



The 25th Human Genome Meeting

May 23-25, 2022 | Dan Tel Aviv Hotel, Tel Aviv, Israel

The Next Frontiers in Genomics

HGM2022 SCIENTIFIC PROGRAM

Time	Monday, 23 May 2022	
18:00-19:00	Welcome Get-Together at the Dan Tel Aviv, Hotel	
Time	Tuesday, 24 May 2022	
08:00-09:00	Registration	
9:00 - 9:15	Opening Chairs: Charles Lee, Karen Avraham	
9:20 – 10:00	Plenary 1 – Mike Snyder, Stanford University, US Yam Hall <i>"Monitoring health and COVID-19 using Big Data"</i> Chair: Eran Meshorer, Hebrew University of Jerusalem, Israel	
10:00 - 11:00	Symposium 1 - Genome organization & high-order interactions Yam Hall Chair: Ed Liu, The Jackson Laboratory, US Ofir Hakim, Bar-Ilan University, Israel <i>"Genomic retargeting of p53 and CTCF in HRas-induced oncogenic transformation" (20 m)</i>	Symposium 2 – Biobanks, databases & impact on precision medicine Kaete Dan Hall Chair: Michal Linial, Hebrew University of Jerusalem, Israel Gil Siegal, Ono College & Tel Aviv University, Israel <i>"Biobanks: National & international ethico-legal challenges" (20 m)</i>



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	<p>Ana Pombo, Wellcome Sanger Institute, UK (virtual) <i>"Specialization of 3D genome topologies in specific cell types and states"</i> (20 m)</p> <p>Ute Deichmann, Ben-Gurion University of the Negev, Israel <i>"Epigenetics: the origins and evolution of a fashionable topic"</i> (20 m)</p>	<p>Susan Tweedie, European Molecular Biology Laboratory, UK <i>"What's in the name"</i> (20 m)</p> <p>Varda Shalev, Alike Health Israel, Israel <i>"Biobank: Lessons learned and opportunities"</i> (20 m)</p>
11:00 - 11:20	Coffee Break	
11:20 - 12:00	<p>Symposium 3 – Convergence of genomics and immunology Chair: Erez Levanon, Bar-Ilan University, Israel Yam Hall</p> <p>Noam Stern-Ginossar, Weizmann Institute of Science, Israel <i>"Subversion of the innate immune response by SARS-CoV-2"</i> (20 m)</p> <p>Ido Amit, Weizmann Institute of Science, Israel <i>"Single-cell immunology: past, present and future"</i> (20 m)</p>	<p>Symposium 4 – Ancient human genomes Chair: Sara Selig, Technion, Israel Kaete Dan Hall</p> <p>Viviane Slon, Tel Aviv University, Israel <i>"Archaeological sediments as a source of ancient human DNA"</i> (20 m)</p> <p>Liran Carmel, Hebrew University of Jerusalem, Israel <i>"The use of ancient epigenetics to study human evolution"</i> (20 m)</p>
12:00 - 13:00	Lunch Break (lunch included)	



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13:00 - 13:40	Plenary 2 - "Ami Bhatt, Stanford University, US" <i>"From precise microbiome genomics to precision medicine"</i> Chair: John Burn, Newcastle University, UK		Yam Hall
13:40 - 14:50	Symposium 5 - Integrating metabolism & disease Chair: Daniel Bar, Tel Aviv University, Israel	Yam Hall	Symposium 6 - Cancer genomics Chair: Ofer Shoshani, Weizmann Institute of Science, Israel Yaara Oren, Tel Aviv University, Israel <i>"Beyond Darwin -understanding cancer persister cells"</i> (20 m) Patrick Tan, Cancer Science Institute, Singapore (virtual) <i>"Transforming health in Singapore through precision medicine"</i> (20 m) Dan Peer, Tel Aviv University, Israel <i>"Therapeutic genome editing in cancer"</i> (20 m) Yuval Tabach, Hebrew University, Israel <i>"Machine-learning of complex evolutionary signals improves classification of SNVs"</i> (10 m)
	Eyal Gottlieb, Technion, Israel <i>"Metabolic synthetic lethality as an effective strategy to target hereditary cancer syndromes with TCA cycle deficiency"</i> (20 m) Ayelet Erez, Weizmann Institute of Science, Israel <i>"Identifying amino-acid cross-talks between the host and the tumor for improving cancer diagnosis and therapy"</i> (20 m) Itamar Harel, Hebrew University of Jerusalem, Israel <i>"Sex-specific regulation of metabolic health and vertebrate lifespan by AMP biosynthesis"</i> (10 m) Dana Goldberg, Hebrew University of Jerusalem, Israel <i>"Hormone-controlled cooperative binding of transcription factors within enhancer clusters drives synergistic gene induction during fasting"</i> (10 m)		



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	Irena Muffels, UMC Utrecht, Netherlands <i>"Bi-allelic variants in NAE1 cause intellectual disability, ischiopubic hypoplasia, stress-mediated lymphopenia and neurodegeneration"</i> (10 m)	
14:50 - 15:50	Coffee Break & Poster Walk & Exhibition	
15:50 - 16:50	Chen Award Chair: Charles Lee, The Jackson Laboratory, US Pui Yan Kwok, University of California San Francisco, US <i>"Genome analysis for the one and the many"</i> (20 m) Jin Billy Li, Stanford University, US <i>"RNA editing underlies genetic risk of common inflammatory diseases"</i> (15 m) Young Seok Ju, KAIST, South Korea <i>"Somatic mosaicism by Line-1 retrotransposition in human somatic cells"</i> (15 m)	Yam Hall
16:50 - 17:15	HUGO African Prize Nicki Tiffin, University of Cape Town, South Africa <i>"Advancing African health genomics research through innovative study design"</i> (20 m)	Yam Hall
18:30	Dinner at Kalamata, Jaffa (Optional- advance reservations required by May 18 to hgm@ortra.com), bus from Dan Hotel	



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Time	Wednesday, 25 May 2022	
9:00 - 10:00	<p>Symposium 7 – AI in health & medicine Yam Hall Chair: Karl Skorecki-Azrieli Faculty of Medicine, Bar-Ilan University</p> <p>Jean Philippe Vert, Google Brain, Paris <i>"Computational analysis of tumour heterogeneity, from bulk to single-cell genomics"</i> (20 m)</p> <p>Michal Rosen-Zvi, IBM Research & Hebrew University of Jerusalem, Israel <i>"Technologies to accelerate discoveries of prognostic and diagnostic cancer biomarker"</i> (20 m)</p> <p>Esti Yeger-Lotem, Ben-Gurion University, Israel <i>"Predicting molecular mechanisms of hereditary diseases by using their tissue-specific manifestation"</i> (10 m)</p>	<p>Symposium 8 – Genetics & epigenetics of health & disease Chair: Philippa Melamed, Technion, Israel Kaete Dan Hall</p> <p>Naomi Habib, Hebrew University, Israel <i>"Uncovering cellular dynamics in Alzheimer's disease: one cell at a time"</i> (20 m)</p> <p>Clodagh O'Shea, Salk Institute for Biological Studies, US <i>"Cracking the nuclear code: Visualizing the structures and functions of the human genome"</i> (20 m)</p> <p>Oded Rechavi, Tel Aviv University, Israel <i>"Transgenerational inheritance in C. elegans nematodes"</i> (20 m)</p>

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	<p>Noa Sher, Minovia, Israel <i>"Utilization of mitochondrial augmentation technology to explore associations between mitochondrial haplogroup, function, and persistence"</i> (10 m)</p> <p>Gautam Kok, UMC Utrecht, Netherlands <i>"Prime editing to correct POLG-related epilepsy"</i> (10 m)</p>	<p>Amit Levon, Tel Aviv University, Israel <i>"Comprehensive transcriptomic analysis of A-T skin fibroblasts reveals unique gene expression and pathway signature of cellular senescence"</i> (10 m)</p>
12:10 - 13:10	Lunch Break (lunch included)	
13:10 - 13:50	<p>Plenary 4: Douglas Wallace, University of Pennsylvania, USA <i>"A mitochondrial eulogy of complex diseases"</i> Chair: Dan Mishmar, Ben-Gurion University of the Negev, Israel</p>	Yam Hall
13:50 - 14:50	Coffee Break & Poster Walk & Exhibition	
14:50 - 15:40	<p>Symposium 11 - Microbiome and genome – where is the junction? Chair: Omry Koren, Azrieli Faculty of Medicine, Bar-Ilan University, Israel</p> <p>Elhanan Borenstein, Tel Aviv University, Israel <i>"Microbes, metabolites, and druas: Integrating multi-omic</i></p>	<p>Symposium 12 – Informatics insights for perceiving the pandemic and protein production (Koret-Berkeley-Tel Aviv Initiative session) Chair: Steven Brenner, UC Berkeley, US</p> <p>Jennifer Listgarten, UC Berkeley, US <i>"Machine learning-based engineering of proteins"</i></p> <p>Kaete Dan Hall</p>



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	<p><i>microbiome data"</i></p> <p>Revital Kariv, TASMC & Tel Aviv University, Israel <i>"Microbiome profiling in patients with Adenomatous Polyposis compared to sporadic subjects" (20 m)</i></p> <p>Adina Weinberger, Weizmann Institute of Science, Israel <i>"10K Study: Personalized medicine based on multi-omics population-level cohorts" (10 m)</i></p> <p>Dana Binyamin, Azrieli Faculty of Medicine, Bar-Ilan University, Israel <i>"The effect of the gut microbiome of adult and aging mice on metabolic characteristics" (10 m)</i></p>	<p>Joseph Lewnard, UC Berkeley, US <i>"Harnessing large-scale clinical informatics for real time learning: experience during the COVID-19 pandemic" (20 m)</i></p> <p>Joel Gelernter, Yale University, US <i>"Genetics of SSRI antidepressant use and implications for COVID19 risk" (10 m)</i></p>
15:45 – 15:55	<p>Plenary 5: Ed Liu, The Jackson Laboratory, US "The future of the genome"</p>	Yam Hall
15:55 – 16:10	CLOSING	Yam Hall