



Department of Philosophy
Faculty of Humanities and Social Sciences
University of Rijeka
Rijeka, Croatia

Summer School in the Philosophy of the Life Sciences: Molecular Biology and Evolution



ThUMB



Theoretical Underpinnings of Molecular Biology
(HRZZ Project IP-2018-02-3378)

July 15 – 18, 2019

Department of Philosophy, University of Rijeka (Room 401)

| DAY 1 (Monday, July 15) | |
|-------------------------|---|
| 10.00 – 11.00 | Agnes Bolinska (University of Cambridge) "Determining the Structure of Biological Macromolecules: Theory, Models, and Data" |
| 11.00 – 11.30 | Coffee Break |
| 11.30 – 12.00 | Michal Hubalek (University of Hradec Králové) "Plots, Past and Puzzles of Human Evolution" |
| 12.00 – 12.30 | Mia Biturajac (University of Rijeka) "The Role of Biological (Dys)function in Mental Disorders" |
| 12.30 – 14.00 | Lunch Break |
| 14.00 – 15.00 | Agnes Bolinska (University of Cambridge), Julie-Anne Gandier (Aalto University) "Understanding Function through Multiple Models of Protein Structure: Barriers to Integration?" |
| 15.00 – 15.30 | Antonio Danese (University of Padova) "Philosophical Challenges Imposed by Genetic Editing" |
| 15.30 – 16.00 | Coffee Break |
| 16.00 – 16.30 | Zvonimir Anić (University of Rijeka) "Mechanisms in Health Sciences: A Desirable Goal but a Bad Methodology?" |
| 16.30 – 17.00 | Predrag Šustar Presentation of the ThUMB project (Croatian Science Foundation IP-2018-01-3378) |
| 19:00 – 21.00 | Welcome reception |

| DAY 2 (Tuesday, July 16) | |
|--------------------------|---|
| 10.00 – 11.00 | Sahotra Sarkar (University Texas at Austin) "Philosophy and Molecular Biology: The Classical Problems" |
| 11.00 – 11.30 | Coffee Break |
| 11.30 – 12.00 | Ozan Altan Altinok (Westfälische Wilhelms-Universität Münster) "Omics Revolution in Molecular Biology and Evolution: From DNA's "Causal Bottleneck" to Evolutionary Processes, What to do When there is no Unified Scheme?" |
| 12.00 – 12.30 | Laurenz Casser (University of Texas at Austin) "Pain Modulation and Sensory Inhibition" |

| | |
|---------------|---|
| 12.30 – 14.00 | Lunch Break |
| 14.00 – 15.00 | Sahotra Sarkar (University of Texas at Austin) “A CRISPR Philosophy” |
| 15:00 – 16:00 | Tudor Baetu (University of Quebec in Trois-Rivieres) “Mechanisms in Molecular Biology” |
| 16.00 – 16.30 | Coffee Break |
| 16.30 – 17.30 | Tudor Baetu (University of Quebec in Trois-Rivieres) “How do Mechanisms and Phenomena relate to One Another?” |
| 18.00 | Visit to Trsat castle (optional) |

| DAY 3 (Wednesday, July 17) | |
|----------------------------|---|
| 10.00 – 11.00 | James DiFrisco (Centre for Logic and Philosophy of Science (CLPS) KU Leuven) “Modeling the Genotype-Phenotype Map: from Networks to Dynamics” |
| 11.00 – 11.30 | Coffee Break |
| 11.30 – 12.00 | Vito Balorda (University of Rijeka) “Explanation in Molecular Biology: Explanatory Force of the Details” |
| 12.00 – 12.30 | Gregor Greslehner (University of Bordeaux) “Two Dogmas of Molecular Biology: What is the Explanatory Role of the Sequence-Structure-Function Relationship?” |
| 12.30 – 14.00 | Lunch Break |
| 14.00 – 15.00 | James DiFrisco (Centre for Logic and Philosophy of Science (CLPS) KU Leuven) “Developmental Homology and the De-Coupling of Levels of Organization” |
| 15.00 – 15.30 | Riccardo Mona (University of Milan) “Evo-Devo and Evolutionary Change” |
| 15.30 – 16.00 | Coffee Break |
| 16.00 – 17.00 | Round table: Croatian Science Foundation Research Projects in Molecular Evolutionary Biology (Tomislav Domazet-Lošo, Institute Ruđer Bošković, Igor Jurak, University of Rijeka, Department of biotechnology) |

| DAY 4 (Thursday, July 18) | |
|---------------------------|--|
| 10.00 – 11.00 | Dan Nicholson (KLI Klosterneuburg) “On Being the Right Size, Revisited: The Problem with Engineering Metaphors in Molecular Biology” |
| 11.00 – 11.30 | Coffee Break |
| 11.30 – 12.00 | Urška Martinc (University of Maribor) “The Ontological Status of Species” |
| 12.00 – 12.30 | Karla Njegric (University of Zadar) “Genetic Underpinnings of Human Intelligence” |
| 12.30 – 14.00 | Lunch Break |
| 14.00 – 15.00 | Dan Nicholson (KLI Klosterneuburg) “What Is Life? at 75: A Retrospective Evaluation” |
| 15.00 – 15.30 | Concluding remarks |
| 16.00 | Visit to Pajol beach (optional) |

Summer School organised by: Predrag Šustar, Zdenka Brzović, James DiFrisco, Vito Balorda
Sveučilišna avenija 4, 51 000 Rijeka
Contact: zdenka@uniri.hr