

International Society for Applied Biological Sciences



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

Hotel Dubrovnik Palace / Dubrovnik, June 19-24, 2017

www.isabs.hr



Program



Registration Desk Hours

Hotel Dubrovnik Palace

Sunday, June 18	8:00 a.m. - 5:00 p.m.
Monday, June 19	8:00 a.m. - 5:00 p.m.
Tuesday, June 20	8:00 a.m. - 5:00 p.m.
Wednesday, June 21	8:00 a.m. - 5:00 p.m.
Thursday, June 22	8:00 a.m. - 5:00 p.m.
Friday, June 23	8:00 a.m. - 12:00 p.m.

Exhibit Hall Hours

Hotel Dubrovnik Palace

Monday, June 19	1:30 p.m. - 5:00 p.m.
Tuesday, June 20	9:00 a.m. - 5:00 p.m.
Wednesday, June 21	9:00 a.m. - 5:00 p.m.
Thursday, June 22	9:00 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 18

Arrival

Monday, June 19

10:00 a.m.-10:30 a.m.		Opening ceremony		
10:30 a.m.-1:30 p.m.		Opening session		
		Chair: Dragan Primorac	ISABS & *	
10:30 a.m.- 11:15 a.m.	Plenary lecture	Gianrico Farrugia	Mayo Clinic, Jacksonville, FL, USA	Individualized Medicine: From Promise to Practice
11:15 a.m - 12:00 p.m.	Plenary lecture	Eske Willerslev	University of Cambridge, UK and University of Copenhagen, Denmark	What we can learn from ancient genomics
12:00 p.m. - 12:45 p.m.	Plenary lecture	Manolis Kellis	MIT Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology, Cambridge, MA, USA and The Broad Institute of MIT and Harvard, Cambridge, MA, USA	Interpreting the "Dark Matter" of the Human Genome in Complex Diseases
12:45 p.m. - 1:30 p.m.	Plenary lecture	Walther Parson	Institute of Legal Medicine, Innsbruck Medical University, Innsbruck, Austria	From Forensic Genetics to Forensic Genomics
1:30 p.m. - 2:30 p.m. Lunch & Networking				
1:30 p.m. - 3:00 p.m.	The Third AAFS/ISABS Join Session**	Chairs: Susan Ballou and Dragan Primorac	National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, USA ISABS & *	
2:30 p.m.-5:30 p.m.	Oral session 1	Personalized Medicine: Approaches and Applications		
		Chair: Stanimir Vuk-Pavlovic	Mayo Clinic, Rochester, MN, USA	
2:30 p.m. - 3:00 p.m.	Lecture	Stephen Thibodeau	Mayo Clinic, Rochester, MN, USA	The All of Us Research Program: Biobanking for 1 Million Participants
3:00 p.m. - 3:30 p.m.	Lecture	Magnus Essand	Uppsala University, Uppsala, Sweden	Cancer Gene and Immunotherapy
3:30 p.m. - 4:00 p.m.	Lecture	Gordan Lauc	University of Zagreb & Genos Glycoscience Research Laboratory, Zagreb, Croatia	High-throughput Glycomics for Patient Stratification: What Did We Learn from the First 50,000 Analyses?
4:00 p.m. - 4:30 p.m.	Lecture	Vlatka Zoldoš	University of Zagreb Faculty of Science, Zagreb, Croatia	Epigenetic Editing Using the CRISPR/Cas9 System and Its Applications in Precision Medicine
4:30 p.m. - 5:00 p.m.	Lecture	Raul Urrutia	Mayo Clinic, Rochester, MN, USA	Epigenetics of Pancreatic Cancer
		Chair: Tamas Ordog	Mayo Clinic, Rochester, MN, USA	
5:00 p.m. - 5:30 p.m.	Special Invited Lecture: Individualized Medicine	Keith Stewart	Mayo Clinic, Scottsdale, AZ, USA	Deploying Clinical Individualized Medicine: Opportunities and Challenges
5:30 p.m. - 9:00 p.m. Free. Invitation-only boat cruise				



Tuesday, June 20

8:30 a.m.-11:30 a.m.	The Fifth Days of Human Genetics - Prof. Ljiljana Zergollern - Čupak***	Co-Chairs: Dragan Primorac and Ingeborg Barišić	ISABS & * Children's Hospital Zagreb, Zagreb, Croatia	
	Oral session 2	Anthropological Genetics		
		Chair: Moses Schanfield	George Washington University, Washington, DC, USA	
8:30 a.m. - 9:00 a.m.	Lecture	Mattias Jakobsson	Uppsala University, Uppsala, Sweden	Into Europe from the South - Genetic Impact of Hunter-Gatherers and Farmers
9:00 a.m. - 9:30 a.m.	Lecture	Wolfgang Haak	Max Planck Institute for the Science of Human History, Jena, Germany	Into Europe from the East - Genetic Impact of Steppe Nomads
9:30 a.m. - 10:00 a.m.	Lecture	Rasmus Nielsen	University of California Berkeley, Berkley, CA, USA	The Genetic Basis of Human Physiological Adaptation
10:00 a.m. - 10:30 a.m.	Lecture	Chris Tyler-Smith	Wellcome Trust Sanger Institute, Hinxton, United Kingdom	Genetic Evidence of Classic Selective Sweeps
10:30 a.m. - 10:45 a.m.	Abstract	Abstract 1		
10:45 a.m. - 11:00 a.m.	Abstract	Abstract 2		
	Special Invited Lecture: Identification of Historic Persons through Genomics	Chair: Manfred Kayser	Erasmus University Medical Center, Rotterdam, The Netherlands	
11:00 a.m. - 11:30 a.m.		Turi King	University of Leicester, Leicester, England, United Kingdom	The incredible but true identification story of King Richard III
11:30 a.m. - 1:30 p.m.	Lunch & Networking Poster session 1			
12:00 a.m. - 1:30 p.m.		Chairs: Johannes Brachmann and Dragan Primorac Co-Chairs: Šimun Anđelinović and Zoran Đogaš	Joint Session: ISABS, Croatia/U.S. / Regiomed Kliniken, Germany / University of Split, Croatia	Why Personalised Medicine is the way forward
1:30 p.m.-4:30 p.m.	The Fifth Days of Human Genetics - Prof. Ljiljana Zergollern - Čupak***	Chair: Ingeborg Barišić	Children's Hospital Zagreb, Zagreb, Croatia	
1:30 p.m.-4:30 p.m.	Oral session 3	Complex and Undiagnosed Diseases: Genomics and Epigenomics		
		Chair: Manolis Kellis	MIT Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology, Cambridge, MA, USA and The Broad Institute of MIT and Harvard, Cambridge, MA, USA	



1:30 p.m. - 2:00 p.m.	Lecture	Leonard Petrucelli	Mayo Clinic, Jacksonville, FL, USA	Genomics and Epigenomics of Amyotrophic Lateral Sclerosis and Frontotemporal Dementia
2:00 p.m. - 2:30 p.m.	Lecture	Amelie Bonnefond	Institut Pasteur de Lille, Lille, France	Genetics of Type 2 Diabetes
2:30 p.m. - 3:00 p.m.	Lecture	Tamas Ordog	Mayo Clinic, Rochester, MN, USA	Metabolic Control of Transcriptional Memory
3:00 p.m. - 3:30 p.m.	Lecture	Jiří Damborský	Masaryk University, Brno, Czech Republic	PredictSNP: Automated and Accurate Platform for Prediction of Disease-related Mutations for Personalized Medicine
3:30 p.m. - 4:00 p.m.	Lecture	Eric Klee	Mayo Clinic, Rochester, MN, USA	Solving Diagnostic Odyssey Cases through Genomics
4:00 p.m. - 4:15 p.m.	Abstract	Abstract 3		
4:15 p.m. - 4:30 p.m.	Abstract	Abstract 4		
		Chair: Moses Schanfield		
4:30 p.m. - 5:30 p.m.	Philips Workshop	Nevenka Dimitrova	Philips	Assessment of information flow and biological pathway dysregulation in cancer using multi-omics data
5:30 p.m. - 8:00 p.m.	Free			
8:00 p.m. - 9:00 p.m.	Evening lecture 1	Special Plenary Lecture: Tissue Engineering		
		Chair: Dragan Primorac	ISABS & *	
8:15 p.m. - 9:00 p.m.	Plenary lecture	Anthony Atala	The Wake Forest Institute for Regenerative Medicine, Wake Forest University, Winston-Salem, NC, USA	The future of regenerative medicine
Wednesday, June 21				
7:45 a.m. - 8:15 a.m.		Chair: Dragan Primorac		
	Philips Lecture	Jeroen Tas	Philips	Digital Transformation in Health
8:30 a.m. - 11:30 a.m.	Oral session 4	Forensic Genetics		
		Chair: Walther Parson	Institute of Legal Medicine, Innsbruck Medical University, Innsbruck, Austria	
8:30 a.m. - 9:00 a.m.	Lecture	Henry Lee	University of New Haven, New Haven, CT, USA	DNA and Other Advanced Technologies for Crime Scene Investigation
9:00 a.m. - 9:30 a.m.	Lecture	Frederick Bieber	Harvard Medical School and Brigham and Women's Hospital, Boston, MA, USA	DNA on Trial: Interpretation of Complex Mixtures and Courtroom Admissibility
9:30 a.m. - 10:00 a.m.	Lecture	Timothy Palmbach	University of New Haven, New Haven, CT, USA	Use of DNA for Border Security, Counterterrorism, and Human Rights
10:00 a.m. - 10:30 a.m.	Lecture	Diana Hall	University Centre of Legal Medicine, University of Geneva and University of Lausanne, Switzerland	DIP-STRs for Forensic Mixture Deconvolution



10:30 a.m. - 11:00 a.m.	Lecture	Manfred Kayser	Erasmus University Medical Center, Rotterdam, The Netherlands	Recent Advances in Appearance Genetics and Impact on Forensic DNA Phenotyping
11:00 a.m. - 11:15 a.m.	Abstract	Abstract 5		
11:15 a.m. - 11:30 a.m.	Abstract	Abstract 6		
11:30 a.m.-12:15 p.m. Lunch				
12:15 p.m. - 3:15 p.m.	Nobel session	Chair: Dragan Primorac	ISABS & *	
12:15 p.m.-1:00 p.m.		Ada Yonath	Weizmann Institute of Science, Rehovot, Israel	
1:00 p.m. - 1:45 p.m.		Harald zur Hausen	German Cancer Research Center, University of Heidelberg, Heidelberg, Germany	Pathogenicity of Bovine Bacterial Plasmid-Derived Virus-Like Infections
1:45 p.m. - 2:30 p.m.		Paul Modrich	Duke University Medical Center, Durham, NC, USA	
2:30 p.m. - 3:15 p.m.		Robert Huber	Max-Planck-Institute, Martinsried, Germany	
3:15 p.m. - 3:45 p.m.	Question and Discussion			
3:45 p.m.-8:00 p.m.	Free			
6:00 p.m. - 7:15 p.m.	Nobel Spirit (Old City of Dubrovnik)			
8:30 p.m.-11:55 p.m.	Conference Reception and Dinner Presentation of Young Investigator Awards			

Thursday, June 22

8:30 a.m. - 12:00 p.m.	Oral session 5	Joint Session: NGS technology in Forensics, Anthropology, and Medicine		
		Chair: Manfred Kayser	Erasmus University Medical Center, Rotterdam, The Netherlands	
8:30 a.m. - 9:00 a.m.	Lecture	Eric Wieben	Mayo Clinic, Rochester, MN, USA	Next-generation Sequencing Technologies and Challenges
9:00 a.m. - 9:30 a.m.	Lecture	Matthias Meyer	Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany	Tailor-made NGS for Ancient DNA Analysis
9:30 a.m. - 10:00 a.m.	Lecture	Henry Erlich	Children's Hospital Oakland Research Institute, Oakland, CA, USA	Next Generation Sequencing of Clinically Informative DNA Mixtures
10:00 a.m. - 10:30 a.m.	Lecture	Mitch Holland	The Pennsylvania State University, State College, PA, USA	Next Generation Sequencing of mtDNA Heteroplasmy in Forensics and Medicine
10:30 a.m. - 11:00 a.m.	Lecture	Sandy Calloway	UC Davis, Davis, CA and Children's Hospital Oakland Research Institute, Oakland, CA, USA	Next Generation Sequencing of Mixtures in Forensic and Prenatal DNA Testing
11:00 a.m. - 11:30 a.m.	Lecture	Peter de Knijff	Leiden University Medical Centre, Leiden, The Netherlands	Next Generation Sequencing of STRs for Individual Identification
11:30 a.m. - 11:45 a.m.	Abstract	Abstract 7		
11:45 a.m. - 12:00 p.m.	Abstract	Abstract 8		



12:00 p.m.-1:30 p.m. Lunch & Networking Poster session 2				
1:30 p.m. - 4:30 p.m.	Oral session 6	Cancer Genomics and Epigenomics		
		Chair: Zdenko Herceg	International Agency for Research on Cancer, Lyon, France	
1:30 p.m. - 2:00 p.m.	Lecture	George Vasmatzis	Mayo Clinic, Rochester, MN, USA	Genomic Biomarkers of Cancer
2:00 p.m. - 2:30 p.m.	Lecture	Arezou A. Ghazani	Harvard Medical School and Dana-Farber Cancer Institute, Boston, MA, USA	It Takes Two: The Complementary Roles of Constitutional and Tumor Genomics in Cancer Therapy
2:30 p.m. - 3:00 p.m.	Lecture	Zhiguo Zhang	Institute for Cancer Genetics, Columbia University, NY, USA	Onco-histone Mutations Reprogram Cancer Epigenomes
3:00 p.m. - 3:30 p.m.	Lecture	Grzegorz Nowakowski	Mayo Clinic, Rochester, MN, USA	Individualized Therapy of Aggressive B-cell Lymphoma
3:30 p.m. - 4:00 p.m.	Lecture	Dieter Saur	Technische Universität München, München, Germany	Genetic Animal Models of Carcinogenesis
4:00 p.m. - 4:15 p.m.	Abstract	Abstract 9		
4:15 p.m. - 4:30 p.m.	Abstract	Abstract 10		
4:30 p.m.-8:00 p.m. Free				
8:00 p.m.-9:00 p.m.	Evening lecture 3	Special Plenary Lecture: Fundamental mechanisms of aging and aging-related diseases		
		Chair: Tamas Ordog	Mayo Clinic, Rochester, MN, USA	
8:15 p.m. - 9 p.m.	Plenary lecture	Jan van Deursen	Mayo Clinic, Rochester, MN, USA	Fundamental mechanisms of aging and aging-related diseases
Friday, June 23				
8:30 a.m. -12:00 p.m.	Oral session 7	Joint Session: Epigenetics in Forensics, Anthropology, and Medicine		
		Chair: Tim Spector	King's College London, London, England, United Kingdom	
8:30 a.m. - 9:00 a.m.	Lecture	Michael Kobor	University of British Columbia, Vancouver, Canada	Geographic Structure of Epigenetic Variation
9:00 a.m. - 9:30 a.m.	Lecture	Wojciech Branicki	Jagiellonian University, Kraków, Poland	Epigenetic Estimation of Age in Forensics
9:30 a.m. - 10:00 a.m.	Lecture	Zdenko Herceg	International Agency for Research on Cancer, Lyon, France	Epigenetics and Cancer: Searching for Angels and Devils around Our Genes
10:00 a.m. - 10:30 a.m.	Lecture	Elmar Tobi	Wageningen University and Research, Wageningen, The Netherlands	Epigenetic Differences after Prenatal Adversity: the Dutch Hunger Winter



10:30 a.m. - 11:00 a.m.	Lecture	Nilufer Ertekin Taner	Mayo Clinic, Jacksonville, FL, USA	Genetics and Epigenomics of Alzheimer's Disease and Progressive Supranuclear Palsy
11:00 a.m. - 11:30 a.m.	Lecture	William Faubion	Mayo Clinic, Rochester, MN, USA	Epigenetics of Inflammatory Bowel Disease
11:30 a.m. - 11:45 a.m.	Abstract	Abstract 11		
11:45 a.m. - 12:00 p.m.	Abstract	Abstract 12		
12:00 p.m.-1:30 p.m.	Lunch & Networking Poster session 3			
1:30 p.m.-4:30 p.m.	Oral session 8	Joint Session: Microbiome Analysis in Forensics, Anthropology, and Medicine		
		Chair: William Faubion	Mayo Clinic, Rochester, MN, USA	
1:30 p.m. - 2:00 p.m.	Lecture	Tim Spector	King's College London, London, England, United Kingdom	Gut Microbiome in Twins
2:00 p.m. - 2:30 p.m.	Lecture	Heidi Nelson	Mayo Clinic, Rochester, MN, USA	Microbiome Analysis in Clinical Medicine
2:30 p.m. - 3:00 p.m.	Lecture	Antti Sajantila	Department of Forensic Medicine, University of Helsinki, Helsinki, Finland	Bones as the Key to DNA Virus History and Epidemiology
3:00 p.m. - 3:30 p.m.	Lecture	Jessica Metcalf	Colorado State University, Fort Collins, CO, USA	Estimating Postmortem Interval with Microbiomes
3:30 p.m. - 3:45 p.m.	Abstract	Abstract 13		
3:45 p.m. - 4:00 p.m.	Abstract	Abstract 14		
	Special Invited Lecture: Microbial Forensics	Chair: Dragan Primorac	ISABS & *	
4:00 p.m. - 4:30 p.m.	Lecture	Bruce Budowle	University of North Texas, Health Science Center, Fort Worth, TX, USA	The Expanding Field of Microbial Forensics
4:30 p.m. -5:00 p.m.	Closing remarks			
5:30 p.m.	Departure			

* St. Catherine Hospital, Zagreb/Zabok, Croatia; University of Split, University of Osijek, University of Rijeka, Croatia; The Pennsylvania State University, University Park, PA, USA; The Henry C. Lee College of Criminal Justice and Forensic Sciences, University of New Haven, West Haven, CT, USA



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