips Center, Amsterdam, the Netherlands	<b>Innovation and the future of healthcare – technology breaking down silos</b>
<b>5:55 p.m. - 8:00 p.m.</b>	<b>Free</b>			
8:00 p.m. - 9:00 p.m.	Evening Lecture 1 Special Plenary Lecture	<b>Moderator:</b> <b>Tamas Ordog</b>	Mayo Clinic, Rochester, MN, USA	
8:00 p.m. - 9:00 p.m.		<b>Richard Weinshilboum</b>	Mayo Clinic, Rochester, MN, USA	<b>Genes and drug response: an Odyssey</b>

## Wednesday, June 19

8:30 a.m. - 11:35 a.m.	Oral Session 4: Innovative Approaches in Forensics, Anthropology and Medicine	<b>Moderator:</b> <b>Mitchell M. Holland</b>	The Pennsylvania State University, University Park, State College, PA, USA	
8:30 a.m. - 8:55 a.m.		<b>Ryan C. Bailey</b>	University of Michigan, Ann Arbor, MI, USA	<b>New microfluidic tools for high throughput and low input epigenomic studies</b>
8:55 a.m. - 9:20 a.m.		<b>Gordan Lauc</b>	University of Zagreb, Genos Ltd., Zagreb, Croatia	<b>Glycans as biomarkers and functional effectors in diabetes and cardiovascular diseases</b>
9:20 a.m. - 9:45 a.m.		<b>Matthias Meyer</b>	Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	<b>Reconstructing ancient DNA fragments on a single-molecule level</b>
9:45 a.m. - 9:55 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Elena Zavala</b>	Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	<b>Recovery of Ancient Hominin and Mammalian Mitochondrial DNA from High Resolution Screening of Pleistocene Sediments at Denisova Cave</b>
<b>9:55 a.m. - 10:10 a.m.</b>	<b>Break</b>			
10:10 a.m. - 10:35 a.m.		<b>Noah Rosenberg</b>	Stanford University, Stanford, CA, USA	<b>Matching DNA records with disjoint sets of genetic markers</b>
10:35 a.m. - 11:00 a.m.		<b>Yaniv Erlich</b>	Columbia University, New York, NY, USA	<b>Long range familial searches: treat lightly!</b>
11:00 a.m. - 11:25 a.m.		<b>Fredrick Bieber</b>	Harvard University, Cambridge, MA, USA	<b>Genealogics rides the three-horse chariot of the criminal justice system</b>
11:25 a.m. - 11:35 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Srecko Gajovic</b>	University of Zagreb School of Medicine - Croatian Institute for Brain Research, Zagreb, Croatia	<b>Visualization of gene activity in the brain of the living mouse - the way to understand and treat stroke</b>
<b>11:35 a.m. - 12:30 p.m.</b>	<b>Break for Lunch + Networking</b>			
12:30 p.m. - 4:15 p.m.	Nobel Laureate Session	<b>Moderator:</b> <b>Dragan Primorac</b>	ISABS & *	
12:30 p.m. - 1:15 p.m.		<b>Ada Yonath</b>	The Weizman Institute of Science, Rehovot, Israel	<b>The ribosome - a connection between the prebiotic origin of life and next generation antibiotics</b>
1:15 p.m. - 2:00 p.m.		<b>Paul Modrich</b>	Duke University Medical Center, Durham, NC, USA	<b>Mechanisms in human DNA mismatch repair</b>
2:00 p.m. - 2:45 p.m.		<b>Robert Huber</b>	Max-Planck-Institut für Biochemie, Technische Universität München, Universität Duisburg-Essen, Germany	<b>New Ways of Vision: Protein Structures in Translational Medicine and Business Development, my Experience</b>
2:45 p.m. - 3:30 p.m.		<b>Avram Hershko</b>	The Rappaport Faculty of Medicine, Technion - Israel Institute of Technology, Haifa, Israel	<b>The ubiquitin system for protein degradation: some roles in health and disease</b>
3:30 p.m. - 4:15 p.m.	Questions and Discussion			
<b>4:15 p.m. - 7:30 p.m.</b>	<b>Split Sightseeing for Invited Speakers (By Invitation Only)</b>			
<b>5:15 p.m. - 6:05 p.m.</b>	<b>Nobel Spirit - Croatian Radiotelevision, Basement Hall of Diocletian's Palace (By Invitation)</b>			
<b>7:30 p.m. - 11:25 p.m.</b>	<b>Conference Banquet and Award Ceremony</b>			

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**Thursday, June 20**

8:30 a.m. - 12:35 p.m.	Human Glycome Project	<b>Moderator: Richard Cummings</b>	Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, US	
8:30 a.m. - 8:55 a.m.		<b>Richard Cummings</b>	Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, US	<b>Human Glycome Project – important outcomes for glycomics, development, immunology, and infectious disease</b>
8:55 a.m. - 9:20 a.m.		<b>Yurii Aulchenko</b>	Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia	<b>Genes regulating variation of protein N-glycosylation in human populations</b>
9:20 a.m. - 9:45 a.m.		<b>Vlatka Zoldos</b>	University of Zagreb, Zagreb, Croatia	<b>CRISPR/CAS9 for epigenetic editing: an application in studies of aberrant protein glycosylation in complex diseases</b>
9:45 a.m. - 10:10 a.m.		<b>Michael Hawkeye Pierce</b>	University of Georgia, Athens, GA, USA	<b>A targeted approach to determining the human glycome</b>
<b>10:10 a.m. - 10:25 a.m. Break</b>				
10:25 a.m. - 10:50 a.m.		<b>Sabine Flitsch</b>	University of Manchester, Manchester, United Kingdom	<b>The use of enzymes in glycoengineering</b>
10:50 a.m. - 11:15 a.m.		<b>Manfred Wuhrer</b>	Leiden University Medical School, Leiden, The Netherlands	<b>Glycomics of cancer and autoimmune diseases</b>
11:15 a.m. - 11:40 a.m.		<b>Mike Tiemeyer</b>	University of Georgia, Athens, GA, USA	<b>The glycomic diversity of homogenous human cell populations derived from pluripotent precursors</b>
11:40 a.m. - 12:05 p.m.		<b>Richard Drake</b>	Medical University of South Carolina, Charleston, SC, USA	<b>Reproducibility and portability of solid-phase N-glycan MALDI profiling workflows for tissues, cells and biofluids</b>
12:05 p.m. - 12:35 p.m.	<b>Short talks selected from submitted abstracts</b>	<b>Wei Wang</b>	School of Medical Sciences and Health, Edith Cowan University, Perth, WA, Australia	<b>Profiling IgG N-glycome as biomarkers for suboptimal health measures</b>
		<b>Erdmann Rapp</b>	GlyXera GmbH, Magdeburg, Germany; Max Planck Institute of Complex Technical System, Magdeburg, Germany	<b>glyXboxCE: A powerful tool in the glycoanalytical toolbox - improving biologics development and biomarker discovery</b>
		<b>Ana Cvetko</b>	Faculty of Pharmacy and Biochemistry, University of Zagreb, Zagreb, Croatia	<b>N-glycosylation of plasma proteins and immunoglobulin. G in multiple sclerosis</b>
<b>12:35 p.m. - 1:30 p.m. Break for Lunch + Networking</b>				



## Thursday, June 20

8:30 a.m. - 11:45 a.m.	Oral Session 5: Anthropological Genetics	<b>Moderator:</b> <b>Manfred Kayser</b>	Erasmus University Medical Center Rotterdam, Rotterdam, The Netherlands	
8:30 a.m. - 8:55 a.m.		<b>Viviane Slon</b>	Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	<b>Inferring interactions between Neanderthals and Denisovans from ancient DNA</b>
8:55 a.m. - 9:20 a.m.		<b>Tom Gilbert</b>	University of Copenhagen, Copenhagen, Denmark	<b>Population palaeogenomics and the consequences of the second plague pandemic</b>
9:20 a.m. - 9:45 a.m.		<b>Mattias Jakobsson</b>	Uppsala University, Uppsala, Sweden	<b>Ancient genomes from Southern Africa push modern human emergence to 300,000 years ago</b>
9:45 a.m. - 9:55 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Fabrizio Mafessoni</b>	Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	<b>A third high-coverage Neandertal genome</b>
<b>9:55 a.m. - 10:10 a.m.</b>	<b>Break</b>			
10:10 a.m. - 10:35 a.m.		<b>Wolfgang Haak</b>	Max Planck Institute for the Science of Human History, Jena, Germany	<b>Into the great wide open: 3000 years of human population history in the Caucasus region</b>
10:35 a.m. - 11:00 a.m.		<b>Joachim Burger</b>	University of Mainz, Mainz, Germany	<b>Demographic and evolutionary inference from palaeogenomes</b>
11:00 a.m. - 11:25 a.m.		<b>Simon Mead</b>	University College London Hospitals, London, United Kingdom	<b>Genetic adaptation to prion diseases with a particular reference to Kuru in Papua New Guinea and CJD in Europe</b>
11:25 a.m. - 11:45 a.m.	<b>Short talks selected from submitted abstracts</b>	<b>Serena Tucci</b>	Princeton University - Lewis-Sigler Institute, Princeton, NJ, United States	<b>Evolutionary history and adaptation from whole-genome sequences of a pygmy population of Flores Island, Indonesia</b>
		<b>Mateja Hajdinjak</b>	Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	<b>Reconstructing population history of the Early Upper Palaeolithic Europe</b>
11:45 a.m. - 1:30 p.m.	Break for Lunch + Networking + Poster Session 2: Anthropological Genetics	<b>Moderator:</b> <b>Anne Stone</b>	Arizona State University, Tempe, AZ, USA	
1:30 p.m. - 4:35 p.m.	Oral Session 6: Circulating Biomarkers in Medicine	<b>Moderator:</b> <b>Minetta C. Liu</b>	Mayo Clinic, Rochester, MN, USA	
1:30 p.m. - 1:55 p.m.		<b>Henry A. Erlich</b>	Children's Hospital Oakland Research Institute, Oakland, CA, USA	<b>Next-generation sequencing for non-invasive prenatal diagnosis of the hemoglobinopathies: a model for autosomal recessive diseases</b>
1:55 p.m. - 2:20 p.m.		<b>George Vasmatazis</b>	Mayo Clinic, Rochester, MN, USA	<b>Personalized therapy monitoring and relapse detection strategies using abnormal tumor related DNA junctions</b>

Thursday, June 20

2:20 p.m. - 2:45 p.m.		<b>Wolfgang Janni</b>	University of Ulm, Ulm, Germany	<b>Clinical utility of circulating tumor cells in early and advanced breast cancer</b>
2:45 p.m. - 2:55 p.m.	<b>Short talk selected from submitted abstracts</b>	<b>Viktoria Dotz</b>	Leiden University Medical Center, Leiden, the Netherlands	<b>N-glycan signatures of type 2 diabetes, its complications and medication use</b>
<b>2:55 p.m. - 3:10 p.m.</b>	<b>Break</b>			
3:10 p.m. - 3:35 p.m.		<b>Minetta C. Liu</b>	Mayo Clinic, Rochester, MN, USA	<b>Development of CTC and CFDNA based assays for the management of solid tumors</b>
3:35 p.m. - 4:00 p.m.		<b>Luis A. Diaz, Jr.</b>	Memorial Sloan Kettering Cancer Center, New York, NY, USA	<b>Clinical applications of circulating tumor DNA</b>
4:00 p.m. - 4:25 p.m.		<b>Thereasa Rich</b>	Guardant Health, Redwood City, CA, USA	<b>Analytical and clinical validation of a comprehensive cell-free circulating tumor genotyping assay</b>
4:25 p.m. - 4:35 p.m.	<b>Short talk selected from submitted abstracts</b>	<b>Sodbo Sharapov</b>	Novosibirsk State University, Novosibirsk, Russia	<b>Genetic loci, associated with glycosylation of human total plasma proteins: a 2019 update</b>
1:30 p.m. - 5:00 p.m.	Oral Session 7: Interdisciplinary Session of American Academy of Forensic Sciences and ISABS 2019			
		<b>Moderator: Henry Lee</b>	University of New Haven, New Haven, CT, USA	
1:30 p.m. - 1:45 p.m.		<b>Henry Lee</b>	University of New Haven, New Haven, CT, USA	<b>Forensic evidence and justice</b>
1:45 p.m. - 2:00 p.m.		<b>Haskel Pitluck</b>	Retired Circuit Court Judge, State of Illinois 19th Judicial Circuit, Crystal Lake, IL, USA	<b>Understanding of forensic expert report by judges</b>
2:00 p.m. - 2:15 p.m.		<b>Robert Barsley</b>	LSU Health Science Center, School of Dentistry, Dept of Diagnostic Sciences, New Orleans, LA, USA	<b>Forensic bitemark evidence in court</b>
2:15 p.m. - 2:30 p.m.		<b>Carla Noziglia</b>	Forensic Science Matters, Aiken, SC, USA	<b>Ethics and the genomic explosion</b>
<b>2:30 p.m. - 3:00 p.m.</b>	<b>Discussion and Coffee Break</b>			
3:00 p.m. - 3:15 p.m.		<b>Samiah Ibrahim</b>	American Academy of Forensic Sciences, Questioned Documents Section, Colorado Springs, CO, USA	<b>Forensic intelligence: application of interdisciplinary data for law enforcement purposes</b>
3:15 p.m. - 3:30 p.m.		<b>Maria Susana Ciruzzi</b>	Paediatric Hospital Dr. Juan P. Garrahan, Buenos Aires, Argentina	<b>The child as witness: competency and credibility</b>
3:30 p.m. - 3:45 p.m.		<b>Martin Olivier</b>	Department of Computer Science, University of Pretoria, South Africa	<b>Medico-legal examinations as a paradigm for digital examinations</b>
3:45 p.m. - 4:00 p.m.		<b>Giuseppe Troccoli</b>	Mental Health Services, Bari, Italy	<b>Forensic Psychiatry: the contribution to investigations</b>

## Thursday, June 20

4:00 p.m. - 4:15 p.m.		<b>Virginia Lynch</b>	Oakland University School of Nursing, Forensic Nursing Program, Rochester, MN, USA	<b>Forensic nursing science: an alliance of health and justice</b>
4:15 p.m. - 4:30 p.m.		<b>Peter Ausili</b>	US Drug Enforcement Administration (Retired), Chicago, IL, USA	<b>Challenging expert witnesses in drug cases</b>
4:30 p.m. - 4:45 p.m.		<b>Zeno Geradts</b>	Netherlands Forensic Institute of the Ministry of Justice and University of Amsterdam, Amsterdam, Netherlands	<b>Using artificial intelligence in forensic science</b>
4:45 p.m. - 5:00 p.m.		<b>Laura L. Liptai</b>	BioMedical Forensics, Moraga, CA, United States	<b>Autonomous vehicle human factors performance in the United States including biomedical engineering analysis of fatal accidents</b>
<b>5:00 p.m. - 5:45 p.m.</b>	<b>Wrap-Up Discussion</b>			
<b>5:45 p.m. - 7:00 p.m.</b>	<b>Round Table by ISABS, Croatian Judges Association and Croatian Academy of Legal Sciences (Croatian language)</b>			
	Introduction	<b>Damir Primorac</b>	University of Split, Split, Croatia	<b>DNA and criminal justice in Croatia (Kazneno-pravni aspekt DNA analize u Hrvatskoj)</b>
		<b>Damir Kontrec</b>	Supreme Court of The Republic of Croatia, Zagreb, Croatia	<b>DNA in civilian and common law in Croatia (Analiza DNA s građansko pravnog aspekta u Hrvatskoj)</b>
	Opening Remarks for Discussion	<b>Marta Dragicevic Prtenjaca</b>	University of Zagreb, Zagreb, Croatia	<b>Introduction to European innocence network - Croatian perspective (Uvod u Europsku mrežu neudžnosti - Hrvatski model)</b>
		<b>Suncana Roksandic Vidlicka</b>	University of Zagreb, Zagreb, Croatia	<b>The use of DNA analysis in retrial of criminal cases in Croatia (Analiza DNA tijekom obnove pravomoćno okončanog kaznenog postupka - Hrvatska praksa)</b>
8:00 p.m. - 9:00 p.m.	Evening Lecture 2 Special Plenary Lecture	<b>Moderator: Manfred Kayser</b>	Erasmus University Medical Center Rotterdam, Rotterdam, The Netherlands	
8:00 p.m. - 9:00 p.m.		<b>Mark Thomas</b>	University College London, London, United Kingdom	<b>Genetic astrology</b>

## Friday, June 21

8:30 a.m. - 11:35 a.m.	Oral Session 8: Epigenetics in Forensics, Anthropology, and Medicine	<b>Moderator:</b> <b>Raul A. Urrutia</b>	Medical College of Wisconsin, Milwaukee, WI, USA	
8:30 a.m. - 8:55 a.m.		<b>Michael S. Kobor</b>	University of British Columbia, Vancouver, BC, Canada	<b>Environmental factors shaping the human epigenome</b>
8:55 a.m. - 9:20 a.m.		<b>Keith D. Robertson</b>	Mayo Clinic, Rochester, MN, USA	<b>Identifying and targeting epigenetic defects in liver disease</b>
9:20 a.m. - 9:45 a.m.		<b>Raul Mostoslavsky</b>	Massachusetts General Hospital, Harvard Medical School, The Broad Institute, Boston, MA, USA	<b>Linking cancer, epigenetics and metabolism: lessons from SIRT6</b>
9:45 a.m. - 9:55 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Petar Ozretic</b>	Rudjer Boskovic Institute, Zagreb, Croatia	<b>Downregulation of Hedgehog-GLI signaling pathway genes by miRNA molecules in high-grade serous ovarian carcinoma</b>
<b>9:55 a.m. - 10:10 a.m.</b>	<b>Break</b>			
10:10 a.m. - 10:35 a.m.		<b>Ludovic Orlando</b>	University of Toulouse, Toulouse, France	<b>Mapping DNA methylation and nucleosomal positions in ancient individuals</b>
10:35 a.m. - 11:00 a.m.		<b>Bastiaan Heijmans</b>	Leiden University Medical Center, Leiden, The Netherlands	<b>Cross-omics analysis in populations to understand the role of epigenomic change in human ageing</b>
11:00 a.m. - 11:25 a.m.		<b>Haojie Huang</b>	Mayo Clinic, Rochester, MN, USA	<b>Gene mutation, epigenetic rewiring and therapy resistance in cancer</b>
11:25 a.m. - 11:35 a.m.	<b>Short talk selected from submitted abstracts</b>	<b>Benjamin Planterose Jimenez</b>	Erasmus University Medical Center Rotterdam, Rotterdam, The Netherlands	<b>Towards epigenetic human individualization with genetically - independent hypervariable CpG methylation</b>
11:35 a.m. - 1:30 p.m.	Break for Lunch + Networking + Poster Session 3: Forensic Genetics	<b>Moderator:</b> <b>Antti Sajantila</b>	University of Helsinki, Helsinki, Finland	
1:30 p.m. - 2:20 p.m.	Oral session 8A: Epigenetics in Forensics, Anthropology, and Medicine (Continued)	<b>Moderator:</b> <b>Alexandre Gaspar-Maia</b>	Mayo Clinic, Rochester, MN, USA	
1:30 p.m. - 1:55 p.m.		<b>Zhiguo Zhang</b>	Columbia University, New York, NY, USA	<b>Epigenetic alterations in glioma</b>
1:55 p.m. - 2:20 p.m.		<b>Hwan Young Lee</b>	Seoul National University College of Medicine, Seoul, South Korea	<b>Epigenetic age signatures in bones</b>
<b>2:20 p.m. - 2:35 p.m.</b>	<b>Break</b>			

## Friday, June 21

2:35 p.m. - 4:50 p.m.	Oral Session 9: Microbiome Analysis in Forensics, Anthropology, and Medicine	<b>Moderator:</b> <b>Joachim Burger</b>	University of Mainz, Mainz, Germany	
2:35 p.m. - 3:00 p.m.		<b>Johannes Krause</b>	Max Planck Institute for the Science of Human History, Jena, Germany	<b>The genetic history of the plague: from the Stone Age to the 18th century</b>
3:00 p.m. - 3:25 p.m.		<b>Anne Stone</b>	University of Arizona, Tucson, AZ, USA	<b>Tracking a killer: using ancient DNA to understand the evolutionary history of <i>Mycobacterium tuberculosis</i></b>
3:25 p.m. - 3:50 p.m.		<b>Christoph Thaiss</b>	University of Pennsylvania, Philadelphia, PA, USA	<b>Microbiome dynamics in obesity</b>
3:50 p.m. - 4:15 p.m.		<b>Jacques Schrenzel</b>	Geneva University Hospitals, Geneva, Switzerland	<b>Microbiome analysis in clinical medicine: hope or hype?</b>
4:15 p.m. - 4:40 p.m.		<b>Zhenjiang Xu</b>	Nanchang University, Nanchang, China	<b>Accurate estimates of the post-mortem interval using cadaver-associated microbiomes</b>
4:40 p.m. - 4:50 p.m.	<b>Short talk selected from submitted abstracts</b>	<b>Maja Pucic-Bakovic</b>	Genos Glycoscience Research Laboratory, Zagreb, Croatia	<b>Successful faecal microbiota transplantation for recurrent clostridioides difficile infection associates with decreased complexity of the serum N-glycome</b>
4:50 p.m. - 5:00 p.m.	Closing Remarks	<b>Dragan Primorac</b>	ISABS & *	
5:30 p.m. - 7:30 p.m.		<b>Henry Lee</b>	University of New Haven, New Haven, CT, USA	<b>Fire and Explosion Investigation and Forensic Analysis (Lecture)</b>

\* St. Catherine Specialty Hospital, Zabok, Croatia; Universities of Split, Osijek and Rijeka, Croatia; Children's Hospital Srebrnjak, Zagreb, Croatia; Eberly College of Science The Pennsylvania State University, University Park, State College, PA, USA; The Henry C. Lee College of Criminal Justice and Forensic Sciences, University of New Haven, West Haven, CT, USA; Regiomed Kliniken, Coburg, Germany

## Saturday, June 22

11:00 a.m. - 2:00 p.m.	Location: Kava "Sveti Kajo"	<b>Henry Lee</b>	University of New Haven, New Haven, CT, USA	<b>Fire and Explosion Investigation and Forensic Analysis (Practical Workshop)</b>
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