

ISEMPH 2016: INTERNATIONAL SOCIETY FOR EVOLUTION, MEDICINE & PUBLIC HEALTH 2016 MEETING

Maps Lunch Restaurants Sponsors and
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PROGRAM

Days: [Wednesday, June 22nd](#) [Thursday, June 23rd](#)
[Friday, June 24th](#) [Saturday, June 25th](#)
[Sunday, June 26th](#)

Wednesday, June 22nd

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

14:00-17:00 Session 1A: EvMed Directors Meeting

LOCATION: Junior Ballroom D at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

14:00-17:00 Session 1B: EvMed Students Meeting

LOCATION: Junior Ballroom D at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

18:00-20:00 Session : Opening Reception

LOCATION: Grand Ballroom Lobby at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

Thursday, June 23rd

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

07:00-08:00 Session : Continental Breakfast

LOCATION: Grand Ballroom Lobby at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

08:00-09:00 Session 2: Plenary Speaker: Helen Ball

CHAIR: [Charles Nunn](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

08:00 [Helen Ball](#)

Changing UK guidance and practice around maternal-infant sleep—did an evolutionary perspective help? ([abstract](#))

09:00-10:00 Session 3A: Sleep

CHAIR: [Katie Hinde](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

09:00 [David Samson](#), [Melissa Manus](#) and [Charles Nunn](#)

Sleep duration, quality and timing in a non-electric population in Madagascar ([abstract](#))

09:15 [Virginia J. Vitzthum](#), [Jonathan Thornburg](#) and [Hilde Spielvogel](#)

Sleep patterns in breastfeeding women in a non-industrialized natural fertility population: Is there mother-infant conflict? ([abstract](#))

09:30 [Randolph Nesse](#) and [Charles Nunn](#)

Does the tradeoff with short sleep explain vulnerability to Alzheimer's disease? ([abstract](#))

09:45 [Gandhi Yetish](#), [Hillard Kaplan](#) and [Michael Gurven](#)

Tsimane hunter-horticulturalists sleeping in more exposed sleeping sites have more sleep interruptions and lower sleep efficiency ([abstract](#))

09:00-10:00 Session 3B: Selection, stress and homeostasis

CHAIR: [Mark Schwartz](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

09:00 [Chris von Rueden](#), [Benjamin Trumble](#), [Mellissa Emery Thompson](#), [Jonathan Stieglitz](#), [Paul Hooper](#), [Aaron Blackwell](#), [Hillard Kaplan](#) and [Michael Gurven](#)

Political influence associates with cortisol and health among egalitarian forager-farmers ([abstract](#))

09:15 [Beverly Strassmann](#), [Armin Dadkhah](#), [Zachary Dolo](#) and [Claudius Vincenz](#)

A longitudinal study of the effects of stress and urbanization on blood pressure in Africa ([abstract](#))

09:30 [Djuke Veldhuis](#)

"Stress is the spice of life": an evolutionary perspective on the human stress response. ([abstract](#))

09:45 [Diana Fleischman](#), [Abbey Woods](#) and [Susan Girdler](#)

Baseline inflammation predicts higher disgust sensitivity but stronger inflammation in response to disease cues predicts lower disgust sensitivity: insights into evolved disease avoidance mechanisms from IL-6 levels ([abstract](#))

10:00-10:30 Session : Break

Coffee and snacks will be provided.

LOCATION: Grand Ballroom II at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30-11:30 Session 4A: Selection, stress and homeostasis

CHAIR: [Melissa Wilson Sayres](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30 [Edmund Legrand](#) and [Judy Day](#)

Self-harm with non-specific stressors to preferentially harm the pathogens within ([abstract](#))

10:45 [Robert Perlman](#)

Precision Medicine and Evolutionary Medicine ([abstract](#))

11:00 [Charleston Chiang](#), [Carlo Sidore](#), [Magdalena Zoledziewska](#), [Joseph Marcus](#), [Hussein Al-Asadi](#), [Goncalo Abecasis](#), [David Schlessinger](#), [Francesco Cucca](#) and [John Novembre](#)

Population genetic insight to the study of human height ([abstract](#))

11:15 [Irina Morozova](#), [Sergey Bruskin](#), [Timofey Prodanov](#), [Anton Afanasyev](#), [Frank Rühli](#) and [Tatiana Tatarinova](#)

Evolution of evolution: changing of human adaptation reaction from the Bronze Age to the modern time ([abstract](#))

10:30-11:30 Session 4B: Behavior and vulnerability

CHAIR: [Polly Wiessner](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30 [Frazer Meacham](#) and [Carl Bergstrom](#)

Explaining the hedonic treadmill: opportunity costs and the evolution of mood ([abstract](#))

10:45 [Molly Fox](#) and [Laura Glynn](#)

Testing the adaptive significance of postpartum depressive symptoms in a prospective longitudinal cohort ([abstract](#))

11:00 [Levent Sipahi](#), [Derek Wildman](#), [Sandro Galea](#), [Karestan Koenen](#), [Allison Aiello](#) and [Monica Uddin](#)

Epigenetic Epidemiology of Epiphenomena: Applying Tinbergen's Four Questions to Posttraumatic Stress Disorder ([abstract](#))

11:15 [Kristin Tully](#), [Alison Stuebe](#) and [Sarah Verbiest](#)

The 4th Trimester: Evolutionary Medicine as a Framework to Improve Clinical Support for New Families ([abstract](#))

11:30-12:30 Session 5: Poster session

All posters and presenters will available during this session.

LOCATION: Grand Ballroom II at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

12:30-13:30 Session : Lunch

This lunch will be provided.

LOCATION: Junior Ballrooms C and D at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

13:30-14:30 Session 6: Plenary Speaker: Martin Blaser

CHAIR: [Andrea Graham](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

13:30 [Martin Blaser](#)

Human Evolution 201: Our early life microbial metagenome guides developmental phenotypes ([abstract](#))

14:30-15:30 Session 7A: Somatic cell mutation, selection and evolution in health and disease

CHAIR: [Neil Greenspan](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

14:30 [Neil Greenspan](#)

A Perspective on the Role of Somatic Cell Evolution in Human Health and Disease ([abstract](#))

14:45 [Mattia Bonsignori](#)

B Cell Lineage Immunogen Design for HIV-1 Vaccine Development. ([abstract](#))

15:00 [Kris Wood](#)

Targeting the convergent evolution of resistance to targeted therapies ([abstract](#))

15:15 [David McDermott](#), [Paejonette Jacobs](#) and [Philip Murphy](#)

Chromothriptic Cure of WHIM Syndrome ([abstract](#))

14:30-15:30 Session 7B: Microbiome and evolutionary medicine

CHAIR: [Richard Bribiescas](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

14:30 [Joe Alcock](#), [Helen Wasielewski](#) and [C. Athena Aktipis](#)

Conflict and cooperation between host and gut microbiota: Implications for nutrition and human health ([abstract](#))

14:45 [Helen Wasielewski](#), [Athena Aktipis](#), [Joe Alcock](#), [Naomi Mandel](#) and [Rosy Krajmalnik-Brown](#)

Two Minutes, Twice a Day: Evolutionary Dynamics of Oral Flora Manipulation in Humans ([abstract](#))

15:00 [Sarah Council](#), [Robert Dunn](#) and [Julie Horvath](#)

**Host genetic variation influences skin
microbe composition ([abstract](#))**

15:30-16:00 Session 8: Poster Session and Break

A-K Last name of the submitting authors should stand by posters.

LOCATION: Grand Ballroom II at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

16:00-17:30 Session 9A: Immune response

CHAIR: [Cynthia Beall](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

16:00 [Aaron Blackwell](#), [Benjamin Trumble](#), [Ivan Maldonado Suarez](#), [Jonathan Stieglitz](#), [Bret Beheim](#), [J. Josh Snodgrass](#), [Hillard Kaplan](#) and [Michael Gurven](#)

Immune Function in Amazonian Horticulturalists ([abstract](#))

16:15 [Seth Barribeau](#), [Paul Schmid-Hempel](#) and [Ben Sadd](#)

Royal decree: gene expression in transgenerationally immune primed bumblebee workers mimics a primary immune response ([abstract](#))

16:30 [Gabriele Sorci](#), [Cédric Lippens](#) and [Bruno Faivre](#)
Disentangling immune protection and damage: a lesson from studies on KO models ([abstract](#))

16:45 [Julie Baker Phillips](#), [Juan Felipe Ortiz](#), [Patrick Abbot](#) and [Antonis Rokas](#)

Rapid evolution of the Siglec Immune Receptor Family in Primates ([abstract](#))

17:00 [Emily Wroblewski](#), [Paul Norman](#), [Lisbeth Guethlein](#), [Yingying Li](#), [Rebecca Rudicell](#), [Miguel Ramirez](#), [Christiana Shaw](#), [Steve Ahuka-Mundeke](#), [Martine Peeters](#), [Anne Pusey](#), [Beatrice Hahn](#) and [Peter Parham](#)

Comparison of MHC class I polymorphism in wild populations of chimpanzee and bonobo ([abstract](#))

17:15 [Caroline Amoroso](#) and [Charles Nunn](#)
Human parasitism in a comparative context: are humans over- or under-parasitized? ([abstract](#))

16:00-17:30 Session 9B: Reproductive ecology and human health

CHAIR: [Grazyna Jasienska](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

16:00 [Grazyna Jasienska](#)

Women's reproductive ecology and the most effective breast cancer prevention strategies (

[abstract](#))

- 16:15 [Richard Bribiescas](#)
How evolutionary biology can inform the risks and benefits of testosterone supplementation in healthy men ([abstract](#))
- 16:30 [Katie Hinde](#)
Liquid Gold Standards: Complexities of Breast Milk and Implications for Precision Medicine ([abstract](#))
- 16:45 [Kathryn Clancy](#)
Clinical implications for normal variation in female reproductive physiology ([abstract](#))
- 17:00 [Alejandra Nunez-De La Mora](#)
Developmental plasticity of human reproductive function and its implications for epidemiological and demographic trends: an evolutionary viewpoint ([abstract](#))

17:30-19:30 Session : Food truck rodeo

[Use this link to view the location on google maps.](#)

LOCATION: Durham Farmer's Market- 501 Foster St, Durham, NC 27701

Friday, June 24th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

07:00-08:00 Session : Continental Breakfast

LOCATION: Grand Ballroom Lobby at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

08:00-09:00 Session 10: Plenary Speaker: Carl Zimmer

CHAIR: [Stephen Stearns](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

- 08:00 [Carl Zimmer](#)
Evolutionary Medicine and the Media: Engaging Stories and Tricky Concepts ([abstract](#))

09:00-10:15 Session 11A: Genetics, vulnerability and selection

CHAIR: [Alejandra Nuñez-De La Mora](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

- 09:00 [Melissa Wilson Sayres](#)
Population history and patterns of sex-biased evolution ([abstract](#))
- 09:15 [Guido A. Gneccchi Ruscone](#), [Choongwon Jeong](#), [Sara De Fanti](#), [Michela Trancucci](#), [Davide Gentilini](#), [Anna Maria Di Blasio](#), [Geoff Childs](#), [Sienna R. Craig](#), [Buddha Basnyat](#), [Mingma G.](#)

[Sherpa](#), [Phurba T. Sherpa](#), [Giorgio Marinelli](#),
[Luca Natali](#), [Davide Peluzzi](#), [Cynthia M. Beall](#),
[Anna Di Rienzo](#), [Davide Pettener](#), [Donata Luiselli](#)
and [Marco Sazzini](#)

Exploring evolutionary causes of differential susceptibility to acute mountain sickness in Nepali populations from the Gaurishankar Area ([abstract](#))

09:30 [Fred Nijhout](#)

Evolution of homeostatic mechanisms, cryptic genetic variation, and predisposition to disease ([abstract](#))

09:45 [Nicole Mideo](#), [Jeffrey Bailey](#), [Andrew Read](#) and [Jonathan Juliano](#)

A deep sequencing tool for detecting drug resistance in polyclonal malaria infections ([abstract](#))

10:00 [Courtney Babbitt](#), [Jason Pizzollo](#) and [Gregory Wray](#)

Identifying genomic loci involved epithelial cancer using comparative genomics ([abstract](#))

09:00-10:15 Session 11B: Lessons from our primate cousins: Evolutionary medicine in nonhuman primate studies

CHAIR: [Jenny Tung](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

09:00 [Jenny Tung](#), [Elizabeth Archie](#), [Jeanne Altmann](#) and [Susan Alberts](#)

Cumulative early life adversity predicts longevity in wild baboons ([abstract](#))

09:15 [Jessica Brinkworth](#), [Jordan Kohn](#), [Lanford Robert](#), [Zach Johnson](#) and [Luis Barreiro](#)

Comparative genomics of innate immune responses to infection in primates ([abstract](#))

09:30 [Nelson Ting](#), [Noah Simons](#), [Diana Christie](#), [Geeta Eick](#), [Maria Ruiz-Lopez](#), [Colin Chapman](#), [Tony Goldberg](#) and [Kirstin Sterner](#)

Understanding how evolution has shaped disease susceptibility in the Ugandan red colobus monkey (*Procolobus rufomitratus tephrosceles*) ([abstract](#))

09:45 [Noah Snyder-Mackler](#), [Joaquin Sanz Remon](#), [Jordan Kohn](#), [Jessica Brinkworth](#), [Zachary Johnson](#), [Mark Wilson](#), [Luis Barreiro](#) and [Jenny Tung](#)

The genomic signature of social adversity in rhesus macaques ([abstract](#))

10:00 [Katherine Amato](#)

Using the gut microbiota to understand primate ecology and evolution ([abstract](#))

10:15-10:30 Session : Break

Coffee and snacks will be provided.

LOCATION: Grand Ballroom II at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30-11:45 Session 12A: General evolution and medicine

CHAIR: [Nicole Burt](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30 [Camille Jacqueline](#), [Frédéric Thomas](#) and [Benjamin Roche](#)

An eco-immunological approach for cancer: a new role for infectious diseases? ([abstract](#))

10:45 [Amy Boddy](#), [Angelo Fortunato](#), [Melissa Wilson Sayres](#) and [Athena Aktipis](#)

Cooperation and conflict beyond the womb: Fetal microchimerism and maternal health ([abstract](#))

11:00 [Paul Norman](#), [Neda Nemat-Gorgani](#), [Hugo Hilton](#), [Jill Hollenbach](#), [Elham Ashouri](#), [Emily Wroblewski](#), [Ketevan Gendzekhadze](#), [Laurent Abi-Rached](#), [Lisbeth Guethlein](#) and [Peter Parham](#)

Coevolution of the highly complex HLA and KIR gene families impacts human immunity and reproduction. ([abstract](#))

11:15 [India A. Schneider-Crease](#), [John C. Noh](#), [Thore J. Bergman](#) and [Jacinta C. Beehner](#)

Diagnosing Taenia serialis in wild geladas: Novel use of adapted urine Ag-ELISA for assessing wildlife health. ([abstract](#))

11:30 [Rui Diogo](#)

Evolutionary Developmental Pathology and Anthropology: a new field linking development, comparative anatomy, human evolution, morphological variations and defects, and medicine ([abstract](#))

11:45 [Chelsea Landolin](#) and [Carlos J. Suarez](#)

Evidence for Applications of Evolutionary Biology Across Health Care Disciplines ([abstract](#))

10:30-11:45 Session 12B: Human evolution, adaptation and disease in Africa

CHAIR: [Sarah Tishkoff](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30 [Joseph Lachance](#), [Ali Berens](#), [Matthew Hansen](#), [Andrew Teng](#), [Sarah Tishkoff](#) and [Timothy Rebbeck](#)

Population and evolutionary genomics of prostate cancer-associated variants: implications for health disparities in men of African descent ([abstract](#))

10:45

[Sophie Limou](#), [George W Nelson](#), [Jeffrey B Kopp](#)
and [Cheryl A Winkler](#)

**Balancing the risk: APOL1 variants, African
sleeping sickness and chronic kidney disease**
([abstract](#))

11:00 [Cheryl Winkler](#), [George Nelson](#), [Kareshma
Ramcharan](#) and [Rajendra Bhimma](#)

**Seeking Rare Variants in Diverse Populations
for Precision Medicine: NPHS2 V260E
homozygosity is a frequent cause of sporadic
steroid resistant nephrotic syndrome in Black
South African children** ([abstract](#))

11:15 [Scott Williams](#), [Minjun Huang](#) and [Shirley Russell](#)

**Pleiotropic effects of immune responses
explain variation in the prevalence of
fibroproliferative diseases** ([abstract](#))

11:30 [Meagan Rubel](#), [Matthew Hansen](#), [Aubrey Bailey](#),
[Kyle Bittinger](#), [Alice Laughlin](#), [William Beggs](#),
[Alessia Ranciaro](#), [Simon Thompson](#), [Fd
Bushman](#) and [Sarah Tishkoff](#)

**Diet, Environment, and Parasites: Factors
Shaping Rural African Gut Microbiomes** ([abstract](#))

11:45 [Matthew Hansen](#), [Joseph Lachance](#), [Sameer Soi](#),
[Laura Scheinfeldt](#), [Alessia Ranciaro](#), [Simon
Thompson](#), [Jibril Hirbo](#) and [Sarah Tishkoff](#)

**The impact of ancestry and subsistence
practice on cardiovascular and
anthropometric traits in sub-Saharan Africans**
([abstract](#))

12:00-13:30 Session : Lunch on your own

12:00-13:30 Session 13: Education and outreach
committee meeting

LOCATION: Meeting Room I- Durham Convention Center

13:30-14:30 Session 14: Plenary Speaker: Joshua
Schiffman

CHAIR: [Athena Aktipis](#)

LOCATION: Grand Ballroom I at the Durham Convention
Center (301 West Morgan St, Durham, NC 27701).

13:30 [Joshua Schiffman](#)

**Comparative Oncology and the Search for
Better Cancer Therapeutics** ([abstract](#))

14:30-15:45 Session 15A: Cancer

CHAIR: [Robert Perlman](#)

LOCATION: Grand Ballroom I at the Durham Convention
Center (301 West Morgan St, Durham, NC 27701).

14:30 [Leonard Nunney](#)

**Identifying the intrinsic and extrinsic risks of
cancer.** ([abstract](#))

14:45 [Athena Aktipis](#)

What to do with cellular cheaters? The cheater detection problem in multicellularity and cancer susceptibility ([abstract](#))

15:00 [Zi-Ming Zhao](#) and [Jeffrey Townsend](#)
Cancer Selection Intensity using Model-Averaged Clustering ([abstract](#))

15:15 [Carlo Maley](#)
Cure by Control: Evolutionary approaches to cancer therapy and prevention ([abstract](#))

15:30 [Diego Mallo](#), [Rumen Kostadinov](#), [Luis Cisneros](#),
[Mary Kuhner](#) and [Carlo Maley](#)
Agent-based simulation of somatic evolution: Modeling the progression of Barrett's esophagus to Esophageal adenocarcinoma ([abstract](#))

14:30-15:45 Session 15B: Paleopathology as part of evolutionary medicine

CHAIR: [Frank Rühli](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

14:30 [Frank Rühli](#), [Katherine van Schaik](#) and [Francesco Galassi](#)
Evolving humans health: Insights from the paleopathological record ([abstract](#))

14:45 [Bruce Rothschild](#)
Evolutionary perspectives of rheumatologic disease ([abstract](#))

15:00 [Michelle Blyth](#) and [Frank Ruehli](#)
A medical perspective to study syphilis in human remains ([abstract](#))

15:15 [Rebecca Crawford](#), [Markus Melloh](#), [Frank Rühli](#) and [Martin Haeusler](#)
Low back pain as a trade-off to efficient walking: A new perspective on connecting evolutionary medicine with public health ([abstract](#))

15:30 [Sandra Mathews](#), [Nakita Frater](#), [Noémie Bonneau](#) and [Martin Haeusler](#)
Osteoarthritis and Human Evolution ([abstract](#))

15:45-16:15 Session 16: Poster Session and Break

L-Z Last name of the submitting authors should stand by posters.

LOCATION: Grand Ballroom II at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

16:15-17:30 Session 17A: Translating evolutionary medicine to the clinic--practical lessons for patient care

CHAIR: [Joe Alcock](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

16:15

[Robert Woods](#), [Michael Mwangi](#), [Juan Garay](#) and [Andrew Read](#)

**Clinical management of resistance evolution:
A case study ([abstract](#))**

16:30 [Joe Alcock](#)

**When evidence-based medicine is
evolutionary medicine. ([abstract](#))**

16:45 [Mark Schwartz](#)

Evolution in the Clinic ([abstract](#))

17:00 [Shelley Hwang](#) and [Carlo Maley](#)

What evolution can teach us about cancer ([abstract](#))

17:15 [Chelsea Landolin](#)

**Exploring Clinical Applications of an
Evolutionary Biology Perspective in Nursing ([abstract](#))**

16:15-17:15 Session 17B: Life history

CHAIR: [Kathryn Clancy](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

16:15 [Caleb Finch](#) and [Mafalda Cacciottolo](#)

ApoE alleles in the evolution of human brain aging ([abstract](#))

16:30 [Paul Turke](#)

Childhood food allergies: an evolutionary mismatch hypothesis ([abstract](#))

16:45 [Daniel Kruger](#) and [Jessica Kruger](#)

Understanding health behaviors and outcomes in a life history framework ([abstract](#))

17:00 [Benjamin Trumble](#), [Aaron Blackwell](#), [Jonathan Stieglitz](#), [Caleb Finch](#), [Michael Gurven](#) and [Hillard Kaplan](#)

Protective impact of ApoE4 on cognitive performance of older adult Tsimane forager-horticulturalists. ([abstract](#))

17:00-18:30 Session 18: Meeting and Programs committee meeting

LOCATION: Meeting Room I- Durham Convention Center

19:00-20:30 Session 19: Board of directors meeting and dinner

Saturday, June 25th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

07:00-08:00 Session : Continental Breakfast

LOCATION: Grand Ballroom Lobby at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

08:00-09:00 Session 20: Plenary Speaker: Andrea Graham

CHAIR: [Andrew Read](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

08:00 [Andrea Graham](#)

**Why do immune systems harm their bearers?
The evolutionary biology of "friendly fire" ([abstract](#))**

09:00-10:00 Session 21A: Evolutionary medicine: A comparative cross species perspective

CHAIR: [Elizabeth Uhl](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

09:00 [Michelle L. Osborn](#) and [Elizabeth W. Uhl](#)

The Pathomechanics of Degenerative Joint Disease: An Evolutionary, Comparative, and Functional Approach ([abstract](#))

09:15 [Natalie Warner](#)

Animal Models, Evolution and Drug Development ([abstract](#))

09:30 [Elizabeth Uhl](#)

Cancer in Animals: Impacts of Selective Breeding, Husbandry and Domestic Environments ([abstract](#))

09:45 [Rita McManamon](#), [Linda J. Lowenstine](#), [Karen A. Terio](#), [Marietta Dindo Danforth](#) and [Hayley Murphy](#)

Cross-Disciplinary Efforts to Understand, Treat and Prevent Ape Heart Disease, through the Great Ape Heart Project ([abstract](#))

09:00-10:00 Session 21B: Metabolism and mismatch

CHAIR: [Benjamin Trumble](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

09:00 [Ariel Aspiras](#), [Cliff Tabin](#) and [Nicolas Rohner](#)

Cavefish as a natural model for insulin resistance and fatty liver disease ([abstract](#))

09:15 [Robert Chevalier](#)

Nephron maladaptation and progression of kidney disease: a new paradigm is needed ([abstract](#))

09:30 [Sasha Makohon-Moore](#) and [Gregory Wray](#)

Primate iPSCs provide insights into the evolution of human metabolic traits ([abstract](#))

09:45 [Nicholas Grebe](#), [Melissa Emery Thompson](#) and [Steven Gangestad](#)

Oxidative Stress and Facultative Adjustment of Energy Allocation ([abstract](#))

10:00-10:30 Session : Break

Coffee and snacks will be provided.

LOCATION: Grand Ballroom Lobby at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30-11:00 Session 22: Human Evolution

CHAIR: [Michelle Blyth](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

10:30 [Stephen Corbett](#), [Alexandre Courtiol](#), [Virpi Lummaa](#), [Jacob Moorad](#) and [Stephen Stearns](#)

A Fiery Forge: The Industrial Revolution, Recent Human Evolution and the Global Burden of Non-Communicable Disease ([abstract](#))

10:45 [John Pepper](#)

Why mammal meat is bad for humans (and humans only) ([abstract](#))

11:00-12:00 Session 23: ISEMPH Annual Meeting

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

12:00-13:30 Session : Lunch on your own

13:30-14:30 Session 24: Plenary Speaker: Marion Koopmans

CHAIR: [Joseph Graves](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

13:30 [Marion Koopmans](#)

Smart genes: evolution as a driver for emerging infectious diseases ([abstract](#))

14:30-15:00 Session 25: Omenn Prize

CHAIRS: [Randolph Nesse](#) and [Andrew Read](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

14:30 [João Barroso-Batista](#), [Jocelyne Demengeot](#) and [Isabel Gordo](#)

Adaptive immunity increases the pace and predictability of evolutionary change in commensal gut bacteria ([abstract](#))

15:00-15:30 Session 26: Williams Prize

CHAIRS: [Randolph Nesse](#) and [Andrew Read](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

15:00 [Pete C. Trimmer](#), [Andrew D. Higginson](#), [Tim W. Fawcett](#), [John M. McNamara](#) and [Alasdair I. Houston](#)

Adaptive decision-making systems with limited information may cause ill health ([abstract](#))

15:30-15:45 Session : Break

Coffee and snacks will be provided.

LOCATION: Grand Ballroom Lobby at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

15:45-17:15 Session 27A: Frontiers of evolutionary medicine

CHAIR: [Stephen Stearns](#)

LOCATION: Grand Ballroom I at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

15:45 [Jang Ik Cho](#), [Choongwong Jeong](#), [Jiayang Sun](#), [Anna Di Rienzo](#), [Buddha Basnyat](#), [Geoff Childs](#), [Sienna Craig](#) and [Cynthia Beall](#)

Hemoglobin concentration and reproductive success of Tibetan highlanders ([abstract](#))

16:00 [Gillian Bentley](#), [James Curtis](#), [James Firth](#), [Samuel Foley](#), [Dugald Foster](#), [Michele Freed](#), [Bliss Gibbons](#), [Savanna Hamilton](#), [Ángel Jiménez](#), [Hyun Jung](#), [Kunil Kim](#), [Christopher Lawson](#), [Francis Oliver](#), [Alexandra Newman](#), [Andrea Silva-Caballero](#), [Jie Yan](#), [Alice White](#) and [Samantha Green](#)

Is it Time to Re-evaluate the Mismatch Concept? ([abstract](#))

16:15 [Emmanuel Milot](#), [Claudia Moreau](#), [Alan A. Cohen](#), [Damian Labuda](#), [Jacinthe Gosselin](#) and [Francine M. Mayer](#)

Eco-evolutionary dynamics and natural selection on health-related traits in humans ([abstract](#))

16:30 [Hillard Kaplan](#), [Benjamin Trumble](#), [Jonathan Stieglitz](#), [Daniel Eid](#) and [Michael Gurven](#)

Cancer in an Indigenous Native South American Population: Initial insights into the natural history of cancer in traditional subsistence populations. ([abstract](#))

15:45-17:15 Session 27B: Pathogen evolution

CHAIR: [Jon Laman](#)

LOCATION: Grand Ballroom III at the Durham Convention Center (301 West Morgan St, Durham, NC 27701).

15:45 [Joseph Graves](#), [Mehrdad Tajkarimi](#), [Adero Campbell](#), [Jaminah Norman](#) and [Marjan Assefi](#)

Does Nanoparticle shape impact the evolution of resistance? ([abstract](#))

16:00 [Katia Koelle](#) and [David Rasmussen](#)

The role of deleterious mutations in shaping influenza's antigenic evolution in humans ([abstract](#))

16:15 [Elsa Hansen](#), [Robert Woods](#) and [Andrew Read](#)

On the use of a chemotherapeutic agent when resistance to it threatens the patient ([abstract](#))

- 16:30 [Alison Feder](#), [Christopher Kline](#), [Brandon Keele](#), [Shiu-Lok Hu](#), [Dmitri Petrov](#), [Pleuni Pennings](#) and [Zandrea Ambrose](#)
Evolutionary dynamics of drug resistance evolution in RT-SHIV through space and time ([abstract](#))
- 16:45 [Ruian Ke](#), [Ruy Ribeiro](#) and [Alan Perelson](#)
Cure and superinfection of infected cells facilitate extremely rapid HCV resistance development to an direct-acting antiviral ([abstract](#))
- 17:00 [Qixin He](#) and [Mercedes Pascual](#)
Does specific immunity structure the Plasmodium falciparum population into strains from the perspective of the major blood antigen PfEMP1? ([abstract](#))

Sunday, June 26th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-11:30 Session : Excursion to the Duke Lemur Center

Meet in the Marriott hotel lobby at 8:50am.

LOCATION: Duke Lemur Center- 3705 Erwin Rd, Durham, NC 27705

11:30-15:00 Session : Excursion to the North Carolina Museum of Natural Sciences

Meet in the Marriott hotel lobby at 11:20am.

LOCATION: North Carolina Museum of Natural Sciences- 11 W Jones St, Raleigh, NC 27601