

# PROGRAM 2017

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**8:30** Welcome Breakfast

**9:00** Opening Remarks

**9:10 KEYNOTE I:** Dr. George Weinstock (Jackson Laboratory):  
*"Variation of the Human Microbiome"*

**10:00 Local Talk I:** Dr. David Paydarfar (Chair of Neurology, Dell Medical School):  
*"Tailoring a Brain Therapy: How Can We Break the Curse of Dimensionality"*

**10:30** Coffee Break

**10:50 KEYNOTE II:** Dr. Alfred Hero (University of Michigan)"  
*"Integration and differentiation in multimodal longitudinal datasets"*

**11:35 Local Talk II:** Dr. Maryjka Blaszczyk (Anthropology, UT Austin):  
*"Into the wild: Behavioral variation in a natural primate population"*

**12:05** Lunch

**1:15 KEYNOTE III:** Dr. Margaret McCarthy (University of Maryland School of Medicine):  
*"Neuroinflammation, Neuroepigenetics and Male Vulnerability"*

**2:00 Pop-Up Institute Fellows (UT Austin):** Dr. Farya Phillips: *"The impact of parental cancer on children & families"*; Dr. Margherita Malanchini: *"The origins of individual differences in educational achievement: beyond cognitive skills"*; and Andrew Grotzinger: *"Relationships between hair testosterone, hair cortisol, and adolescent externalizing behaviors"*

**2:40** Coffee Break

**3:10 Interactive Panel led by the Pop-Up Institute Principal Members (UT Austin):**  
Drs. Molly Bray, Mark Hayward, Vishy Iyer, and Chris Webb *moderated by Dr. Hans Hofmann*

**4:10** Reception with Poster Session

**5:30** Adjourn



The University of Texas at Austin  
Office of the Vice President  
for Research



**Center for Computational Biology and Bioinformatics**



# KEYNOTE SPEAKERS

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## GEORGE WEINSTOCK

Dr. George Weinstock is the Evin Family Chair, Director of Microbial Genomics, and a Professor at The Jackson Laboratory for Genomic Medicine. His research leverages advanced technologies to investigate infectious diseases, human and other mammalian microbiomes, and their clinical impact.

## ALFRED HERO

Dr. Alfred Hero is the John H. Holland Distinguished University Professor of Electrical Engineering and Computer Science and the R. Jamison and Betty Williams Professor of Engineering at the University of Michigan. He is also co-Director of the University's Michigan Institute for Data Science (MIDAS). His research focuses on building foundational theory and methodology for data science and engineering.

## MARGARET MCCARTHY

Dr. Margaret McCarthy is the Chair of the Department of Pharmacology at the University of Maryland School of Medicine. Her research has led to significant discoveries related to sex differences in the brain and their underlying cellular and developmental mechanisms.

## THE POP-UP INSTITUTE

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The Vice President for Research funds Pop-Up Institutes to foster interdisciplinary research and collaborations across campus. Our Pop-Up Institute brings together faculty and trainees from the Dell Medical School and the Colleges of Natural Sciences and Liberal Arts to explore the causes and consequences of individual and population variation. Understanding this variation is critically important for promoting the success of individuals and the populations within which they live. Together, we will identify shared research goals across disciplines; establish unique and integrative research programs; and develop solutions to advance research.

*With support from the Dell Medical School, the Center for Systems and Synthetic Biology, the Departments of Integrative Biology, Statistics and Data Sciences, Nutritional Sciences, Molecular Biosciences, and Sociology.*

## THE CCBB

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The Center for Computational Biology and Bioinformatics (CCBB) supports research with bioinformatic consulting, training programs, high performance computing infrastructure, and community-building events. Our efforts have enabled diverse groups of scientists and engineers to harness the wealth of information contained in large datasets to advance understanding and advance science.

#bdib17   [www.ccbb.utexas.edu](http://www.ccbb.utexas.edu)   @PopUpVariation   @texas\_cbrs



# POSTERS

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## INDUSTRY TABLES

- **Lab7 Systems:** Cheng Lee, *Principal Software Engineer*
- **UT Libraries:** Porcia Vaughn, *Biosciences Librarian*; Roxanne Bogucka, *Health Sciences Librarian*; Imelda Vetter, *Dell Medical School Librarian*; Jessica Trelogan, *Data Management Coordinator*
- **MeCo Visuals:** Melanie Connolly, *Medical Illustrator*

## POSTERS

1. Hans Hofmann, Dhivya Arasappan, Dennis Wylie, Benni Goetz: Big Data Analytics and Bioinformatics Consulting
2. Mike Wilson: The Genomic Sequencing and Analysis Facility
3. Connor Sheehan, Mark Hayward: Black/White Differences in Mortality among Veteran and Non-Veteran Males
4. Alan Gee, Riccardo Barbieri, David Paydarfar, Premananda Indic: Predicting Severe Bradycardia in Preterm Infants Using Point Process Analysis
5. Dhivya Arasappan, Jamal Sabir, Tracey A. Ruhlman, Robert Jansen: Genome assembly, annotation, and gene family analysis
6. Somsubhra Barik, Haris Vikalo: Binary matrix completion with performance guarantees for single individual haplotyping
7. Benjamin Goetz: Transcriptomics, Bacterial Genome Annotation, and Custom Pipelines
8. Rayna Harris, Maddy Kao, Andre Fenton, Hans Hofmann: An Integrative Approach to the Molecular and Synaptic Mechanisms of Learning and Persistent Hippocampal Memory for an Active Place Avoidance.
9. John Hawkins, Cheulhee Jung, Stephen Jones Jr, Yibei Xiao, ... Andy Ellington, Bill Press, Ilya Finkelstein: Massively parallel biophysical analysis of a CRISPR-Cas complex on repurposed next generation sequencing chips
10. Gizelle McCarthy, Sean Farris, Laura Ferguson, Yuri Blendov, Dayne Mayfield, Adron Harris: The Microglial Transcriptome and Ethanol Consumption: Computational Drug Repurposing
11. Mikhail Matz: Inferring genetic risks based on individual-specific gene expression signatures
12. HaridhaShivram, Vishy Iyer: The PRC2 component EZH2 activates genes by promoting splicing efficiency independent of PRC2 activity and chromatin interaction
13. Douglas Wu, Alan Lambowitz: Use of Thermostable Group II Intron Reverse Transcriptases (TGIRTs) for Single- Stranded DNA-seq of Cell-Free DNA in Human Plasma and Molecular Diagnostics
14. Dennis Wylie, Boris Zemelman, Hans Hofmann: SARKS: Motifs from Suffix Array Kernel Smoothing