



International School on  
Biological Crystallization  
Granada (SPAIN), May 21<sup>st</sup> – 26<sup>th</sup>, 2023  
LABORATORIO DE ESTUDIOS CRISTALOGRAFICOS, IACT (CSIC - UGR)

# Programme

## Sunday, May 21<sup>st</sup>

### WELCOME

18:00 – 20:00 Registration (*Abades Nevada Palace Hotel*)

20:00 *Welcome Cocktail* (*Abades Nevada Palace Hotel*)

## Monday, May 22<sup>nd</sup>

### FROM SOLUTION TO PROTEIN CRYSTALS

08:00 – 09:00 Registration (*Abades Nevada Palace Hotel*)

09:00 – 09:15 **Overview of the School**

*J.A.G. & J.M.G-R*

09:15 – 10:00 **Protein purification strategies intended for crystallization**

*S. Martínez-R*

10:00 – 10:30 *Coffee break and Poster Session*

10:30 – 11:15 **From protein solution to crystals: Nature and formation of protein crystals**

*B. Rupp*

11:15 – 12:00 **Preparation of protein samples for crystallization experiments**

*P. Řezáčová*

12:00 – 12:45 **Nucleation of Macromolecular Crystals**

*J.M. García-Ruiz*

12:45 – 13:30 **Analyzing, Scoring and Optimizing Crystallization Conditions**

*C. Betzel*

13:30 – 15:00 *Lunch*

15:00 – 15:45 **Dialysis, crystallization and the Hofmeister series**

*J. Mesters*

15:45 – 16:30 **Protein Crystallization by capillary Counter-diffusion technique**

*J.A. Gavira*

16:30 – 17:15 **Unpacking how to grow protein crystals**

*J. Newman*

17:15 – 18:00 **Seeds of success: An overview of the Microseed Matrix Screening technique**

*M. Marsh*

18:00 – 19:00 *Coffee break and Poster Session*

## Tuesday, May 23<sup>rd</sup>

### TINY & LARGE CRYSTALS, MEMBRANE PROTEINS, COMPLEXES, SAXS, CryoEM...

- 09:00 – 09:30 **A guide to choosing your method for crystallization**  
*L. Govada*
- 09:30 – 10:00 **Microfluidics in action: crystallization and crystallography in microchips**  
*C. Sauter*
- 10:00 – 10:30 **Trace fluorescent Labeling and Low-Cost Imaging of Protein Crystals**  
*C. Tarver*
- 10:30 – 11:00 *Coffee break and Poster Session*
- 11:00 – 12:00 **Femtosecond Crystallography, a New Era in Structural Biology**  
*P. Fromme*
- 12:00 – 12:45 **Crystallization of Membrane Proteins in Lipid Mesophases**  
*M. Caffrey*
- 12:45 – 13:30 **Helicobacter pylori Acid Acclimation: The Evil Duo of a pH-Gated Urea Channel and a Cytoplasmic Urease.**  
*H. Luecke*
- 13:30 – 15:00 *Lunch*
- 15:00 – 15:45 **Screening Data Analysis and Crystallization Condition Prediction**  
*M. Pusey*
- 15:45 – 16:30 **Best practices to prepare and deliver samples in serial femtosecond crystallography experiments at XFELs**  
*J.M. Martin-G.*
- 16:30 – 17:15 **Crystallization of Protein-Nucleic Acid Complexes**  
*C. Biertümpfel*
- 17:15 – 18:00 **AlphaFold and biochemical considerations for protein crystallization**  
*J.D. Ng*
- 18:00 – 19:00 *Coffee break and Poster Session*
- 22:00 *Night guide walk of Albaicín & Sacromonte*

## Wednesday, May 24<sup>th</sup>

### TINY & LARGE CRYSTALS, MEMBRANE PROTEINS, COMPLEXES, SAXS, CryoEM...

09:00 – 09:30 Differences in crystallization of various haloalkane dehalogenases

*I.K. Smatanova*

09:30 – 10:00 Optimisation of Crystal Growth for Neutron MX

*M. Budayova-Spano*

10:00 – 10:30 Protein crystallization in micro- and meso-scale devices

*F. Castro*

10:30 – 11:00 *Coffee break and Poster Session*

11:00 – 11:45 Intracellular protein crystallization

*L. Redecke*

11:45 – 12:30 Molecular movies of enzyme catalysis

*G. Calero*

12:30 – 13:30 Small Angle Solution Scattering as a complementary technique in structural biology studies.

*E. Snell*

13:30 – 15:00 *Lunch*

15:00 – 15:45 Cryo-Electron tomography – method to bridge scales in biological system

*N. Mizuno*

15:45 – 16:30 Introduction to single particle cryoEM

*E. Cunha*

16:30 – 17:15 How do we get fragments or ligands into structures?

*T. Peat*

17:15 – 18:00 Microcrystal electron diffraction: methods and applications

*B. Nannenga*

18:00 – 19:00 *Coffee break and Poster Session*

## Thursday, May 25<sup>th</sup>

### DEMONSTRATION FAIR

09:00 – 10:30 **Practical Demonstration “a la carte”**

10:30 – 11:00 *Coffee Break*

11:00 – 13:30 **Practical Demonstration “a la carte”**

13:30 – 15:00 *Lunch*

15:00 – 16:30 **Practical Demonstration “a la carte”**

17:00 – 17:45 **Practical Demonstration “a la carte”**

20:00 *Gala Dinner* (*Carmen de la Victoria*)

## Friday, May 26<sup>th</sup>

### CLOSING LECTURES & STUDENTS PRESENTATIONS

09:30 – 10:15 **The Chemistry of Mushroom Magic** (*Why you should not lick toads.*)  
*B. Rupp*

10:15 – 11:00 **Round Table: Teaching Crystallography**

11:00 – 11:30 *Coffee Break*

11:30 – 12:30 **Oral Presentation of finalist posters**

12:30 – 13:30 **Poster Prizes and Closing of the School**

13:30 – 15:00 *Lunch*