



## Program

### Friday, 18 August

Time	Title	Speaker/Chair	Room
11.00-12.00	<i>Publications committee meeting</i>	<i>Randolph Nesse</i>	<i>Round Room</i>
12.00-14.00	<i>Outreach and education committee meeting</i>	<i>Joe Alcock, Michelle Blyth</i>	<i>Round Room</i>
14.00-16.00	<i>Directors meeting &amp; students meeting</i>	<i>Randolph Nesse</i>	<i>Round Room</i>
15.00-16.00	<i>Program committee meeting</i>	<i>Frank Rühli</i>	<i>Room 4</i>
16.00-16.30	Official opening by the Dean of the medical school	Joëls, Marian Intro: Randolph Nesse	Blue Room
16.30-17.15	<u>Keynote 1</u> : Adaptation to critical illness – a conserved approach that is increasingly appreciated	Singer, Mervyn Intro: Robert Perlman	Blue room
17.15-18.00	<u>Keynote 2</u> : Maternal capital and the inter-generational transmission of health and disease	Wells, Jonathan Intro: Alejandra Nuñez de la Mora	Blue room
18.00-19.30	Evening reception & walking dinner		Fountain Patio

### Saturday, 19 August

Time	Title	Speaker	Room
08.00-09.00	Coffee and registration		Fountain Patio
09.00-09.45	<u>Keynote 3</u> : Social immunity: protecting the colony against disease	Cremer, Sylvia Intro: Charles Nunn	Blue room

### Session 1A: Immune system

Chair: Irina Morozova

Time	Title	Speaker	Room
10.00-10.15	Evolution of human immunity during last several millennia	Morozova, Irina	Round room
10.15-10.30	Immune priming decreases resistance to early-stage pathogenic infection	Armitage, Sophie	Round room
10.30-10.45	Are autoimmune diseases and the origin of the adaptive immune system linked?	Catania, Francesco	Round room
10.45-11.00	Are seasonal and multiannual infectious disease dynamics determined by human aggregation? A long-term study in historical Finns	Briga, Michael	Round room

### Session 1B: Women's health

Chair: Alexandra Alvergne

Time	Title	Speaker	Room
10.00-10.15	To wean or not to wean? Extended breastfeeding and infant growth in a deprived and food- insecure agricultural setting	Núñez-de la Mora, Alejandra	Red room
10.15-10.30	Can premenstrual symptoms be used as a cue to an undiagnosed infection? Insights from digital health	Alvergne, Alexandra	Red room
10.30-10.45	Cumulative health risks of preeclampsia exposure in the womb are consistent with an evolutionary interpretation of the etiology of the disorder	Hollegaard, Birgitte	Red room
10.45-11.00	The Polycystic Ovary Syndrome and the Flexible Response Model of Human Reproduction	Corbett, Stephen	Red room
11.00-11.45	Coffee break & Posters		Fountain Patio

### Session 2A: Metabolic and cardiovascular diseases

Chair: Corbett, Stephen

Time	Title	Speaker	Room
11.45-12.00	Applications of Evolutionary Biology in Nutrition & Dietetics	Landolin, Chelsea	Round room
12.00-12.15	The French or Mediterranean Paradox and Life History Evolution	Corbett, Stephen	Round room
12.15-12.30	Milder forms of obesity may be a good evolutionary adaptation: 'Fitness First' hypothesis'	Parakadavathu, Rakesh	Round room

12.30-12.45	Evolutionary perspectives on Hypertension in African Americans	Kim, Kunil	Round room
12.45-13.00	The Hypertension Pandemic: an Evolutionary Perspective	Rossier, Bernard	Round room

### Session 2B: Culture, gender and sexual health

Chair: Benjamin Auerbach

Time	Title	Speaker	Room
11.45-12.00	How similar are women's hormone profiles from one pregnancy to the next?	Fox, Molly	Red room
12.00-12.15	Care as Human Condition - An Evolutionary Psychology of Sickness and Healing	Steinkopf, Leander	Red room
12.15-12.30	Gender-specific Inequality in pre- and early historic Europe	Koepke, Nikola	Red room
12.30-12.45	Natural selection, mismatch, and differences in female human true pelvis morphology with respect to age	Auerbach, Benjamin	Red room
12.45-13.00	Behavioural deficiencies: the missing link in our understanding of complex disorders	Watve, Milind	Red room

13.00-14.00	Lunch		Fountain Patio
13.00-14.00	<i>EMPH editorial board</i>	<i>Charles Nunn</i>	<i>Round Room</i>
14.00-14.45	<u>Keynote 4</u> : The evolution of sex-specific virulence in infectious diseases	Ubeda, Francisco Intro: Joe Alcock	Blue room
14.45-15.15	<u>Talk by George C Williams Prize winner</u> : Evolutionary perspectives on postnatal depression	Myers, Sarah Intro: Randolph Nesse	Blue room
15.15-15.45	<u>Talk by Gilbert Omenn Prize winner</u> : More effective drugs lead to harder selective sweeps in the evolution of drug resistance in HIV-1	Feder, Alison Intro: Gillian Bentley	Blue room

15.45-16.30	Coffee break & Posters		
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### Session 3A: Pathogens

Chair: Michelle Blyth

Time	Title	Speaker	Room
16.30-16.45	Evolutionary tradeoff theory of virulence and vector borne diseases	Pandey	Round room

16.45-17.00	Ancient Mycobacterium tuberculosis complex genomes from the Americas	Stone, Anne	Round room
17.00-17.15	Decreasing unnecessary antibiotic use and associated harms by incorporating evolutionary perspectives into the diagnostic criteria for sepsis.	Blyth, Michelle	Round room
17.15-17.30	Evolution of iron resistance in Escherichia coli	Graves, Joseph	Round room
17.30-17.45	Optimal virulence in a macroparasite, the cestode Schistocephalus solidus in its specific intermediate host, the three-spined stickleback Gasterosteus aculeatus	Scharsack, Joern	Round room

### Session 3B: Cognition and aging

Chair: Nicole Bender

Time	Title	Speaker	Room
16.30-16.45	The influence of omega-3 fatty acids on the development of human cognition: systematic review and meta-analysis	Bender, Nicole	Red room
16.45-17.00	Infering clonal mutations from in silico model of intratumour heterogeneity	Opasic, Luka	Red room
17.00-17.15	Fitness-Reducing Cis- and Retrograde Trans-Generational Extended Phenotypes in Association with Autism	Greenspan, Neil	Red room
17.15-17.30	The genomic basis of experimental evolution of aging in Drosophila: how individual SNPs affect lifespan	Hoedjes, Katja	Red room
17.30-17.45	Intercellular Competition and the Inevitability of Multicellular Aging	Nelson, Paul	Red room

17.45-18.45	<u>workshop</u> : how to write Clinical Briefs for the journal	Bentley, Gillian & Nunn, Charles	Round room
17.45-18.45	<u>Round table</u> : teaching evolutionary medicine	Frank Rühli (chair), Randolph Nesse, Dan Grunspan, Joachim Kurtz, Patricia Brito, Jon Laman	Lokaal 14

19.00-21.00	<i>ISEMPH Council meeting/dinner</i>	<i>Randolph Nesse</i>	<i>Restaurant Prinsenhof</i>
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19.00-	Conference delegates: Noorderzon Festival		downtown
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### **Sunday, 20 August**

08.00-09.00	Coffee and registration		Fountain Patio
09.00-09.45	<u>Keynote 5</u> : In vivo and in vitro human gut microbiome perturbations	Bork, Peer Intro: Joseph Graves	Blue room

### **Session 4A: Cancer**

Chair: Voskarides Konstantinos

<b>Time</b>	<b>Title</b>	<b>Speaker</b>	<b>Room</b>
10.00-10.15	Is cancer a side effect of evolution? Epidemiological and other evidence	Konstantinos, Voskarides	Room 4
10.15-10.30	Evolutionary Game Theory of Cancer: Harnessing Clonal Selection to Impair Intra- Tumor Cooperation	Archetti, Marco	Room 4
10.30-10.45	The Evolution of Cancer Suppression: Solutions to Peto's Paradox Revealed by Genomic Analyses of Elephants and Whales	Tollis, Marc	Room 4
10.45-11.00	PISCA: a new phylogenetic method for the reconstruction of somatic evolution using somatic chromosomal alteration data	Mallo, Diego	Room 4

### **Session 4B: Antibiotic resistance**

Chair: Clare Kinnear

<b>Time</b>	<b>Title</b>	<b>Speaker</b>	<b>Room</b>
10.00-10.15	Resistance selection on non-target bacterial populations	Kinnear, Clare	Red room
10.15-10.30	Antibiotic combination efficacy (ACE) network	Barbosa, Camillo	Red room
10.30-10.45	NOD2 influences intestinal resilience and fungal signatures after antibiotic perturbation	Moltzau Anderson, Jacqueline	Red room
10.45-11.00	Phage therapy can restrain antibiotic bloom of multiresistant gut bacteria	Mikonranta, Lauri	Red room

11.00-11.45	Coffee break & Posters		Fountain Patio
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## Session 5A: Theoretical considerations and animal models

Chair: Elizabeth Uhl

Time	Title	Speaker	Room
11.45-12.00	A Re-Conceptualization of Bacterial Virulence Emphasizing Interactions Among Pathogens of the Same or Different Species	Greenspan, Neil	Room 4
12.00-12.15	Network analysis of common disease identifies shared inherited risk pathways across independent datasets consistent with evolutionary mismatch and trade-offs and a mechanism for disease progression	Buetow, Ken	Room 4
12.15-12.30	Identifying Evolutionary Medicine Core Principles	Grunspan, Dan	Room 4
12.30-12.45	Adding Evolution to Comparative Pathology: Investigating the Unanswered Questions	Uhl, Elizabeth	Room 4
12.45-13.00	Mouse models of human disease: An evolutionary perspective	Perlman, Robert	Room 4

## Session 5B: Microbiome

Chair: Joe Alcock

Time	Title	Speaker	Room
11.45-12.00	The microbiome and host resilience	Alcock, Joe	Red room
12.00-12.15	In utero sensitization and induction of tolerance to parasite antigens: Is transplacental immunization a mechanism for the inheritance of immunological strategies?	Blackwell, Aaron	Red room
12.15-12.30	Commensal and pathogenic microbiota and viruses from the oral cavity of deceased Gombe chimpanzees	Ozga, Andrew	Red room
12.30-12.45	Host genetic variation at B4galnt2 influences intestinal microbial ecology and susceptibility to enteric pathogens in house mice	Baines, John	Red room
12.45-13.00	Improved detection of gene-microbe interactions in the mouse skin microbiota using high-resolution QTL mapping of 16S rRNA transcripts	Belheouane, Meriem	Red room
13.00-14.00	Lunch		Fountain Patio
14.00-15.00	<i>Annual ISEMPH Meeting and presentation of the Omenn and Williams Prizes</i>	<i>Randolph Nesse</i>	<i>Blue room</i>

### Session 6A: Different topics

Chair: Martin Häusler

Time	Title	Speaker	Room
15.00-15.15	An evolutionary perspective on back problems	Häusler, Martin	Round room
15.15-15.30	Identifying genomic adaptations to rice-based diet in Asian populations	Sazzini, Marco	Round room
15.30-15.45	Evolutionary nephrology: changing vulnerability of the kidney from birth to senescence	Chevalier, Robert	Round room

### Session 6B: Theoretical considerations and methodology

Chair: Charles Nunn

Time	Title	Speaker	Room
15.00-15.15	Investigating Human Uniqueness in Relation to Health and Disease Using Phylogenetic Methods	Nunn, Charles	Red room
15.15-15.30	Cliff-edge fitness functions and disease vulnerability	Nesse, Randolph	Red room
15.30-15.45	Meta-analyses of variation: applications in evolutionary medicine and beyond	Nakagawa-Lagisz, Malgorzata	Red room

### Session 7A: Genetics

Chair: Alice Ledda

Time	Title	Speaker	Room
15.45-16.00	A formal model of clonal expansion in bacterial population genetics	Ledda, Alice	Red room
16.00-16.15	Analysis of Thousand Genomes data reveals unique genetic architectures, considerations for personalized medicine	Niedbalski, Sara	Red room
16.15-16.30	What is the genetic basis of the variation in susceptibility to infection by parasitoid wasps in <i>Drosophila</i> species?	Arunkumar, Ramesh	Red room

Time	Title	Speaker	Room
15.45-16.30	<u>Round table:</u> What you can do at your university to build the field	Randolph Nesse (chair), Michelle Blyth, John Baines, Alexandra Alvergne, Djuke Veldhuis, Nicole Bender	Round room

16.30-17.30	Move to ESEB Conference Centre		
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## ESEB and ISEMPH 2017 Co-sponsored and shared events

Conference Centre

### Sunday, 20 August 2017

17:30-19:00	<b>ESEB Opening session</b> Chair(s): Verhulst, Simon (Groningen, Netherlands)	Room A
17:30-17:40	Opening by Leo Beukeboom Leo Beukeboom, University of Groningen, Groningen, Netherlands	
17:40-18:00	Opening address by Sibrand Poppema Sibrand Poppema, University of Groningen, Groningen, Netherlands	
18:00-19:00	Evolutionary biology and healthy ageing Linda Partridge, MPI for Biology of Ageing, COLOGNE, Germany	
19.00-22.00	Welcome reception	Foyer

### Monday, 21 August 2017

09:00-09:50	<u>Keynote lecture Svante Pääbo</u> Chair(s): Bender, Nicole (Zurich, Switzerland)	Room A
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10:00-13:10	<b>Symposium 1: Parasite evolution in response to treatment</b> Chair(s): Lion, Sébastien (Montpellier, France)	Room G
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10:00-10:30    Combination therapy and the evolution of drug resistance  
Bonhoeffer, Zurich, Switzerland



- 10:30-11:00 Why study drug resistance evolution in HIV and what have we learned?  
Pleuni Pennings, San Francisco, United States of America
- 11:30-11:50 An evolutionary model to predict the frequency of antibiotic resistance under changing antibiotic use  
François Blanquart, Imperial College London, London, United Kingdom
- 11:50-12:10 Quantifying the establishment probability of an antibiotic-resistant bacterial strain  
Helen Alexander, University of Oxford, Oxford, United
- 12:10-12:30 The role of antibiotic exposure in bacterial adaptation to phages  
Flor Inés Arias Sánchez, Institute of Integrative Biology, Zürich, Switzerland
- 12:30-12:50 Within-host competition and evolution of drug resistance in Plasmodium falciparum malaria  
Mary Bushman, Emory University, Atlanta, United States of America
- 12:50-13:10 The potential of fast and random drug changes to constrain antibiotic resistance evolution  
Hinrich Schulenburg, University of Kiel, Kiel, Germany

10:00-13:10	<b>Symposium 4: Evolution of immune diversity</b> Chair(s): Norman, Paul (United States of America)	Room C
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- 10:00-10:30 Evolutionary trade-offs in the adaptive immune system shape genomic diversity of the MHC  
Tobias Lenz, Max Planck Institute for Evolutionary Biology, Ploen, Germany
- 10:30-11:00 HLA Typing in Large Cohorts: Insights for studies of disease  
Stephen Leslie, University of Melbourne, Parkville, Australia
- 11:30-11:50 Immunological memory in natural populations of an insect- variation, selection and evolution  
Imroze Khan, NCBS, Bangalore, India
- 11:50-12:10 Parasites confer a selective advantage on novel MHC variants in guppy fish  
Radwan, Adam Mickiewicz University, Poznań,
- 12:10-12:30 Shared variability in selected innate immune receptors (TLRs) in tit family (Paridae)  
Martin Těšický, Charles University, Faculty of Science, Prague 2, Czech Republic
- 12:30-12:50 Is TCR diversity associated with MHC gene copy number? Testing the optimality hypothesis.  
Magdalena Migalska, Adam Mickiewicz University, Poznan, Poland
- 12:50-13:10 Highly polymorphic loci through allelic division of labour: a mathematical model of heterozygote advantage  
Mattias Siljestam, Uppsala University, Uppsala, Sweden

13.30-14.30	Special ISEMPH & ESEB Connections Lunch Format: Brief scientific speed dating to meet colleagues, followed by a special lunch Host: Simon Velhulst (upstairs)	Room 2
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10:00-16:40	<b>Symposium 5: Evolutionary biology of ageing: integrating function and mechanism</b> Chair(s): Verhulst, Simon (Groningen, Netherlands)	Room A
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- 10:00-10:30 Evolutionary and Functional Links Between Longevity and Immunity  
Thomas Flatt, University of Lausanne, Lausanne, Switzerland
- 10:30-11:00 Incorporating epigenetics into the evolutionary theory of ageing  
Russell Bonduriansky, University of New South Wales, Sydney, Australia
- 11:30-11:50 Sex-differences in lifespan extension and their relevance to the evolutionary biology of aging  
Garratt, University of Michigan, Ann Arbor, United States of America
- 11:50-12:10 Rapid increase in lifespan under increased condition-dependent mortality explained by shifting mutation-selection balance for robustness  
Merijn Driessen, University of Groningen, Groningen, Netherlands
- 12:10-12:30 Disentangling the causes and consequences of parental age effects on offspring fitness in humans  
Erik Postma, University of Exeter, Penryn, United Kingdom
- 12:30-12:50 Bearing sons rather than daughters increases mortality and morbidity of present-day mothers  
Birgitte Hollegaard, University of Copenhagen, Copenhagen Ø, Denmark
- 12:50-13:10 Good mums die young: artificial selection reveals a trade-off between reproductive investment and survival  
Barbara Tschirren, University of Exeter, Penryn, United Kingdom
- 14:30-14:50 Survival-reproduction trade-offs in long-lived, income breeders  
Antica Culina, Netherlands Institute of Ecology, Wageningen,
- 14:50-15:10 Growth rates are associated with lifespan, but not metabolic rate, in a clade of killifishes  
Will Sowersby, Stockholm University, Stockholm, Sweden
- 15:10-15:30 The mechanisms of dietary restriction: insight from a combined theoretical and empirical perspective in flies  
Mirre Simons, Sheffield, United Kingdom
- 16:00-16:20 Disease Spread in Age Structured Populations with Maternal Age Effects  
Jessica Clark, University of Edinburgh, Edinburgh, United Kingdom
- 16:20-16:40 Does early infection shape the rate of aging? An experimental test with pro- and anti-inflammatory parasites

Gabriele Sorci, CNRS, DIJON, France

10:00-16:40	<b>Symposium 22: Coevolution of hosts and their microbiome</b> Chair(s): Heeb, Philipp (France)	Room B
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- 10:00-10:30 On the Origin of Species: From Genes to Holobionts  
Seth Bordenstein, Vanderbilt University, Nashville, United States of America
- 10:30-11:00 From plant to plant-holobiont, a revolution  
Vandenkoornhuysse, Université de Rennes 1, CNRS, Rennes, France
- 11:30-11:50 Unraveling the processes shaping mammalian gut microbiomes over evolutionary time  
Mathieu Groussin, MIT, Cambridge, United States of America
- 11:50-12:10 Biodiversity of the human gut microbiome: influence of diet and parasitism  
Laure Segurel, CNRS, Paris, France
- 12:10-12:30 Evolution of hosts, parasites and their microbiomes  
Nolwenn Dheilly, Stony brook University, Stony Brook, United States of America
- 12:30-12:50 The role of gut microorganisms in dietary niche expansion  
Ostaizka Aizpurua, University of Copenhagen, Copenhagen, Denmark
- 12:50-13:10 Experimental evolution of reduced dependence on gut microbiota for development under nutritional stress  
Tadeusz Kawecki, University of Lausanne, Lausanne, Switzerland
- 14:30-14:50 Host plant diet affects gut microbial community composition across development in monarch butterflies  
Erica Harris, Emory University, Atlanta, United States of America
- 14:50-15:10 Beyond nutrition: host-microbiota interactions drive shifts in the behavioural phenotypes of cockroaches  
Thorben Sieksmeyer, Free University Berlin, Berlin, Germany
- 15:10-15:30 Rapid experimental evolution of host-microbial associations in a novel environment  
Aparna Agarwal, National Centre for biological Sciences, Bangalore, India
- 16:00-16:20 Host- defensive mutualist coevolution results in specificity of enhanced protection  
Charlotte Rafaluk, University of Oxford, Oxford, United Kingdom
- 16:20-16:40 Host-parasite coevolution: from experimental evolution studies to evolutionary medicine  
Joachim Kurtz, University of Münster, MÜNSTER, Germany

10:00-16:40	<b>Symposium 11: Evolution of communication signals</b> Chair(s): Halfwerk, Wouter (Amsterdam, Netherlands)	Room K
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- 10:00-10:30 New insights in the evolution of sexual communication signals (final)  
Astrid Groot, University of Amsterdam, Amsterdam, Netherlands

- 10:30-11:00 Evolution and maintenance of variation in antipredator defences  
Johanna Mappes, University of Jyväskylä, Jyväskylä, Finland
- 11:30-11:50 Multimodal courtship in a small marine fish is affected by noise  
Karen de Jong, University of Cologne, Rees-Grietherbusch, Germany
- 11:50-12:10 Seen but not heard: vestigial calls in earless frogs  
Sandra GOUTTE, Universidade Estadual de Campinas, Campinas, Brazil
- 12:10-12:30 Song evolution in gomphocerine grasshoppers: a support of rapid and convergent changes in complex courtship  
Varvara Vedenina, Moscow, Russian Federation
- 12:30-12:50 Development and inter-sexual communication in damselflies: combining experimental and phylogenetic approaches  
Beatriz Willink, Lund University, Lund, Sweden
- 12:50-13:10 Paternal care and reproductive costs drive the evolution of female ornamentation: comparative analyses in songbirds  
Amélie Fargevielle, CNRS, MONTPELLIER, France
- 14:30-14:50 Proximity of signallers can maintain sexual signal variation under stabilizing selection  
Michiel van Wijk, University of Amsterdam, Amsterdam, Netherlands
- 14:50-15:10 Sending Mixed Signals: Communication cues for species recognition differ between two African weakly electric fish  
Rebecca Nagel, Institute of Biochemistry and Biology, Potsdam, Germany
- 15:10-15:30 Exploring the hidden landscape of female preferences for complex signals  
Michael Reichert, University College Cork, Cork, Ireland
- 16:00-16:20 Effects of inbreeding on parent-offspring communication in the burying beetle *Nicrophorus vespilloides*  
Jon Richardson, University of Edinburgh, Edinburgh, United Kingdom
- 16:20-16:40 Signalling about information which is already publicly available  
Shana Caro, Oxford University, Oxford, United Kingdom

10:00-16:40	<b>Symposium 17: Evolutionary causes and consequences of variation in recombination rate</b> Chair(s): Santure, Anna (Auckland, New Zealand)	Room L
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- 10:00-10:30 Evolvability of recombination features  
Sviatoslav Rybnikov, University of Haifa, Haifa, Israel
- 10:30-11:00 Determinants of recombination activity—the alternative hotspot view  
Irene Tiemann-Boege, Johannes Kepler University Linz, Linz, Austria
- 11:30-11:50 Solving the recombination hotspots paradox  
Francisco Ubeda, Royal Holloway, Egham, United Kingdom

- 11:50-12:10 Natural diversity in the reproductive isolation gene Prdm9: Lessons from Madeiran Robertsonian house mice  
Covadonga Vara Vara, Universitat Autònoma de Barcelona, Sant Cugat del Vallès, Spain
- 12:10-12:30 Is there indirect selection on recombination modifiers in the great apes?  
David Castellano, Aarhus University, Aarhus, Denmark
- 12:30-12:50 Exploring the variation in recombination rates in eutherian mammals  
Aurora Ruiz-Herrera, Universitat Autònoma Barcelona, Barcelona, Spain
- 12:50-13:10 The molecular genetic basis of recombination variation in adaptively diverging stickleback fish  
Vrinda Venu, FML, Max Planck Society, Tuebingen, Germany
- 14:30-14:50 Sexual antagonism drives the evolution of the guppy sex chromosomes  
Alison Wright, University of Sheffield, Sheffield, United Kingdom
- 14:50-15:10 Sex-chromosome recombination: what role for sexually antagonistic genes?  
Nicolas Perrin, University of Lausanne, Lausanne, Switzerland
- 15:10-15:30 Recombination in the eggs and sperm in a simultaneously hermaphroditic vertebrate  
Loukas Theodosiou, Max Planck Institute of Evolutionary Biology, Plon, Germany
- 16:00-16:20 The influence of high recombination rate on genetic diversity in the invasive ant *Cardiocondyla obscurior*  
Jan Oettler, Regensburg, Germany
- 16:20-16:40 The Role of Recombination in Preventing Viral Divergence  
Christina Jenkins, Martin-Luther University at Halle-Wittenberg, Halle (Saale), Germany

10:00-16:40	<b>Symposium 23: Rapid evolution revisited</b> Chair(s): Dr. Gordon, Swanne (Jyväskylä, Finland)	Room M
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- 10:00-10:30 Little evidence for rapid evolution in wild populations?  
Loeske Kruuk, Australian National University, Canberra, Australia
- 10:30-11:00 Predictability of evolution in fish and flies  
Kimberly Hughes, Florida State University, Tallahassee, United States of America
- 11:30-11:50 Coevolution of Plasticity and Adaptive Traits: The Case of Extremely Rapid Evolution in Wild Crickets  
Nathan Bailey, University of St Andrews, St Andrews, United Kingdom
- 11:50-12:10 Robust inference of selection for plasticity  
Michael Morrissey, University of St Andrews, St Andrews, United Kingdom
- 12:10-12:30 Dynamics of seasonal adaptation in *Drosophila melanogaster*  
Emily Behrman, University of Pennsylvania, Philadelphia, United States of America
- 12:30-12:50 Evolutionary Responses to Catastrophic Environmental Change

Carol Lee, University of Wisconsin, Madison, United States of America

- 12:50-13:10 Epigenetics and adaptation in an asexual invader  
Jennifer Madrid Thorson, Washington State University, Pullman, WA, United States of America
- 14:30-14:50 DNA methylation and gene expression patterns in a fish meta-population following rapid thermal adaption  
Tiina Sävillammi, Turku university, Turku, Finland
- 14:50-15:10 HSP90 as a capacitor for rapid evolution in the red flour beetle *Tribolium castaneum*  
Joachim Kurtz, University of Münster, Münster, Germany
- 15:10-15:30 Very rapid, cyclical evolution of resistance in a natural plankton population  
Dieter Ebert, Uni Basel, Basel, Switzerland
- 16:00-16:20 Maternal RNA is able to transmit temperature information across generations in wild fish  
Adrian-Kalchhauser, University of Basel, Basel, Switzerland
- 16:20-16:40 Replicated Rapid Evolution of Sea-Run Threespine Stickleback Fish After Colonizing Alaskan Lakes  
Michael Bell, Stony Brook University, Stony Brook, New York, United States of America

10:00-16:40	<b>Symposium 30: Phylogenetics in the genomic era</b> Chair(s): Dr. Blom, Mozes (Stockholm, Sweden)	Room F
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- 10:00-10:30 Bayesian species tree inference under the multispecies coalescent using genomic sequence data  
Ziheng Yang, London, United Kingdom
- 10:30-11:00 Comparative genomics, the anomaly zone, and the phylogeny of palaeognathous birds  
Scott Edwards, Harvard University, Cambridge, United States of America
- 11:30-11:50 A comprehensive evaluation of species tree methods in the presence of incomplete lineage sorting  
Diego Mallo, Arizona State University, Tempe, United States of America
- 11:50-12:10 Inferring molecular rates and dates using StarBEAST2  
Huw Ogilvie, Australian National University, Acton ACT, Australia
- 12:10-12:30 Bayesian divergence-time estimation with genome-wide SNP data  
Michael Matschiner, University of Basel, Basel, Switzerland
- 12:30-12:50 Combining relaxed clocks with lateral gene transfers to date species trees  
Bastien Boussau, CNRS, VILLEURBANNE, France
- 12:50-13:10 Modeling trait-dependent evolution on a random species tree  
Daniah Tahir, Uppsala University, Uppsala, Sweden

- 14:30-14:50 Polymorphism-Aware Phylogenetic Models and their Application to Baboon Species  
Carolin Kosiol, University of St Andrews, St Andrews, United Kingdom
- 14:50-15:10 Exploring evolutionary relationships across the genome using topology weighting  
Simon Martin, University of Cambridge, Cambridge, United Kingdom
- 15:10-15:30 Disentangling phylogenetic evolution of rock-wallabies informs the pattern and process of chromosome evolution  
Potter, The Australian National University, Acton, Australia
- 16:00-16:20 Phylogenomics of microendemic frogs of the Brazilian Atlantic Forest: species delimitation and phylogenetic relationships  
Marcio Pie, Universidade Federal do Paraná, Curitiba, PR, Brazil
- 16:20-16:40 Phylogenomics at the tips  
Craig Moritz, The Australian National University, Acton, Australia

14:30-16:40	<b>Symposium 2: The spread and evolution of ancient infectious diseases</b> Room G Chair(s): Rühli, F.J. (Zurich, Switzerland)
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- 14:30-15:00 The spread and evolution of ancient tuberculosis and leprosy  
Helen Donoghue, UCL, London, United Kingdom
- 15:00-15:30 The Scientific Studies on Ancient Parasite Infection of East Asia by Microscopic and Genetic Researches  
Dong Hoon Shin, Seoul National University, Seoul, Korea
- 16:00-16:20 Ancient origins, dispersal and Neanderthal transmission to modern humans of HPV16, the most oncogenic human-papillomavirus  
Ignacio G. Bravo, Centre National de la Recherche Scientifique, Montpellier, France
- 16:20-16:40 Were language borders “cultural” barriers for the spread of influenza 1889-94 and 1918-19 in the canton of Bern, Switzerland?  
Kaspar Staub, University of Zurich, Zurich, Switzerland

14:30-16:40	<b>Symposium 14: Fitness landscapes, big data and the predictability of evolution</b> Room C Chair(s): Dr Matuszewski, Sebastian (Lausanne, Switzerland)
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- 14:30-15:00 The antigenicity-stability seascape: a minimal fitness model for evolutionary predictions  
Lässig, Köln, Germany
- 15:00-15:30 Fitness Landscapes: how little do we know?  
Thomas Bataillon, Aarhus University, Aarhus, Denmark
- 16:00-16:20 Population size and the repeatability of antibiotic resistance evolution  
Mark Zwart, University of Cologne / Wageningen University and Research, Wageningen, The Netherlands
- 16:20-16:40 "Ghost peaks" in epistatic models of high-throughput fitness data: predicted high-fitness sequences predominantly false positives

David McCandlish, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York,  
United States of America

16:40-17:25	<u>Keynote lecture Stephen Stearns Closure ISEMPH 2017</u> Chair(s): Boomsma, Koos (Copenhagen, Denmark)	Room A
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17:30-19:30	Poster sessions	Expo 1 - poster area
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### ISEMPH Posters

Developmental conditions are important for health: facial fluctuating asymmetry and risk of cardiovascular diseases	Klimek, Magdalena
Environmental influences on the Malagasy skin microbiome	Manus
Importance of conditional selection in somatic evolution of cancer	B
The Project SALUTOGENETICS: Bridging Evolution and Health	Kitsiri, Ruchira
Rapid adaptation of clinical <i>Pseudomonas aeruginosa</i> populations to antibiotic therapy	Tüffers, Leif
An evolutionary model of function and pathology of the human hallux:	Tamer, Pierre
Evolutionary emergence of bacteriophages in heterogeneous bacterial populations	Chabas, Hélène
Early life effects on C-reactive protein levels among Bangladeshi migrants to the UK	Bentley, Gillian
Evolutionary Medicine: Carpal Tunnel Syndrome	Perez, Althea Anne
A call to use cultural competence when teaching evolution to religious undergraduate students: Introducing Religious Cultural Competence in Evolution Education (ReCCEE)	Brownell, Sara Presenter: M. Elizabeth Barnes
Phylogenetic Contrast Of Paralogous Genes And Toxin Resistance Genotypes In <i>Escherichia coli</i> and <i>Klebsiella pneumoniae</i>	Sharpe, Imani
Evolution of Copper resistance in <i>Escherichia coli</i>	Boyd, Sada
Invasion effects on native species: positive or negative?	Ashghali Farahani, Sajad
The role of ecological factors in parasite distribution and non-host predator niche	Ashghali Farahani, Sajad
Phases of the menstrual cycle and women's perception of tattooed men	Milkowska, Karolina
Eliciting Common Student Misconceptions in Evolution and Medicine	Dan Grunspan
Absence of Long-Distance Dispersal in Ebola: A Phylogenetic Examination	Alec Downie
Mouth breathing effects on craniofacial development	Lee Glanville
Iron-driven host-microbiota coadaptation: an influence factor in <i>Mycobacterium tuberculosis</i> infection?	Jessica E. Ojong
Daf-2 lifespan extension in <i>Caenorhabditis elegans</i> : what are the fitness costs?	Ravindran, Sanjana