

Miriam Caravaca Rodríguez

Biomedical Engineer

Professional Curriculum Vitae

2016 Universidad Autónoma de Barcelona- (UAB, Veterinary Department, Cerdanyola del Vallés)

Contribution to the “Argó” Program – Design and development of a research Project about the comparison and effectiveness of different food conservation methods in front of food contamination in a specialized microbiology laboratory.

2018: Centre de Recerca en Agrigenòmica (CRAG, UAB, Cerdanyola del Vallés)

Internship in the research centre in all the departments. Contribution to the management of the research centre from the global point of view.

2020-2021: UPF - DCEXS Translational Synthetic Biology group (Parc de Recerca Biomèdica de Barcelona)

Project design and development of the project Harmonic for the International genetically engineered machines competition (iGEM, Boston- MIT). Scientific publication pending.

Design and development of hormonal biosensor for the characterization of the T3 hormone in “in vitro” diagnostic with synthetic biology tools via engineered *E. Coli*. Design and development of a proof-of-concept autoregulation system with cellular signalling. Generation of scientific dissemination materials (poster, webpage, social media, mass media)

https://2020.igem.org/Team:UPF_Barcelona

Recognition as winners for the Best Genetic Part designed and Best Wiki (webpage) of the project in the competition. Also we had been nominated for the prizes of Best Poster, Best Final Communication and Best Therapy.

2020-2021: UPF - DCEXS Synthetic Biology for Biomedical Applications Research Group (Parc de Recerca Biomèdica de Barcelona)

Bachelor's thesis, being responsible of the design and development of my research project about genetically engineered bacteria biosensors for the detection of *Vibrio cholerae* microorganism (cholera disease) in water samples.

Being responsible of the experimental planning, analysing the results, doing a registry of the data and creating documentation about it.

2021-2022: UPF - DTIC Simulation, Imaging and Modelling for Biomedical Systems (Barcelona)

Development of a research project focused in the development of new synthetic datasets in new-born images. The augmentation of the dataset was done using StyleGANs application for synthetic image generation.

2022: Athos Capital (Barcelona)

Analyst in a Venture Capital digital investment fund. Study of the start-ups' ecosystem, market analysis, dealflow management, technological analysis of the opportunities, documentation and strategy development.

2022 - Now: Institut d'Investigació i Innovació Parc Taulí (I3PT – CERCA) (Sabadell)

Coordinator and researcher of the research group of Clinical, Interventional, Computational Nephrology (CICN).

Biomedical research of medical devices, software and experimental designs of research in the field of Nephrology and more detailed of the Vascular Access for Haemodialysis. Development of virtual medical training models for clinicians to train invasive techniques or procedures of interventional nephrology.

Publications and congresses:

- Eduardo Palomares; Patricia Jimenez; Edwar Macias; et al; Jose Ibeas. TRANSFER LEARNING COMO HERRAMIENTA PARA MEJORAR EL RENDIMIENTO DEL MACHINE LEARNING EN LA DETERMINACIÓN DEL FLUJO DE LA FISTULA MEDIANTE LA IMAGEN CON INFRARROJOS. Cuarto Congreso del Grupo Español Multidisciplinar del Acceso Vascular. Grupo Español Multidisciplinar del Acceso Vascular (GEMAV). 2022. España.
- Oscar Gallés; Miriam Caravaca; Remo Suppi; Antoni Morell; Jose Ibeas. MORTALITY PREDICTION IN CRONIC KIDNEY DISEASE: DEEP LEARNING-BASED MODEL WITH DATA FROM 10.000 PATIENTS OVER 11 YEARS. Women in Data Science (WiDS). ISGlobal. 2022. España.
- Oscar Galles, Miriam Caravaca Rodríguez, Remo Suppi, Edwar Macias, Antoni Morell, Jordi Comas, Elisenda Martinez, Tomas Salas, Jose Ibeas, #4640 PREDICTION OF CHRONIC KIDNEY DISEASE PROGRESSSION WITH ARTIFICIAL INTELLIGENCE: A CHALLENGE WITHIN OUR REACH, *Nephrology Dialysis Transplantation*, Volume 38, Issue Supplement_1, June 2023, gfa063c_4640, https://doi.org/10.1093/ndt/gfad063c_4640
- Mobile World Congress 2023 - Virtual/Synthetic Reality Training Models conference. 2023. España
- Women in Data Science (WiDS). ISGlobal. 2023. España. Confirmed speaker