IBB world Biophysics Week 2023 (IBB-BW2023)

Institute of Biochemistry and Biophysics (IBB)

University of Tehran, Tehran, Iran

Hybrid virtual and in person sessions: 26-28 February 2023, Virtual sessions: 23 March 2023

https://www.ibb.ut.ac.ir/ibb-bw2023

Location:

IBB Amphitheater

Virtual sessions:

https://elearn4.ut.ac.ir/login/index.php

Google meet, and UT Television

Director:

Dr. Hamid Mobasheri

Executive members:

Ziaei, S., Edrisi, M., *Rezaei, M., Akbari, M., Mohsenimehr, A., Rezaee. S.*

Due to coincidence of World Biophysics Week 20-24 March 2023 with the Iranian New Year eve and holidays, the combined in-person and virtual programs will be conducted from 26-28 February 2023 and their corresponding virtual representation will be podcasted during World Biophysics Week time on March 23.

Supporting organizations:

United Nations Educational, Scientific and Cultural Organization (UNESCO), uniTwin Network on Research and Postgraduate Education in Biophysics, Biotechnology and Environmental Health, American Biophysical Society, CEBiochem, Iran, Federation of Iranian Bioscience Societies, uniTwin, UNESCO Chair on Interdisciplinary Research in Diabetes, University of Tehran, International Science Council

IBB-BW 2023 hybrid virtual and in-person programs
Part I

26-28 February 2023

	Opening session *Sunday 26-2-2023*	
10:00-10:15 (06:30-07:00 GMT)	*Quran recitation and Iran National anthem* *Opening remarks*	
10:15-10:30 (07:15-07:30 GMT)	Iranian Biophysical activities and outcomes	Pof. H. Mobasheri
10:30-10:45 (07:30-07:45 GMT)	Biophysics, research and teaching aspects	Prof. A.A. Moosavi Movahedi (Head of IBB)
10:45-11:00 (07:45- 08:00 GMT)	Biophysics in IBB and Iran	*(Video clip)*
11:00-12:00 (08:00-08:30 GMT)	General discussion on the teaching and research and application aspects of Biophysics	*Member of academics and students*

	Frontiers on Protein Structure (Biophysical Chemistry Laboratory, BCL) *Sunday, 26-2-2023*	
13:30-13:45 (10:00-10:15 GMT)	*Biophysics of Molecular Diabetes*	*Prof. A.A. Mousavi Movahedi (Head of BCL)*
13:45-14:00 (10:15-10:30 GMT)	*Amyloid Management by Protein-based Chaperones*	P. Arghavani, F. Moosavi-Movahedi, M. Pirhaghi, E. Hosseini
14:00-14:15 (10:30-10:45 GMT)	*Protein-based Vehicle for Antioxidants and Drug Delivery*	S. Behjati-Hosseini, F. Disfani, B. Davaeil, S. Esteghlal, Z. Noruzzadegan, Hongjun
14:15-14:30 (10:45-11:00 GMT)	*Protein Segments Recognition via Residual Networks*	Z. Moosavi-Movahedi, N. Salehi, M.H. Karimi-Jafari
14:30-14:45 (11:00-11:15 GMT)	*Coffee and refreshment break*	
14:45-15:00 (11:15-11:30 GMT)	*Aggregate Regulation for αB-Crystallin by Serotonin (Happiness Hormone)*	M. Nourazaran, R. Yousefi
15:00-15:15 (11:30-11:45 GMT)	*Protein-MOF Complex as Anticancer Reagent*	M. Edrisi, H. Daneshgar, M. Bagherzadeh
15:15-15:30 (11:45-12:00 GMT)	*Microfluidic Device for Facilitating Protein Fibrillation*	Z. Haghparas, M. Badiei, M. Habibi-Rezaei
15:30-15:45 (12:00-12:15 GMT)	*Enhancement of αB-Crystallin Chaperone Ability via ions F.*	Moosavi-Movahedi, A.A. Saboury, R. Yousefi
15:45-16:00 (12:15-12:30 GMT)	***General discussion, elaboration on the future activities of BCL and concluding remarks***	

Biosensors and Bioanalysis (Laboratory of Bioanalysis, LB) *Monday 27-2-2023*		
13:30-13:45 **(10:00-10:15 GMT)**	*Research areas, current works and future perspective of LB*	Prof. H. Ghourchian (Head of LB)
13:45-14:00 **(10:15-10:30 GMT)**	*A report of the laboratory articles and targeted journals*	Journal Club *(Video clip)*
14:00-14:15 **(10:30-10:45 GMT)**	*Nanozymes: Hot spot in the application of enzymes*	Dr. F. Dashtestani
14:15-14:30 **(10:45-11:00 GMT)**	*Biophysics of aptamer-based biosensors: Recent advances for global health applications*	Dr. R. Torabi
14:30-14:45 **(11:00-11:15 GMT)**	Introducing the atmosphere, facilities and running projects of the lab by currently active students:	(M. Behnamrad, F. Hejrati, H. Zamanian, S. Ziaei, H. Mianmohale, A. Heidari, N. Cheraghi) (Video clip)
14:45-15:00 **(11:15-11:30 GMT)**	*Coffee and refreshment break*	
15:00-15:15 **(11:30-11:45 GMT)**	*Graphene quantum dots: An insight on improving performance and biological applications*	Dr. Z. Kamal
15:15-15:30 **(11:45-12:00 GMT)**	*Metal-organic frameworks: bioconjugation and application in the development of LSPR-based immunosensors*	Dr. M. Soroush
15:30-15:45 **(12:00-12:15 GMT)**	*Gold nanorods etching: a powerful signaling process for biosensor fabrication*	K. Kermanshahian
15:45-16:00 **(12:15-12:30 GMT)**	*Introducing the atmosphere, facilities and running projects of the lab by currently active students*	(S. Ziaei, A. Heidari) (Video clip)
16:00-16:15 **(12:30-12:45 GMT)**	***General discussion, collaboration, future activities of LB and concluding remarks***	

Biophysics and Bio-electromagnetics (Laboratory of Membrane Biophysics and Macromolecules, LMBM) *Tuesday 28-2- 2023*		
13:30-13:45 **(10:00-10:15 GMT)**	*LMBM current Biophysical projects;* • *Biophysical detection and control of corona virus* • *Electromagnetic field effect on brain K-channels* • *Magnetic field effect on cornea and stem cells* • *Biophysical and pest control* • *Biophysics of high altitude effect on living systems*	*Prof. Hamid Mobasheri* *(Head of LMBM)*
13:45-14:00 **(10:15-10:30 GMT)**	*A tour of LMBM and some of the collaborating labs and centers*	*Rezaei, M. and Akbari, M.* *(Video clip)*
14:00-14:15 **(10:30-10:45 GMT)**	*Electromagnetics susceptibility of rat's brain calcium dependent K-channel*	*Rezaei, M.* *(Current PhD student of LMBM)*
14:15-14:30 **(10:45-11:00 GMT)**	*Biophysics and ophthalmology* *Current approaches to treat eye problems*	*Dr AR. Nourizadeh* *(Collaborative research Scientist)*
14:30-14:45 **(11:00-11:15 GMT)**	*Effect of Magnetic field on collagen molecules involved in keratoconus of cornea*	*Akbari, M.* *(Current PhD student of LMBM)*
14:45-15:00 **(11:15-11:30 GMT)**	**Coffee and refreshment break**	
15:00-15:15 **(11:30-11:45 GMT)**	*Magnetic field effect on Olfactory Ensheating Cells (OEC)*	*Drs. Zahra Elyasigorgi* *(PhD graduate of LMBM)*
15:15-15:30 **(11:45-12:00 GMT)**	*Biophysics and clinical neuroscience* *Biophysics and spinal cord injuries treatment*	*Drs. S. Kouhzaei* *(PhD graduate of LMBM)*
15:30-15:45 **(12:00-12:15 GMT)**	*Application of Polymer Physics in biology*	*Dr Rouholah Abdolvahab* *(Joint PhD graduate of LMBM)*
15:45-16:00 **(12:15-12:30 GMT)**	***General discussion, collaboration, future activities of LMBM and concluding remarks***	