

# CRYSTAL<sup>3</sup>



## Meet our Fellows



This project has received funding from  
the European Union's Horizon 2020  
research and innovation programme  
under grant agreement No 101007931

# ESR2 Alicia Gómez

(Ocupharm/ Madrid to University College  
Dublin/Ireland)



## About myself:

I am currently clinician at CERI (TUDublin) working on myopia trials, under the supervisión of Prof. James Loughman. My former employer in Spain (Ocupharm) sent me on secondment to Ireland and changed my life (for good!). I love stand up comedy, climbing, dogs and sushi. I don't like spiders.

## My role in CRYSTAL3:

I have worked on zebrafish visual behaviour as part of my secondment to UCD under the supervisión of Prof. Brendan Kennedy. My research focused on developing affordable ways to evaluate zebrafish visual behaviour and investigating how cigarette smoke affects the zebrafish visual system.



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# ESR6 Thalía Rodríguez

(Linköping University/Sweden to  
Ocupharm/Spain)

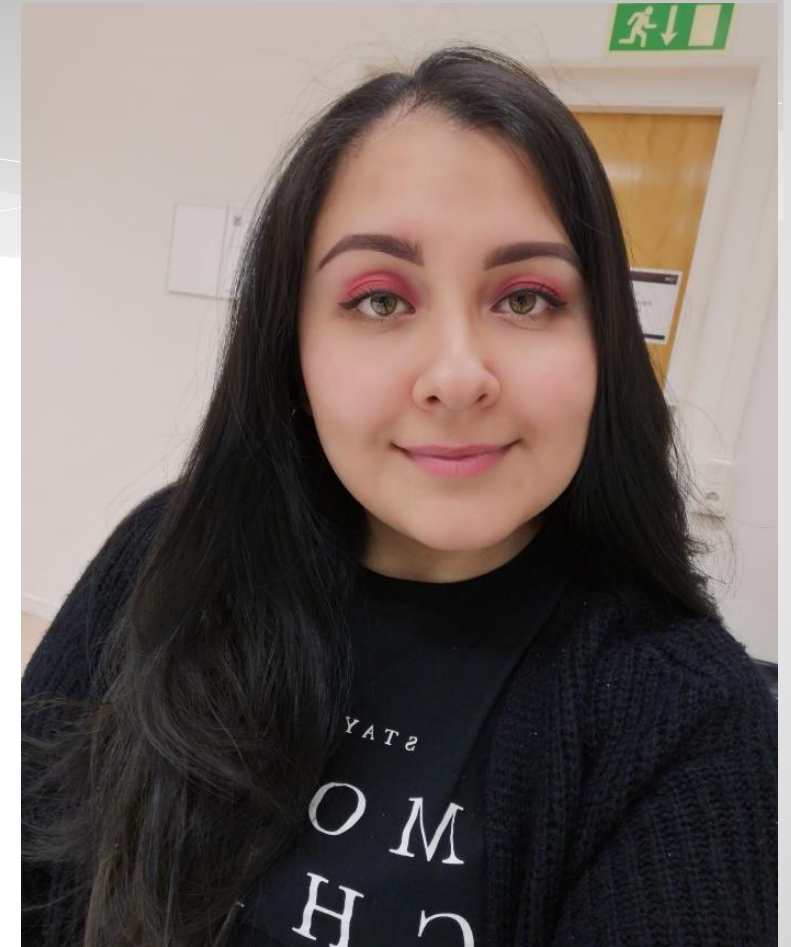
 CRYSTAL<sup>3</sup>

## About myself:

I did my bachelor's in Biomedicine at Linköping University. Currently I am seconded to Ocupharm Diagnostics as I enjoy acquiring new knowledge within the biomedical field. I enjoy music and exploring new places.

## My role in CRYSTAL<sup>3</sup>:

My research mainly focuses on the discovery of a new artificial tear and getting experience working with animal models among other small projects. My goal is to acquire skills and experience in the treatment of ocular pathologies.



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# ESR7 Csenger Kovácsházi

(Pharmahungary Group/Hungary to  
University College Dublin/Ireland)

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## About myself:

I am a PhD student at Semmelweis University and a research fellow at Pharmahungary Group. I spent a month together with my wife and our 2 years old kid at UCD to learn proteomics analysis. I loved my colleagues and the beautiful country. In my free time, I love hiking, climbing and mountaineering.

## My role in CRYSTAL<sup>3</sup>:

I studied whether cardiomyocyte extracellular vesicles carry CysLT signalling-related proteins and if their abundance is affected by hypercholesterolemia.



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# ESR9 Patricia Pérez

(Ocupharm/Spain to International Iberian  
Nanotechnology Laboratory/Portugal)

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## About myself:

I am an Optician expert in eye care. When I finished my master's degree in Complutense University of Madrid, I started to work for Ocupharm Diagnostic.

I love travelling, dancing, flowers and tea. I dislike arrogant people.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Ocupharm Diagnostic to International Iberian Nanotechnology Laboratory for 3 months.

My research focuses on analysis of CysLT signally in Dry Eye Disease, Conjunctivitis and Sjögren's syndrome. Afterwards, I will evaluate ocular surface inflammatory models with CysLT simulations.

My secondment is a great opportunity to acquire new skills and laboratory experience. In addition to being able to help in future treatment of eye diseases.



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# ESR10 Sara Fernández

(Ocupharm/Spain to University College  
Dublin/Ireland)

**CRYSTAL<sup>3</sup>**

## About myself:

After finishing my studies in Spain, I started working in Ocupharm and shortly after moved to Dublin as a visitor researcher. I really like Spanish food and I hate waking up early in the mornings.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Ocupharm to Conway Institute at UCD for a max period of 12 months. My aim is to study the role of cysteinyl leukotriene (CysLT) in the pathogenesis of endophthalmitis, an eye condition resulting from severe inflammation of the intraocular cavities.

Being part of CRYSTAL<sup>3</sup> is a great opportunity to develop new skills, valuable for Ocupharm and key for my future career.



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# TECH11 Ifigeneia Filippaki

(Ocupharm/Spain to Universitätsmedizin  
Göttingen/Germany)

CRYSTAL<sup>3</sup>

## About myself:

I am a BSc Chemistry Student from Greece. , working on Ocupharm to gain research experience. Molecular Biochemistry and Food Chemistry are the areas I would like to deepen into . I love sweets, travelling and studying. Things that I hate are the windy weather and bad manners.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Ocupharm Diagnostics S.L. to the Institute of UMG in Goettingen. My aim is to gain knowledge and laboratory experience while investigating the therapeutic potential of CysLT modulators in animal and human models . For me CRYSTAL<sup>3</sup> is so far a special learning experience.



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# TECH12 Evangelia Michelaraki

(Ocupharm/Spain to Universitätsmedizin Göttingen/Germany)

## About myself:

I am Eva and I'm studying Chemistry at Aristotle University of Thessaloniki, Greece. I worked several months as a technician for Ocupharm in Madrid. I love experiences in laboratories and travelling. That's why I also chose to have this secondment in Crystal3 at Georg-August-University in Goettingen. I also find Molecular Biology really interesting and I would like to deepen into it.

## My role in CRYSTAL<sup>3</sup>:

I was seconded from Ocupharm Diagnostics S.L. to the Institute of Pharmacology and Toxicology of UMG in Goettingen. I chose this CRYSTAL<sup>3</sup> secondment because I found it a perfect opportunity of gaining knowledge and laboratory experience, especially in UMG's Institute. At this project, my aim is to investigate the therapeutic potential of CysLT pathway in CCC models and to analyse them in Cellular Models.

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# ESR13 Alexandro Moya

(Ocupharm/Spain to University College  
Dublin/Ireland)



## About myself:

I moved to Dublin from Madrid when I finish my degree, Optics and Optometry at UCM. I am a visitor researcher at UCD, seconded from the SME where I started working as trainee during my degree. I like to face new challenges and I hope that this new phase leave me a mark. Also, I like travelling and sports. I hate negativity and spiders.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Ocupharm Diagnostics SL. to Conway Institute for 12 months. My aim is to develop skills and knowledge while I study the vision of the zebrafish. My research focuses on finding out how some drugs act on the vision of zebrafish although, I am learning to work with cells.



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# ESR14 Almudena Navarro

(Ocupharm/Spain to University College  
Dublin/Ireland)

**CRYSTAL<sup>3</sup>**

## About myself:

I am a new visitor researcher at UCD that had studied Optics and Optometry at Complutense University of Madrid and initiated a research career at a CRO based in that campus. I like visiting new cities and having a good time with the people I love. There are some things that I hate like running and windy weather.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Ocupharm Diagnostics SL. to Conway Institute at UCD in Dublin for a whole year. My research focuses on testing the vision on zebrafish by using the OKR, also to know if some drugs can develop or improve the vision. My aim is to improve my knowledge in the laboratory and try to help with some of my future researches. I would like also to help Ocupharm to start working with this interesting fish model to study vision.



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# ESR15 Aroa Gormaz García

(Ocupharm/Spain to University College  
Dublin/Ireland)

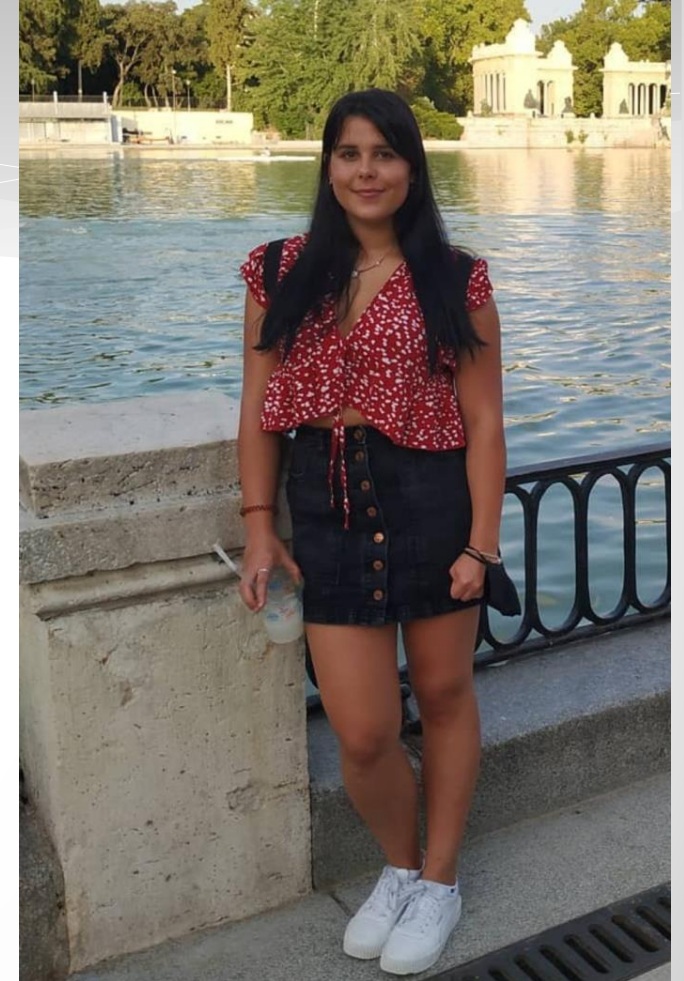
## About myself:

I studied Optics and Optometry degree in Complutense University of Madrid, and worked several months in Ocupharm as trainee. I love nature, animals and dancing. I hate snow and getting up early.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Ocupharm Diagnostics S.L. at UCD School of Veterinary Medicine for a year. My aim in the project is work to develop skills and knowledge by working on a dry eye disease project, using models like human corneal cells, rodent ex vivo tissue- to develop a primary cell line and maybe zebrafish. Ocupharm has several projects related to dry eye disease and I hope I can enable for them some interesting new research lines.

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# ESR17 Maitiú Ó Murchú

(Trinity College Dublin/Ireland to Bioreperia/Sweden)

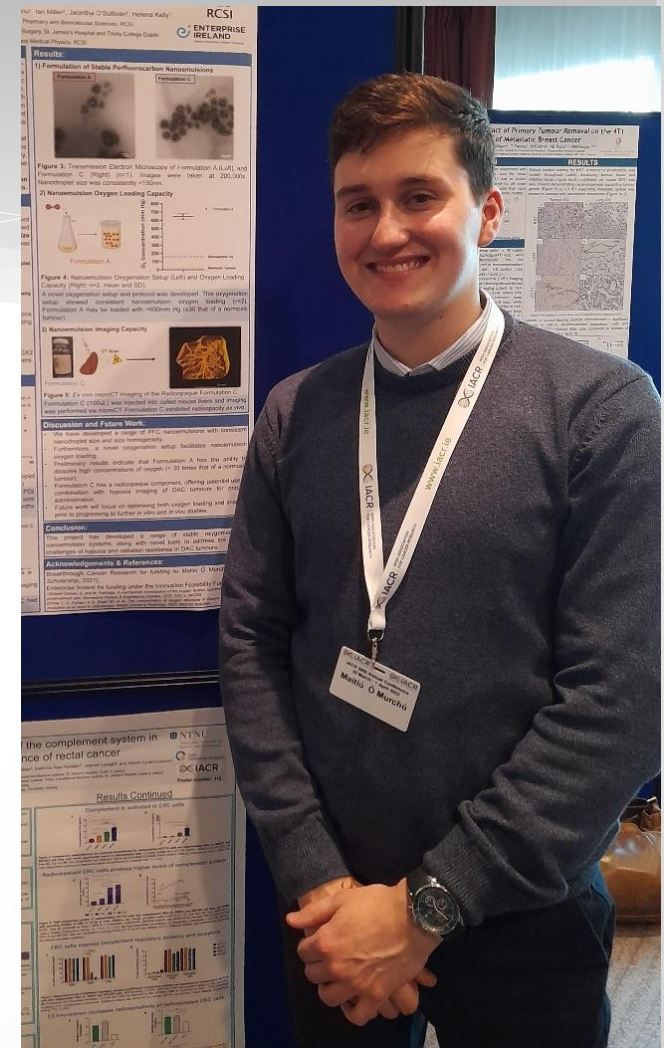
## About myself:

I am a PhD student from Dublin, Ireland. My PhD project aims to improve radiation response in oesophageal cancer (OAC) patients. My project is under the supervision of Prof. Jacintha O'Sullivan. I love coffee and friendly people – I dislike negativity and cold weather!

## My role in CRYSTAL<sup>3</sup>:

My CRYSTAL<sup>3</sup> project with Bioreperia aims to use OAC cell line-implanted zebrafish to assess CysLT receptor expression in response to radiation and treatment with novel oxygen-carrying perfluorocarbon nanoemulsions. I hope to apply the skills and knowledge I have learned during this project to my PhD project back in Dublin!

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# ESR18 Husvinee Sundaramurthi

(University College Dublin/Ireland to Pharmahungary Group/Hungary)



## About myself:

Originally from Singapore, I moved to Ireland 5 years ago. I am a Postdoctoral researcher with Prof. Breandán Kennedy, Ocular Pharmacology & Genetics Group. I have a passion for travelling and enjoy baking. I dislike solo travelling.....

## My role in CRYSTAL<sup>3</sup>:

My research interest currently focuses on identifying novel therapeutics for treatment of Metastatic Uveal Melanoma (MUM). Knowledge gained from this 3-month long secondment with Pharmahungary, will help us understand how anti-cancer agents e.g. HDAC6 inhibitor(s), CysLTs antagonist(s) modulates the characteristics of extracellular vesicles to elicit with therapeutic effects.



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# ESR19 Federico Bleckwedel

(Universitätsmedizin Göttingen/Germany to Pharmahungary Group /Hungary)



## About myself:

In Argentina, where I was born, I studied Biotechnology. After a few years in the Human reproduction field, I moved to Germany for pursuing a PhD at Universitätsmedizin Göttingen. I like football, hiking and food. I hate the German weather and fast food.

## My role in CRYSTAL³:

I was seconded from UMG to PHU for a month. There I worked on the validation of an Extracellular vesicles (EVs) protocol from cardiac tissue. The EVs seem to be related to communication pathways between inflammatory cells in cardiac diseases. After the isolation of EVs, we will be able to investigate the presence of CysLT within these vesicles and their relation in the different conditions.



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# ESR20 Eduard Culda

(Linköping University/Sweden to OcuPharm/Spain)

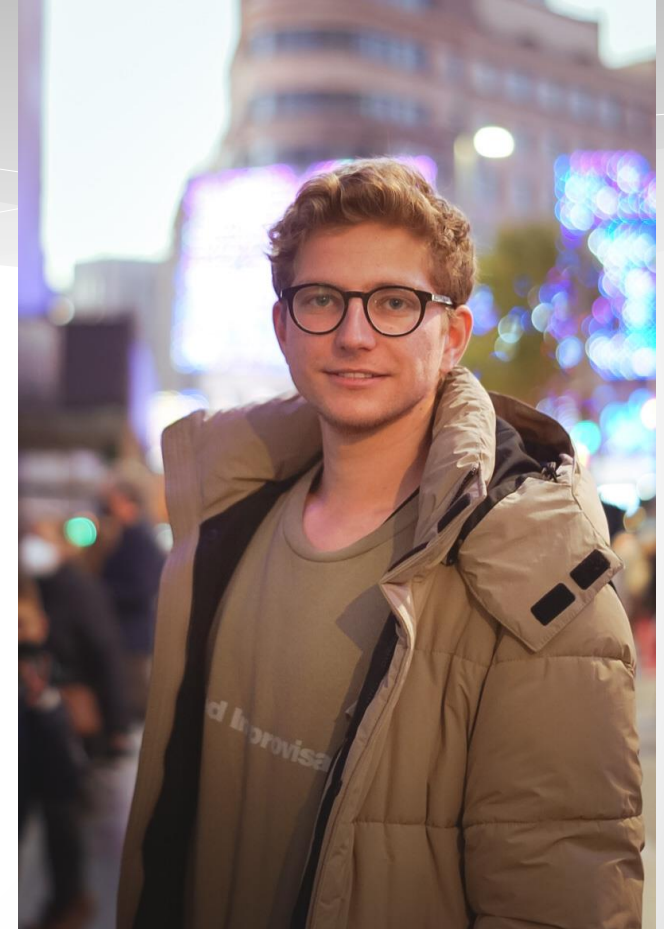
**CRYSTAL<sup>3</sup>**

## About myself:

I am a MSc research student in Biomedicine, sent by Linköping University to OcuPharm Diagnostics S.L. What I love is: playing the piano, hiking and photographing. I hate one thing most of all: injustice.

## My role in CRYSTAL<sup>3</sup>:

My research focuses on observing the CysLT – receptor expression in rabbit models while comparing the cytotoxicity of Nanoparticles including Gold Nanoparticles (AuNPs) and Chitosan Nanoparticles (Cs) conjugated with Chlorhexidine (CHX). My aim is to gain laboratory experience and develop new practical skills.



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# ESR21 CHRISTINA CAHILL

(Trinity College Dublin/Ireland to Bioreperia /Sweden)

The logo for CRYSTAL<sup>3</sup> features a stylized geometric structure of interconnected cubes above the text "CRYSTAL<sup>3</sup>".

## About myself:

I am a final year PhD student in Trinity College Dublin. Here, I work with Dr. Niamh Lynam-Lennon and Prof. Jacintha O'Sullivan in the Department of Surgery to investigate the role of microRNA in the treatment response of oesophageal and gastric cancer. I like hiking, travelling, and discovering new places and new foods.

## My role in CRYSTAL<sup>3</sup>:

My CRYSTAL<sup>3</sup> project in Bioreperia aims to generate gastric adenocarcinoma cell line zebrafish xenograft models. Using these models, I aim to assess the role of miRNA-31 and miRNA-31-mediated regulation of CysLT receptors in the tumour response to chemotherapy. I hope this work can enhance my current research and help improve response to chemotherapy for gastric cancer patients.



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# ESR25 Alina Qaisar

(Trinity College Dublin/ Ireland to Cresset/ UK)

CRYSTAL<sup>3</sup>

## About myself:

I am a 3rd year PhD student in medicinal and organic chemistry under the supervision of Dr. Niamh O'Boyle. I love big cities, doing new adventures and listening to music. I hate waking up early in the morning and negative people.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Trinity College Dublin to Cresset UK. It was a perfect opportunity for me to gain knowledge of computational chemistry by using Cresset's outstanding software for molecular design. The aim of my research was to find new binding drugs for cysteinyl leukotriene receptors by ligand based virtual screening.



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# ESR26 Morgan Morris

(University College Dublin/Ireland to Cresset/UK)

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## About myself:

I am a final year PhD student in medicinal chemistry, under the supervision of Dr. Paul Evans in University College Dublin. I like hiking, running, gardening and coffee. I hate awkward silences!

## My role in CRYSTAL<sup>3</sup>:

I have worked on computationally analysing cysteinyl leukotriene antagonists (CysLTs) as part of my 4-month secondment with Cresset. My research has focused on developing new homology models of CysLTs and finding new, better binding drugs through virtual screening. My aim is to use this information to help improve future drug therapies targeting these proteins.



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# ESR30 Valentina Tonelotto

(Xenopat/Spain to University College Dublin/Ireland)

**CRYSTAL<sup>3</sup>**

## About myself:

I am a Postdoctoral Researcher from Italy and I moved to Dublin as a Marie Curie Visiting Fellow. I like to gain new knowledge and familiarize with other people. Also, I love classic music and I am fascinated by outer space. I hate inequality and discourtesy.

## My role in CRYSTAL<sup>3</sup>:

I am seconded from Xenopat to UCD Conway Institute for 12 months. My research focuses on the evaluation of cysteinyl leukotriene receptor signalling and uveal melanoma extracellular vesicles as novel therapeutic targets and biomarkers to improve patient outcomes in metastatic uveal melanoma (MUM). Therefore, my aim is to accelerate the route towards MUM diagnosis and treatment.



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# ER34 Eric Schoger

(Universitätsmedizin Göttingen/Germany to Cresset/UK)



## About myself:

I am a postdoctoral researcher and medical student at the University Medical Center Göttingen. My goal is to translate biotechnology into clinical applications. I like exploring close and distant lands and new cooking recipes!

## My role in CRYSTAL<sup>3</sup>:

I work with CRISPR/Cas9 methods in cardiovascular research. With in vivo and in vitro tools to endogenously modulate the expression of CysLTR, we aim to investigate their roles in cardiovascular research and beyond. To gain better control over these new tools, I spent my secondment at Cresset Ltd. to learn about pharmacophore design to tame Cas9 proteins and related applications.



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# ER39 Alberto Villanueva

(Xenopat/Spain to University College Dublin/Ireland)

## About myself:

I am the CSO and co-founder of the spin-off Xenopat S.L, and also Principal Investigator of Chemoresistance Group at ProCURE (Program Against Therapeutically Resistance), at the Catalan Institute of Oncology (ICO)/IDIBELL in Barcelona. I moved to Dublin as a Marie Curie Visiting Fellow. This project represents a great opportunity to grow professionally, as well as a great experience for my family who shares this stay in Dublin with me. I love cooking and travelling with my family. I don't like all the bureaucratic work related to research...

## My role in CRYSTAL<sup>3</sup>:

I am seconded to UCD for 12 months, hosted by Brendan Kennedy's lab. My research focuses on the evaluation of the role of CysLT receptors in the response to chemotherapy and targeted therapies in different tumour types. We are currently analyzing a bank of Patient-Derived-OrthoXenographs (PDOX) generated in mice from human tumors. Additionally, I am evaluating options to generate new scientific and business collaborations in Ireland within this project framework.

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# ESR46 Mirjam Simovart

(Linköping University /Sweden to OcuPharm  
Diagnostics/Spain)

## About myself:

I come from Estonia but carried out my bachelor's studies in Sweden. I love to travel, discover new places and get to know other cultures. I also really enjoy learning new languages.

## My role in CRYSTAL<sup>3</sup>:

I'm seconded from Linköping University to OcuPharm Diagnostics. As my bachelor's project focused on studying ocular diseases, the secondment will give me an opportunity to participate in projects to further develop my knowledge and skills about different ocular pathologies and their potential treatments.

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# ESR52 Justine O'Brien

(University College Dublin/Ireland to  
Experimentica/Finland)

## About myself:

I am a Pharmacologist currently working as part of the Ocular Pharmacology and Genetics group in University College Dublin. I love hiking, baking, snowy days and cats. I hate ketchup and spiders.

## My role in CRYSTAL<sup>3</sup>:

My research aims to find compounds that restore vision in zebrafish models of blindness. In Experimentica (CRYSTAL<sup>3</sup>) my compounds will be tested for safety and efficacy in rodent models, with a especial focus on CysLTs pathway modulation. We hope that uncovering these compounds will help us identify new ways to treat vision loss in patients.

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# ESR55 RITA CARACUEL

(FPS/Spain to Bioreperia/Sweden)

## About myself:

Currently, I am pursuing the PhD in the Proteases and extracellular matrix group in the center for genomic and oncological research GENYO (Granada, Spain). I love travelling and hamburgers.

## My role in CRYSTAL<sup>3</sup>:

My work involves different mouse tumor models to explore the impact of the extracellular matrix on the tumorigenesis process, with a specific focus on the immune microenvironment. During my secondment in Bioreperia I have learned to generate xenografts in zebrafish larvae, establishing the MUM2B uveal melanoma model. Next collaboration will be to evaluate the effects of CysTL antagonists on modulating the extracellular matrix during uveal melanoma progression.

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