# READY FOR A SUMMER OF SCIENCE?

Barcelona, July 6th - 17th 2020

**Barcelona International Youth Science Challenge**

With the support of:

In collaboration with:

Barcelona Institute of Science and Technology

Organized by:

**Fundació Catalunya La Pedrera**

Our reason for being: people. Catalunya La Pedrera Foundation serves our society by building a better and more fair future. For this reason, it offers people opportunities; it drives talent, creation and education; it promotes healthy eating habits, and it preserves and shares the natural and cultural heritage. Catalunya La Pedrera Foundation, through the Area of Knowledge, Education and Research, introduces BIYSC this July 2020. This program is part of the Foundation's objectives, which consist on developing and collaborating with projects that promote excellence in education, offering young students opportunities and supporting those at risk of social exclusion. BIYSC was created based on the knowledge of projects that the Foundation has been running for several years in Catalonia and through the experience of our students that have attended similar international programs around the world.

**BIYSC**
Barcelona International Youth Science Challenge

- Engineering
- Astrophysics
- Mathematics
- Biotechnology
- Computer science
- Biology
- Physics
- Genetics
- Chemistry
- Biomedicine

# Barcelona International Youth Science Challenge

## BIYSC 2020

BIYSC is a two-week excellence program held annually in the Mediterranean capital which is looking for **100 young scientists aged between 16 and 18 years** old from all over the world. It is meant to stimulate scientific talent and encourage their enthusiasm to pursue scientific research and careers in science.

BIYSC covers a broad range of subjects across STEM fields. Different scientific and technological challenges are posed by **international research centers** based in Catalonia. Our participants will have the chance to choose a project that suits their interests and conduct **hands-on and cutting-edge research**.

## BIYSC Program

During this intensive period of time, the participants will not only be living together with their international colleagues that share their same passion, but also enjoy their time by:

- Attending to the **Opening Ceremony** at the UNESCO World Heritage Site La Pedrera (Casa Milà).
- **Working hands-on in a project** within a research center of their choice.
- Attending scientific lectures from leading scientists and **participating in debates and discussions** on the challenges and that scientists face today.
- Visiting some of the **top international industrial sites and research facilities** across Catalonia.
- **Sightseeing of Barcelona** and surroundings and taking part in the social and networking activities.
- Presenting their project's results in the **Closing Ceremony** at La Pedrera.

# Research projects

**Are you in? Be BIYSC!**

**NEW! Continuous flow chemistry: the laboratory of the future**
Institute of Chemical Research of Catalonia (ICIQ)

**NEW! Synthetic biology: engineering life for new social and medical challenges**
Department of Health and Experimental Sciences (DCEXS-UPF)

**NEW! Can computers do math? An approach through axiomatic geometry**
Department of Mathematics at Autonomous University of Barcelona (UAB)

**Protein engineering to improve plastic-degrading enzymes**
Barcelona Supercomputing Center (BSC)

**Feeding the world in a changing climate: molecular breeding & gene editing**
Centre for Research in Agricultural Genomics (CRAG)

**Drosophila as a model organism to study the intricate paths of tumorigenesis**
Institute for Research in Biomedicine (IRB)

**The medicine behind organ transplantation**
Bellvitge University Hospital (HUB)

**Studying neurodegenerative diseases through the eye of molecular biology**
Centre for Genomic Regulation (CRG)

**Quantum physics: a tool for new upcoming technologies**
Institute of Photonic Sciences (ICFO)

**Cosmic rays' detection, astrophysics at your fingertips**
Institute of High Energy Physics (IFAE)