

# New Frontiers in Molecular Crowding

## Wednesday 29 June

Chair: Marco Cammarata, ESRF

|               |                     |  |  |
|---------------|---------------------|--|--|
| 12:30 - 13:50 | Registration        |  |  |
| 13:50 - 14:00 | Welcome             |  |  |
| 14:00 - 14:40 | Daniel Harries      | The Hebrew University, Jerusalem, Israel | <a href="#">Molecular Crowding Is More than Hard-Core Repulsions</a>   |
| 14:40 - 15:20 | Alessandro Barducci | INSERM-CNRS-UM, Montpellier, France      | <a href="#">Molecular modeling of cellular condensates at diverse resolution</a>                               |
| 15:20 - 16:00 | Judith Peters       | ILL, Grenoble, France                    | <a href="#">Crowding as protective mechanism in cells and for proteins against extreme external conditions</a> |

### Coffee Break

Chair: Francesco Piazza, University of Firenze

|               |                    |  |  |
|---------------|--------------------|--|--|
| 16:30 - 17:10 | Paolo De los Rios  | EPFL, Lausanne, Switzerland                        | Crowding modulation of chemical reactions  |
| 17:10 - 17:35 | Josipa Cecic Vidos | Centre de Biophysique Moléculaire, Orleans, France | <a href="#">Toward Understanding of the Extracellular Matrix Remodeling: Enzymatic Kinetics in Synthetic Crowded Mimics</a>                            |
| 17:35 - 18:00 | Alexandre Chenal   | Institut Pasteur, Paris, France                    | <a href="#">Effects of molecular crowding on a bacterial toxin: from secretion to host cell hijacking</a>  |
| 18:00 - 18:25 | Giuseppe De Luca   | University of Palermo, Italy                       | <a href="#">Deciphering LLPS phenomena during spontaneous amyloid self-assembly in micron-scale compartments by quantitative microscopy techniques</a> |

18:30- 20:00 **Poster Session with Cheese and Wine**

## Thursday 30 June

Chair: Pierandrea Temussi, University of Naples

|               |                        |   |   |
|---------------|------------------------|---|---|
| 08:40 - 09:20 | Gian Gaetano Tartaglia | IIT, Genova, Italy                            | <a href="#">Non-coding RNAs and phase separation rule the world!</a>  |
| 09:20 - 10:00 | Evan Spruijt           | Radboud University, Nijmegen, The Netherlands | <a href="#">Liquid-liquid phase separation in crowded environments</a>  |
| 10:00 - 10:40 | Roland Winter          | TU Dortmund, Dortmund, Germany                | <a href="#">Pressure, Temperature, and Cosolute Effects on Liquid-Liquid Phase Separation of Proteins: Physical Chemistry and Biological Implications</a> |

### Coffee Break

Chair: Anand Yethiraj, Memorial University of Newfoundland

|               |             |   |   |
|---------------|-------------|---|---|
| 11:05 - 11:30 | Maryna Löwe | Heinrich-Heine-University Düsseldorf, Germany | <a href="#">Genetically-encoded sensors for measuring macromolecular crowding at the lipid membrane interface</a> |
| 11:30 - 12:10 | Yann Fichou | University of Bordeaux, Bordeaux, France      | <a href="#">Tau protein liquid-liquid phase separation</a>  |

### Lunch

Chair: Giorgio Schiró, IBS Grenoble

|               |                   |  |  |
|---------------|-------------------|--|--|
| 13:30 - 14:10 | Sofia Magkiriadou | EPFL, Lausanne, Switzerland                  | <a href="#">Polyphosphate affects cytoplasmic and chromosomal dynamics in nitrogen-starved Pseudomonas aeruginosa</a>            |
| 14:10 - 14:50 | Simon Ebbinghaus  | TU Braunschweig, Braunschweig, Germany       | <a href="#">Protein and RNA folding under crowding and phase separation</a>  |
| 14:50 - 15:15 | Elisabetta Mileo  | CNRS & Aix Marseille Univ, Marseille, France | <a href="#">How the cellular crowding affects protein structural dynamics: a SDSL- EPR spectroscopy approach applied in cell</a> |

### Coffee Break

Chair: Christian Gutt, University of Siegen

|               |                      |  |  |
|---------------|----------------------|--|--|
| 15:40 - 16:05 | Maria Agnese Morando | Ri.MED Foundation, Palermo, Italy      | <a href="#">Development of non toxic bio-adhesives for wet environments</a>  |
| 16:05 - 16:45 | Frank Schreiber      | University Tübingen, Tübingen, Germany | <a href="#">Crowding in protein solutions: From phase behavior to dynamics</a>   |
| 16:45 - 17:10 | Greta Grassmann      | University of Rome & IIT, Rome, Italy  | <a href="#">A Computational Approach to Investigate TDP-43 RNA-Recognition Motif 2 C-Terminal Fragments Aggregation in Amyotrophic Lateral Sclerosis</a> |

17:45 - 20:00 **Departure to Grenoble & Street Art visit**

20:00 **Social Dinner at L'Epicurien**

## Friday 1 July

Chair: German Rivas, CIB Madrid

|               |                 |  |   |
|---------------|-----------------|--|---|
| 09:00- 09:40  | Christian Gutt  | University Siegen, Siegen, Germany                     | XPCS studies of crowded protein systems using high brilliance synchrotron sources |
| 09:40 - 10:20 | Johannes Möller | XFEL, Hamburg, Germany                                 | <a href="#">Accessing dynamics of complex liquids at European XFEL</a>            |
| 10:20 - 11:00 | Anand Yethiraj  | Memorial University of Newfoundland, St John's, Canada | <a href="#">Experimental Model Systems for Macromolecular Crowding</a>            |

### Coffee Break

|               |                    |                    |  |
|---------------|--------------------|--------------------|--|
| 11:30 - 12:10 | Silvia Zorilla     | CIB, Madrid, Spain | <a href="#">Implications of macromolecular crowding and phase separation in bacterial division</a> |
| 12:10 - 12:20 | Concluding Remarks |                    |  |
| 12:30         | End of the meeting |                    |  |