

Program outline:

	13.8.2017	14.8.2017	15.8.2017	16.8.2017	17.8.2017
7:30		Breakfast	Breakfast	Breakfast	Breakfast
9:00		Session I	Session III	Excursion to Jerusalem (Lunch & Dinner)	Life Award
10:00			Session IV		Workshop
11:00		Lunch	Lunch		Lunch
12:00			Poster I		Poster III
13:30		Session II	Session V		Best poster awards
14:00			Session V		Discussion
15:30		Registration	Free evening		Conclusion
16:00					Light dinner + Poster II
17:00		Reception			
18:00					
19:00					
20:00					
21:00					

- Note two type of talks,
 - 1) 25 min talk + 5 min questions
 - 2) 10 min talk + 5 min questions

Detailed Program:

August 13, 2017, Sunday

16:00 – 19:00 Registration at Reisfeld Residence

19:00 – 21:00 Reception at Reisfeld Residence

August 14, 2017, Monday

7:30 – 8:45 Breakfast at Reisfeld Residence

9:00 – 9:15 **Opening remarks**

Session I: Mechanism of action I

Chair: Frank Sonnichsen

9:15 – 9:45 Ido Braslavsky - "IBP interactions with ice crystals"

9:45 – 10:15 Yoshinori Furukawa - "Anisotropic functions of antifreeze glycoproteins"

10.15 – 10:45 Coffee Break

10.45 – 11:15 Maddalena Bayer-Giraldi - "Ice-binding proteins from sea-ice diatoms: a study of protein-ice interaction"

11:15 – 11:30 Marco Mangiagalli – "Relationship between function and structure of an ice binding protein from Antarctic bacteria"

12:00 – 13:30 **Lunch**

13:30 – 15:30 **Poster Session I**

Session II: Mechanism of action II, Ice nucleation and Recrystallization

Chair: Maddalena Bayer-Giraldi

15:30 - 16:00 Thomas Koop - "Ice nucleation and ice recrystallization inhibition of natural ice-binding macromolecules"

16:00 – 16:30 Tobias Weidner – "Control of water structure and energy transfer by ice nucleating bacteria and fungi"

16:30 – 16:45 Peter Wilson – "Cubic ice transitioning to hexagonal - not as esoteric as we thought"

16:45 – 17:15 Coffee Break

17:15 – 17:30 Iftach Nevo – "Laser-induced oriented ice nucleation"

17:30 – 17:45 David Ehre – "Induced Ice Nucleation by Polar Materials: The Role of Pyroelectric Charge and Water Alignment"

17:45 – 18:00 Patricio Carvajal-Rondanelli - "Relationship between polyproline helix type II secondary structure and inhibition of ice recrystallization of short homopeptides"

18:15 – 20:00 **Poster Session II + Light Dinner**

August 15, 2017, Tuesday

7:30 – 8:45 Breakfast at Reisfeld Residence

Session III: Biology of Psychrophiles

Chair: Ido Braslavsky

9:00 – 9:30 Laurie Graham - "The origins of antifreeze proteins - a cornucopia of evolutionary mechanisms"

9:30 – 10:00 Maya Bar-Dolev, Shuaiqi Guo, and Corey Stevens - "Ice Adhesion of *Marinomonas primoryensis* bacteria, and the structure of the multi-domain *MpIBP*"

10:00 – 10:15 Tyler Vance – "New type of ice-binding adhesion? Structure and function of the multi-domain ice-binding proteins from the Antarctic bacterium, *Shewanella frigidimarina*"

10:15 – 10:45 Coffee Break

Session IV: IBPs, water and ice simulations

Chair: Peter Wilson

10:45 – 11:15 Valeria Molinero - "Effect of size, aggregation, and hydrogen bonding on ice binding and ice nucleation by IBPs"

11:15 – 11:45 Michael Schauerl - "Adding a missing piece to the puzzle of protein ice recognition"

12:00 – 13:30 Lunch

13:30 – 15:30 **Poster Session III**

Session V: Novel and modified IBPs and bio-inspired material

Chair: Wang Jianjun

15:30 – 16:00 Matt Gibson "Biomaterials Ice inhibitors; Design and application"

16:00 – 16:30 Ran Drori - "Inhibition of Ice Growth by a Supramolecular Assembly"

16:30 – 16:45 Guoying Bai – "Oxidized quasi-carbon nitride quantum dots inhibit ice growth"

16:45 – 17:15 Coffee Break

17:15 – 17:45 Frank Sonnichsen - "Photo-activated IBPs; from basic mechanism to applications"

17:45 – 18:00 Elizabeth Delesky – "Synthetic Routes from Ice Binding Proteins to Biomimetic Antifreeze Polymers"

Free Evening

August 16, 2017, Wednesday

7:30 – 8:30 Breakfast at Reisfeld Residence

8.30 – 20:30 **Excursion to Jerusalem (Including dinner)**

August 17, 2017, Thursday

7:30 – 8:45 Breakfast at Reisfeld Residence

9:00 – 9:45 **Life Award lecture** - Peter Davies

9:45 – 10:00 **Conference Picture**

10:00 – 12:00 **Workshop and demonstrations of IBP investigation techniques**

Ido Braslaysky and Peter Davies

12:00 – 13:30 Lunch

Session VI: IBP applications in biotechnology and cryobiology

Chair: Yizchak Mastai

14:00 –14:30 Wang, Jianjun - "Biomimetic antifreeze proteins for cryopreservation of horse sperm"

14:30 – 15:00 Peter Davies - "Engineering superior IBPs"

15:00 – 15:15 Elias Anastassopoulos –“Freezing in nature; what can we learn from biotechnological purposes?”

15:15 – 15:45 Coffee Break

15:45 – 16:00 Aleksei Kaleda – “Ice cream structure modification by ice-binding proteins”

16:00 - 16:15 Vera Sirotinskaya – “Investigation of ice binding proteins applications for cryopreservation of biological systems”

16:15 – 16:30 **Best poster awards**

16:30 – 17:00 **Panel Discussion** Peter Davies, Ido Braslaysky, Frank Sonnichsen, Matt Gibson, Wang Jianjun, "Future directions in IBP research and applications"

17:00 – 17:15 **Closing remarks**

19:00 - 21:00 **GALA**