

# READY TO IMMERSE IN RESEARCH?

Barcelona, 2nd - 12th July 2024



**BIYSC**

Barcelona International  
Youth Science Challenge

Agrigenomics  
Architecture  
Astrophysics  
Biochemistry  
Biomedicine  
Chemistry  
Computer Science  
Engineering  
Genetics  
Medicine  
Mathematics  
Physics

## Barcelona International Youth Science Challenge

**Barcelona International Youth Science Challenge (BIYSC)** is a **life-changing experience** for **talented young students** from all over the world with a genuine interest in Science and Technology.

This **two-week residential program** is held annually in **Barcelona**, a **vibrant city with a scientific and technological ecosystem of international relevance** composed by **top-ranked Universities and world-class Research Centers and Hospitals**.

BIYSC is designed for an **international group of ~150 brilliant young High School students** highly motivated for Science, Technology and Research, **aged between 16 and 18 years old**.

Inspire · Empower · Connect · Challenge · Engage



### KEY BENEFITS OF THE PROGRAM

*At BIYSC, you will boost your career by:*

- **Working hands-on in a project of your choice, immersed in a Research Centre, University or Hospital.**
- **Attending lectures from leading scientists.**
- **Participating in debates, discussions and networking sessions.**
- **Being part of a multicultural scientific community.**
- **Attending the Opening Ceremony and Keynote Expert Lecture at the UNESCO World Heritage Site La Pedrera - Casa Milà.**
- **Presenting your research project in a Symposium during the Closing Ceremony at the UNESCO World Heritage Site La Pedrera - Casa Milà.**
- **Discovering the cultural heritage and main landmarks of Barcelona.**



# RESEARCH PROJECTS



**NEW! Predicting tap Water Neurotoxicity using laboratory model organisms**  
Institute of Environmental Assessment and Water Research (IDAEA-CSIC)

**NEW! Advanced Mathematics: Bridging the Gap between Fundamental Theory and Real-World Impact**  
Centre for Mathematical Research (CRM)

**NEW! Quantum Entanglement and Superposition: How Quantum Mechanics helps us understand our Universe**  
Institute of Cosmos Sciences of the University of Barcelona (ICCUB)

**Multi-omics in the fight against Leukaemia**  
Josep Carreras Leukaemia Research Institute

**Unravelling Tumorigenesis and its pathways with Drosophila as a model organism**  
Institute for Research in Biomedicine (IRB Barcelona)

**Synthetic Biology Innovations: engineering tomorrow's life**  
Department of Medicine and Life Sciences at University Pompeu Fabra (UPF MELIS)

**The Neurobiology of Trauma: effects on behaviour and brain function.**  
Institute of Neurosciences (INC)

**Molecular Breeding & Gene Editing: Feeding the world in a changing climate**  
Centre for Research in Agricultural Genomics (CRAG)

**Innovation in Photochemistry and Drug Synthesis: Shaping a Sustainable Future**  
Institute of Chemical Research of Catalonia (ICIQ)

**Planarian Stem Cells: the genetics of immortality.**  
Department of Genetics, Microbiology and Statistics at University of Barcelona (UB)

**Protein Engineering to improve Plastic-Degrading Enzymes.**  
Barcelona Supercomputing Center (BSC)

**Quantum Physics in Communications and Cryptography for New Technologies**  
Institute of Photonic Sciences (ICFO)

**Cosmic ray's detection, Astrophysics at your fingertips.**  
Institute of High Energy Physics (IFAE)

**Inhabiting Gaudi: an Architecture and Engineering approach to human health and buildings of the future.**  
La Salle R&D

**PRE-MED NEW! Beyond the scalpel: discover the Surgery of the future**  
Germans Trias i Pujol Research Institute and Hospital

**PRE-MED. The Medicine behind Organ Transplantation.**  
Bellvitge University Hospital (HUB)

**PRE-MED. Broadening Medical Expertise: from the clinic to the lab bench and back.**  
Clinic University Hospital (HClínic)



**Barcelona International Youth Science Challenge**

**1st Application Call: January 9th - February 19th, 2024**

**2nd Application Call: February 20th - April 12th, 2024**  
*(only for projects with available places)*

**Applications and more information at:**  
**[www.biysc.org](http://www.biysc.org)**



✉ [contact@biysc.org](mailto:contact@biysc.org)

Hosting research centres:



In collaboration with: Committed to:



Within the context of:



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Catalunya  
La Pedrera**

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