

Advanced Training in Cutting-edge Research & Innovation at CIC bioGUNE

1. INTRODUCTION to CIC bioGUNE RESEARCH to NEW PhD STUDENTS

- Periodicity: 1 per year; 5 consecutive days
- Location: CIC bioGUNE Atrium 801 and Installations
- Synopsis: Day 1: General presentation of CIC bioGUNE by Scientific Director
Presentation of the Training Program by the Training Committee
Presentation of the Tech Transfer Unit
Short presentation by each new student (5 min each)
Short intro to the Visionary Project to be prepared by the students
- Day 2: Introduction to Structural Biology & Prions
Visit to the facilities
- Day 3: Introduction to Mol, Cell Biology & Metabolomics Techniques
Visit to the facilities
- Day 4: Introduction to the Technological Platforms at CIC bioGUNE
Visit to the facilities
- Day 5: Presentation of a research project by each group of students
Prize to best presentation
- Open: CIC bioGUNE New PhD students
- Mandatory: Mandatory
- Language: English
- Coordinator: Rosa Barrio/Training Committee

2. THEMATIC COURSES

MANDATORY COURSES

- **Proteomics**
Felix Elortza.
Basic Course on Proteomics.

- **Introduction to Bioinformatics**
Antonio del Sol, Urko M Marigorta, Sacha Yung.
Introductory Course.

- **Advanced Bioinformatics**
Antonio del Sol, Urko M Marigorta, Sacha Yung.
Advanced and Real Cases.

- **Technology Transfer & Business Development**
Invited speakers.
Coordinator: Donatello Castellana.
Basic ideas and diverse activities.

- **Ethics and Compliance.**
Invited speakers.
Coordinator: Donatello Castellana.

OPTIONAL COURSES

- **Mice genotyping**
Ana M Aransay.
Introductory course.

- **MALDI-TOF imaging**
Felix Elortza.
Theoretical background

- **Biomarkers & Discovery**
José M Mato.
Basic and practical cases.

- **UPLC-MS Metabolomics**
JM Falcón.
Metabolomics applied to cell biology and physiology.
Metabolomics applied to analytical chemistry.
Both include Guided visits to metabolomics platform.

- **Immunohistochemistry**
Malu Martínez-Chantar, Marta Varela et al. Every year
Theoretical background
Hands-on activities

- **Seahorse-based Assays**
Malu Martínez-Chantar, Teresa Cardoso.
Applications

- **B cell responses and Antibody Production**
Juan Anguita.
Introductory Course.
Basis of B cell responses: activation, clonal expansion & memory. Allergy & tolerance.
Experimental generation of antibodies: types of antigens, adjuvants and immunization regimes
Polyclonal antibodies in research: species and uses. Purification.
Monoclonal Ab production: Process & selection, characterization, cloning and humanization. Identification of epitopes.
Antibody isotypes and their function: human, mouse, rabbit and bovids

- **Drug Discovery**
Invited Speaker.
Coordinator: Donatello Castellana.
Basic course.

- **Computational Chemical Biology**
G Jiménez-Osés.
Introduction and theory, background and general concepts
Hands-on demonstration

- **Basic NMR**
Oscar Millet.
Introduction of NMR spectroscopy.

- **Foundations of NMR spectroscopy**
Oscar Millet, Tammo Diercks et al.
Advanced Course.

- **NMR & Molecular Recognition**
Jesús Jimenez Barbero, Ana Ardá, Oscar Millet, et al.
Advanced Course.

- **Introduction to X-Ray Crystallography**
Adriana Rojas.
Introductory Course.

- **Advanced X-Ray Crystallography**
Adriana Rojas.
Advanced Course.

- **Electron Microscopy**
Nicola Abrescia, S Connell, M Valle. Every year
Theoretical & technical background
Hands-on activities & Tutorial

- **Fundamentals of Glycosciences**
Ana Ardá, Alberto Fernández-Tejada, Marcelo Guerín.
Basic course.

- **Experimental models in Biomedicine**
Edurne Berra
Basic course

3. SEMINAR SERIES

- Friday Seminars.

Periodicity: 3 Fridays / month @ 12:00, 1 hour
Location: Atrium 800
Participants: External invited speakers
Synopsis: General topics
Open: Open to external audience
Mandatory: Mandatory for PhD students
Language: English
Coordinator: Begoña Bareño / Training Committee / every PI

- Senior Researchers Seminars.

Periodicity: 1 Friday / month @ 12:00, 1 hour
Location: Atrium 800
Participants: CIC bioGUNE Senior Researchers
Synopsis: General topics
Open: Open to external audience
Mandatory: Mandatory for PhD students
Language: English
Coordinator: Rosa Barrio / Begoña Bareño / Training Committee

- Junior Researchers Seminars

Periodicity: 2 Wednesday / month @ 12:00, 60 minutes
Location: Atrium 800
Participants: CIC bioGUNE Predocs and Postdocs
Synopsis: General topics
Open: Open to CIC bioGUNE personnel only
Mandatory: Mandatory for PhD students
Language: English
Coordinator: Donatello Castellana / Begoña Bareño / Training Committee

- UPS Club

Periodicity: Every 4 months; Several groups 20-30 minutes per group
Location: CIC bioGUNE or UPV/EHU.
Participants: Groups from CIC bioGUNE, UPV/EHU & other invited researchers;
Topics: Ubiquitin and Proteasome System topics
Open: Open to CIC bioGUNE PhD students
Mandatory: Non-mandatory
Language: English
Coordinator: Rosa Barrio