

Summary:

Out of a group of almost 30 undergraduate researchers, we have had an overwhelming number volunteer to present their research. This is the exciting event that brings those presentations to you. We have 22 action-packed presentations spaced out over two nights. The presentation topics range across the sciences: including Biology, Chemistry, Physics, Math, Computer Science, and even Psychology. Everyone has worked hard on their research and their respective presentations. So please, sit back, put your thinking caps on, and enjoy!

Thanks To:

We would like to thank Professor Chaim Sukenik who was integral in organizing this program and this event. In addition, thank you to everyone at Bar Ilan and Yeshiva University who made this program possible. Thanks to Rav Eliav and Adi Silverman who have made living at the Gruss campus enjoyable and fun and for all of the hard work they have put in. Thank you to Nikki Press, Geulah Ben-David and Nat Shere for organizing this event. Finally, thank you to all of the presenters for without them we would not have an event.

Bar Ilan Student Presentations



Yeshiva University and Bar Ilan Present:

A Symposium of Research

July 27

- 7:30 Opening remarks
- 7:36 **Geulah Ben-David** and **Erica Hasten** (Stern College): *"The Journey from Neuroblastoma to Neurons: A Differentiation Process"*, Prof. Ron Goldstein (Life Sciences)
- 7:47 **Shimon Farber** (Yeshiva College): *"Negative Regulation of Cytoskeletal Proteins in T-Cells"*, Dr. Mira Barda-Saad, Barak Reicher (Life Sciences)
- 7:58 **Nat Shere** (Yeshiva College): *"Making Google Secure"*, Prof. Amir Herzberg, Haya Shulman (Computer Science)
- 8:09 **Tzvi Goldfeder** (Yeshiva College): *"Route Search in Mobile Ad-Hoc Networks"*, Prof. David Sarne (Computer Science)
- 8:20 **Kira Joel** (Stern College): *"Tethered Particle Motion"*, Dr. Yuval Garini, Guy Nir (Physics)
- 8:31 Intermission
- 8:38 **Tova Miller** (Stern College): *"RNA Editing"*, Dr. Lior Appelbaum, Dr. Tali Lerer (Life Sciences)
- 8:49 **Sam Cohen** (Yeshiva College): *"Modeling of Volatility Smile"*, Prof. Malka Schaps (Mathematics)
- 9:00 **Yair Saperstein** (Yeshiva College): *"Optimizing Lithium Ion Batteries for Use in Portable Devices"*, Prof. Doron Aurbach (Chemistry)
- 9:11 **Nikki Press** (Barnard College): *"Beyond Blushing: Physical Expressions of Social Anxiety"*, Prof. Eva Gilboa-Shechtman, Lior Galili, Yair Sahar (Psychology)
- 9:22 **Moses Sutton** (Yeshiva College): *"Wireless Networking: Carrier Sense"*, Dr. Itsik Bergel, Yaniv George (Engineering)
- 9:33 **Orli Haken** (Stern College): *"Magnetoencephalography"*, Dr. Avi Goldstein, Yuval Harpaz (Brain Research)

August 3

- 7:30 Opening Remarks
- 7:36 **Rachel Blinick** (Stern College): *"Measuring the Effects of p53 Mutations on DNA Binding with Microfluidic Affinity Analysis"*, Dr. Doron Gerber, Dorit Avrahami (Life Sciences)
- 7:47 **Ricki Notis** (Penn): *"Interaction of Chiral Surfaces"*, Prof. Yitzhak Mastai, Michal Eigenberg (Chemistry)
- 7:58 **Jordie Gilbert** (Rutgers University): *"Gold Nanoparticles for Detection of Cancer"*, Dr. Rachela Popovtzer (Engineering)
- 8:09 **Ariel Habshush** (Cooper Union): *"Pump Probe Spectroscopy"*, Dr. Yaakov Tischler (Chemistry)
- 8:20 **Helen Unger** (Stern College): *"Role of Oligoribonuclease in Biofilm Formation of Pseudomonas Aeruginosa"*, Dr. Ehud Banin, Dorit Cohen (Life Sciences)
- 8:31 Intermission
- 8:38 **Davida Kollmar** (Stern College): *"Neuron Development and Morphology"*, Dr. Orit Shefi, Koby Baranes (Engineering)
- 8:49 **Miri Koolyk** (Stern College): *"Sintering Semiconductors in Solar Cells"*, Prof. Arie Zaban, Dr. Shay Tirosh (Chemistry)
- 9:00 **Yehuda Stiefel** (Yeshiva College): *"Super Conductor Nanowires"* Prof. Yosi Yeshurun, Daniel Levi (Physics)
- 9:11 **Moshe Press** (Yeshiva College): *"Chemical Models of the Galactose Oxidase Active Site"*, Dr. Laurent Benisvy, Gala Zats (Chemistry)
- 9:22 **Dina Golfeiz** (Stern College): *"Effects on Phosphorylation by the c-Kit Receptor Tyrosine Kinase Mutant V555C"*, Dr. Yarden Opatowsky, Gali Sandler (Life Sciences)
- 9:33 **Alan Katz** (Yeshiva College): *"Core Promoter Functions in Anti-microbial Peptide Genes"*, Dr. Tamar Juven-Gershon, Yoni Zehavi (Life Sciences)