

Eva Bugallo Blanco

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Research interests

I am passionate about the development of translational **gene cell therapies**. Throughout my academic career, I have been involved in every step of the process for developing novel CAR T cell products, from target discovery to in vivo efficacy assessment; including vector design, **immunophenotyping** of CAR T cell product, **in vivo** CAR T cell **tracking** and ex vivo biodistribution. Driven by my enthusiasm for cutting-edge immunotherapy, I am eager to further expand my knowledge and expertise beyond the oncology field and venture into the dynamic industry sector.

Key Skills

Excellent in time management
Excellent record keeping
Great team player
Strong research ethic

Experienced in flow cytometry
Experienced in in vivo models
Experienced in viral production and transduction
Competent with Flowjo, GraphPad, Vivoquant

Research Experience

Doctoral student, King's College London

October 2019 – December 2023

“Development of an absolute quantitation method for genetically modified cell therapies.”

- Production and characterization of traceable CAR-hNIS PSMA T cells.
- Monitoring of CAR T cell efficacy and biodistribution through SPECT/CT in in vivo models.
- Good organisation, meticulous record keeping and timely delivery of results.
- Demonstrated seamless efficiency while working between two laboratories sites.

COVID-19 Research Project

April 2020 – June 2020

Immunophenotyping of peripheral blood from COVID patients.

- Isolation and staining of T cells from patient's samples in CL3 laboratory for immunophenotyping.
- Adapted to work extended shifts with little advance notice.
- Collaborative project with numerous interdependent steps.

Research Assistant, UCL Institute of Child Health

January 2018 – September 2019

“Generation of panel of O-Acetyl-GD2-specific antibodies for development of immunotherapies targeting neuroblastoma.”

- Production and purification of O-Acetyl-GD2-specific antibody from hybridomas.
- Preparation of patient tumour samples for 10X scRNAseq in collaboration with the Sanger Institute.
- Meticulous record keeping and presentation of results.

Education

PhD student

October 2019 – December 2023

King's College London

Doctoral studies, "Development of a quantitation method for genetically modified cell therapy"

MRes in Molecular and Cellular Biosciences

October 2016 – September 2017

Imperial College London

- **Distinction** award
- Master's theses: "Characterization of recombinant proteins in mammalian cells", "Role of GABAergic neurons in thermoregulation and sleep" and "Analysis of the hetero-hexameric HrpRS that regulates the Type III Secretion System in *Pseudomonas syringae* pv. Tomato DC3000"

BSc in Biotechnology

July 2015 – June 2016

University of Salamanca, Spain & University of Melbourne, Australia **First class**

- Dissertation: "Oligonucleotide RNA Targeting: A Novel Therapy for Treating Friedreich's Ataxia"

Publications

- **A dynamic COVID-19 immune signature includes associations with poor prognosis**
AG Laing, A Lorenc, IDM Del Barrio, A Das, M Fish, [...], E Bugallo-Blanco, [...] AC Hayday, *Nature medicine* 2020 (*T cell isolation and immunophenotyping by flow cytometry*)
- **Acute immune signatures and their legacies in severe acute respiratory syndrome coronavirus-2 infected cancer patients**
S Abdul-Jawad, L Baù, T Alaguthurai, IDM Del Barrio, [...], E Bugallo-Blanco, [...] S Irshad
Cancer Cell 2021 (*T cell isolation and immunophenotyping by flow cytometry*)
- **Tumor to normal single-cell mRNA comparisons reveal a pan-neuroblastoma cancer cell**
G Kildisiute, WM Kholosy, MD Young, K Roberts, [...], E Bugallo-Blanco, [...] K Straathof
Science Advances 2021 (*10x Genomics*)

Technical skills

Molecular biology: vector design, cloning, DNA purification, PCR.

Tissue culture: isolation of T cells from peripheral blood and xenograft tumours, maintenance of primary and tumour cells, lentiviral transduction of primary cells, co-culture and cytotoxicity assays, 10x from patient samples.

Flow cytometry including multi-colour immunophenotyping, ELISA, Western Blot, Immunohistochemistry.

In vivo: BLI, SPECT/CT, competent in subcutaneous, intraperitoneal, and intravenous injections.

Software: Flowjo, Graphad, VivoQuant, QuPath.

Seminar Talks and Conference Presentations

- “No more shots in the dark: tracking and imaging CAR T-cells”, **poster** presentation, EACR annual meeting, Turin, June 2022.
- “Development of a quantitation method for genetically modified gene therapies”, **presentation**, ISCT annual meeting, Paris, May 2023.
- “Development of a quantitation method for genetically modified gene therapies” **poster** presentation, CRUK CoL Centre Symposium, London, November 2022.
- “No more shots in the dark: tracking and imaging CAR T-cells”, **poster** presentation, 17th European Molecular Imaging Meeting, Thessaloniki, March 2022.
- “Next generation GD2-targeted immunotherapeutics”, **presentation**, Bi-Annual Symposium, UCL Institute of Child Health, London, June 2018.

Science Communication

- CRUK Future Leaders training event, Barts Cancer Institute, January 2023
- Barts Cancer Institute, Instagram takeover, October 2022
- Revealing Research : The Pursuit of Personalised Medicine, UCL, London, October 2019
- Talk to kids on flow cytometry during the Annual Family Fun Day, Great Ormond Street Hospital (GOSH), London, October 2018
- Hosting tours of the laboratory for supporters of Cancer Research UK and GOSHCC/Sparks, London, September 2018

Awards and Fellowships

- CRUK City of London PhD fellowship
- La Caixa Doctoral INPhINIT Fellowship, I chose not to accept it.
- Best poster award, 2021 CRUK City of London Center Symposium, London, March 2021.
- Exchange scholarship at the University of Melbourne (2015-2016).