Marc Expòsit Goy

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RESEARCH EXPERIENCE

Translational Synthetic Biology lab, Spain
09/2019 – 09/2020

Master Thesis: "Prediction of CRISPR-Cas9 and base editing outcomes from the sequence of the target region using machine learning". *Advisor:* Marc Güell, Ph.D.

Excellent with distinctions (95/100).

Gehrke lab, Massachusetts Institute of Technology (MIT)
09/2018 – 09/2019

Institute for Medical Engineering and Science

Master Thesis: "Rapid identification of Nanobody Reagents for Emerging Viruses using Yeast Surface Display". *Advisors:* Lee Gehrke, Ph.D. and Magda Faijes, Ph.D.

Applied synthetic biology to reduce the development time of paper-based diagnostic tests for emerging viruses from 8 months to about 2 months.

Excellent with distinctions (100/100), awarded with the Pare Salvador Gil prize in recognition to the best thesis of the MSc in Bioengineering from Ramon Llull University.

Leader of the BioIQS iGEM team, Spain
02/2018 – 09/2018

Developed a gluten sensor for celiac patients based on synthetic biology. Started and formed a team of 12 multidisciplinary students and 3 faculty members to participate in the iGEM competition. Raised US $ 8,700 from companies to finance the project. Created and engaged in multiple science outreach activities. The project recived a bronze medal from the iGEM committee.

Chemical and Environmental Engineering lab, Spain
06/2016 – 09/2017

Bachelor Thesis: "Ethanol production from carbon dioxide by an enriched culture of a microbial isolate using microbial electrochemical technologies".

Co-advisors: Jesús Colprim, Ph.D. and Sebastià Puig, Ph.D.

Excellent with distinctions (98/100), received the PTECO2 prize to the best thesis in carbon capture in Spain.

EDUCATION

Ph.D. Molecular Engineering and Science, University of Washington
2020 – Current

M.S. Bioinformatics and Biostatistics, University of Barcelona, Spain
2019 - 2020

Learned bioinformatics using **Python, R,** and command line tools for the analysis of large-scale biological data. Strong focus on **machine learning** (Sci-kit learn, PyTorch), statistical inference, regression, and lineal models. Also learned web development and data visualization with D3.js.

M.S. Bioengineering, Ramon Llull University, Spain
2017-2019

Awarded with Salvador Gil Academic Excellence Master's Scholarship.
Overall percentage: 95/100 – top of the class

B.S. Biotechnology, University of Girona, Spain
2013 – 2017

Awarded with an Honorific Prize to the student with higher grades of the class.
Overall percentage: 86/100 – top of the class

PRESENTATIONS AND POSTERS

M. Expòsit Goy, A. Mondini, M. Roberts, A. Roffler, A. Schmidt, L. Gehrke. "Rapid development of emerging virus diagnostics for low resource locations". Oral presentation at the Global Community Biosummit 4.0, MIT Media Lab, Boston, MA (10/2020).

M. Expòsit Goy, A. Mondini, M. Roberts, A. Roffler, A. Schmidt, L. Gehrke. "Selection and characterization of Nanobody Reagents for Emerging Viruses". Poster presentation at the Harvard Microbiology Department Retreat, Boston, MA (07/2019).

M. Expòsit Goy, X. Carol, J. Chi, M. Clariana, R. Compte, C. García, M. Jordà, E. Martínez, V. Maull, J. Quintanas, M. Solà, A. Vega, BioIQS iGEM team. "Personalized diagnostic kit for celiac disease". Oral and poster presentations at the 2018 iGEM Giant Jamboree, Boston, MA (10/2018).

PUBLICATIONS

M. Expòsit Goy, R. Bartrons, J. Bertranpetit. "Genome-editing technologies and its impact" (11/2020). ISBN: 978-84-9965-564-2, accessible from: https://www.iec.cat/activitats/documents/genome_editing.pdf

COMMUNITY

Judge at the 2020 iGEM Giant Jamobree   11/2020
Evaluated 6 iGEM projects and gave feedback to the teams on how to improve them.

Genetic Engineering Attribution Challenge participant   10/2020
Trained deep learning models to predict the lab of origin from plasmid DNA sequences.

Organizer of the *Genomic Engineering symposium*, Catalan Society of Biology   2019 – 2020
Organized a series of talks by Spanish scientists and clinicians working on synthetic biology.
Responsible for writing a report on the benefits and risks of modern genome editing technologies.

Responsible for science outreach at the *Catalan Biotechnology Association*   2017 – 2020
Implemented a mentoring program between biotechnology professionals and students.

Grand Hack - *MIT Hacking Medicine* participant   05/2019
Collaborated with medical and bussines students to design a mobile app to assist patients' recovery.

Harvard Square Homeless Shelter substitute volunteer   12/2018 – 04/2019

FELLOWSHIPS AND AWARDS

La Caixa Fellowship: full tuition and stipend for Ph.D. programs in the US	2019
Master's Extraordinary Award to the top student in the class	2019
Pare Salvador Gil award to the best MSc thesis in bioengineering	2019
MOBINT fellowship from the Catalan Government	2018
Accepted in the IQS-MIT exchange program	2018
Salvador Gil Academic Excellence Master's Scholarship	2017
PTECO2 prize to the best BSc thesis in Spain about carbon capture	2017
Bachelor's Extraordinary Award to the top student in the class	2017