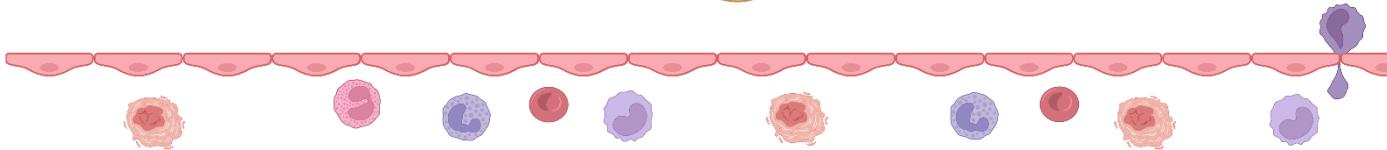
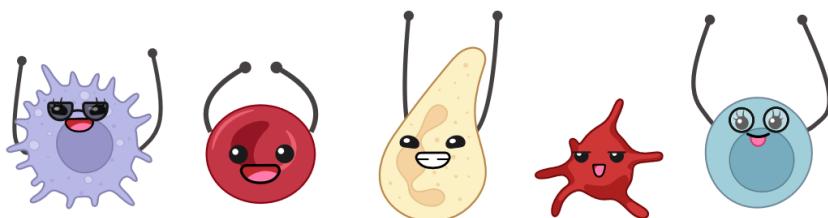


# THE ARCH PROJECT BOOKLET



## Age-Related Changes in Hematopoiesis

**2020 - 2023**





# The ARCH Consortium

**Antonella Ronchi – Coordinator**

Università degli Studi di Milano Bicocca



**Gerald De Haan and Leonid Bystrykh**

University Medical Center Groningen



**Philippe Kastner and Susan Chan**

Centre European De Recherche En Biologie et Medicine

**John Strouboulis**

King's College London



**Gianluca Carenzo and Alessandra Roberto**

FlowMetric Europe



**Alessandro Fatica**

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**Florian Grebien**

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**Nina Cabezas-Wallscheid**

Max Plank Institute for Immunobiology and Epigenetics

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**Miguel Vidal – Carmela Cales**

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Institut Curie

**Shai Izraeli**

Tel Aviv University

**Gianni Cazzaniga**

Fondazione Tettamanti



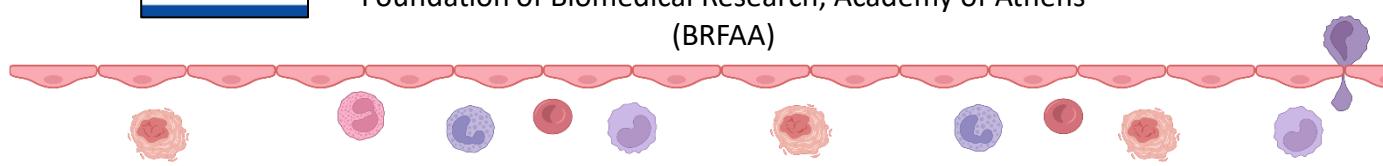
**Celine Sabatel**

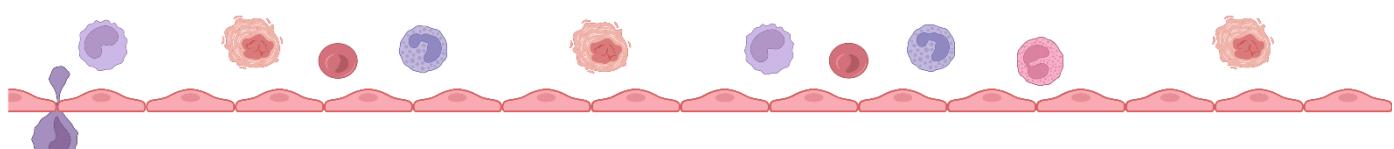
Diagenode



**Eleni Katsantoni**

Foundation of Biomedical Research, Academy of Athens  
(BRFAA)





## ESR1

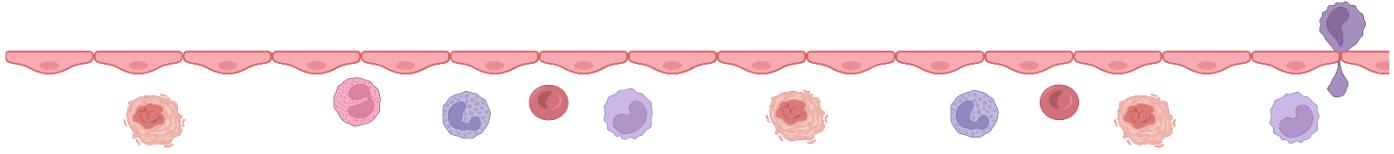
Agata Labedz comes from Warsaw, Poland. She graduated in biotechnology at Warsaw University of Life Sciences (WULS). During her MSc, she became interested in cancer biology and immunotherapies as she worked in the laboratory of Dr. Kinga Majchrzak at the WULS where she studied T cell activation and co-stimulation for the future use in adoptive cell transfer. After graduation, she moved to Paris and continued to work in the field of cancer immunology in the lab of Professor Robin Fahraeus, at Inserm.

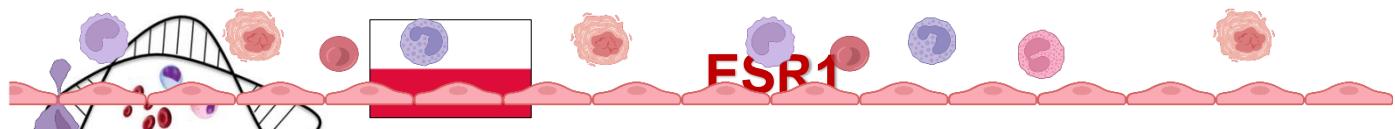


Finally, she applied for the ESR1 position supervised by Professor Antonella Ellena Ronchi and started to work in a new field of hematopoiesis within the ARCH project. Agata enrolled in the PhD program in Translational and Molecular Medicine (DIMET) and conducted her experiments in Professor Antonella Ronchi's laboratory at the University of Milano-Bicocca (UNIMIB) in Milan, Italy. Her study was focused on the transcriptional regulators of hemoglobin switching during embryo development and its potential use in the treatments of  $\beta$ -hemoglobinopathies.

Agata said:

"I am glad that I had the chance to be a part of the ARCH consortium. During the last three years I broadened my knowledge in hematology and molecular biology and got a better perspective on differences between work environments between different European countries and institutions. I also met amazing people and I think that with some of them we will remain life-long friends. It has been a great experience to exchange scientific knowledge with other students during ARCH meetings. Last but not least, I am really grateful for the time that I spent at Flowmetric Europe in Milan and in Professor Florian Grebien's laboratory at Vetmeduni in Vienna during the ARCH secondments."

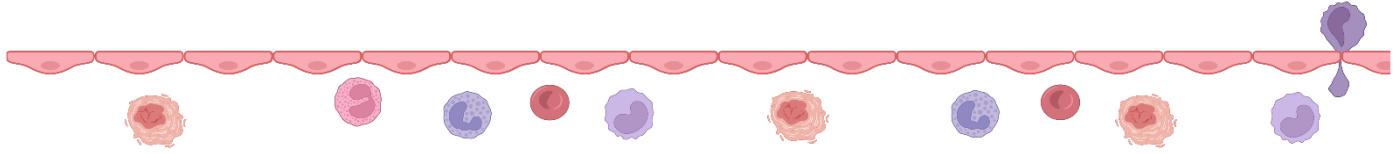


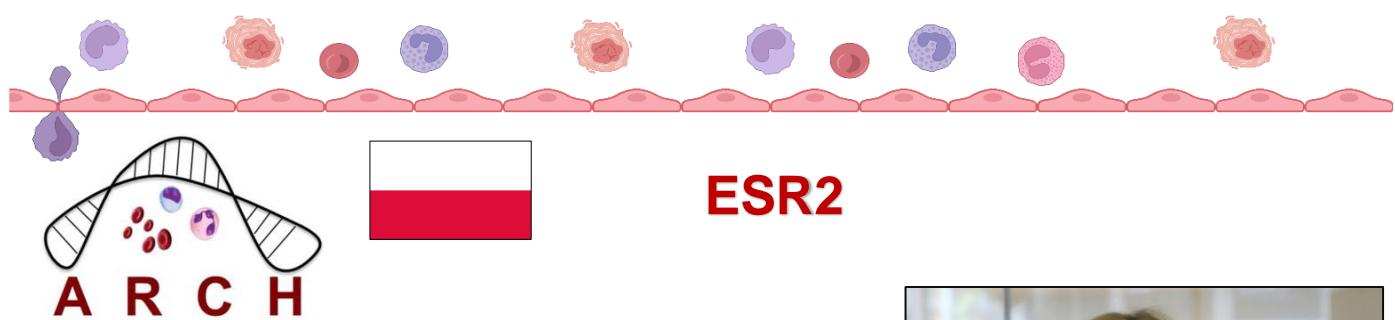


ARCH

FSR1

"Cieszę się, że miałam okazję być częścią konsorcjum ARCH. W ciągu ostatnich trzech lat znacznie poszerzyłam swoją wiedzę z zakresu hematologii i biologii molekularnej oraz zyskałam lepszą perspektywę na różnice między środowiskami pracy w różnych europejskich krajach i instytucjach. Poznałam też niesamowitych ludzi i myślę, że z niektórymi z nich pozostaniemy przyjaciółmi na całe życie. Również wymiana wiedzy naukowej z innymi doktorantami podczas spotkań ARCH była bardzo wartościowym doświadczeniem. Na koniec, jestem wdzięczna za cudowny (i owocny) czas, który spędziłam w Flowmetric Europe w Mediolanie i w laboratorium Profesora Floriana Grebien na Vetmeduni w Wiedniu podczas staży w ramach projektu ARCH."





My name is Natalia Skinder, and I did my PhD within the ARCH consortium funded by the Marie Curie fellowship. The transformative experience of being awarded a Marie Curie fellowship has played a pivotal role in shaping my journey and enabling me to excel in my field.

Having completed my bachelor's and master's degree in Biotechnology, I was captivated by the immense potential of stem cell aging research. Determined to contribute to this exciting field, I sought opportunities to enhance my expertise and gain international exposure.

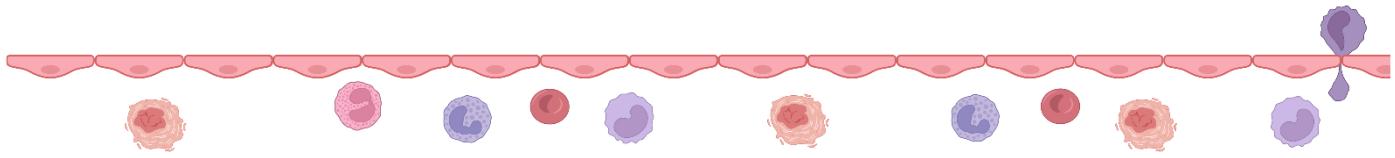


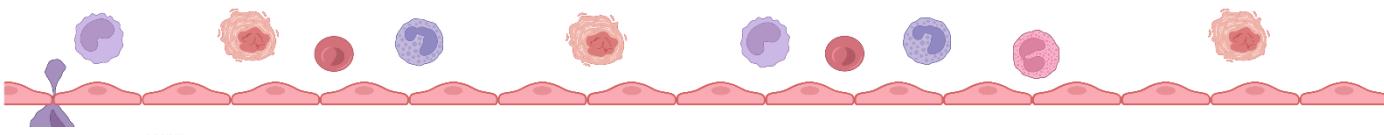
The Marie Curie fellowship emerged as the perfect platform to achieve these goals. The fellowship opened doors to a renowned research institution that focused on cutting-edge stem cell biology. Joining the Stem Cell Biology and Aging group led by Gerald de Haan, allowed me to work alongside amazing scientists and collaborate with researchers from diverse backgrounds. The exposure to such an intellectually stimulating and collaborative environment enhanced my growth as a researcher.

Under the guidance of my mentors, I started my project aimed at unraveling the mechanisms underlying the aging mechanism of hematopoietic stem cells. The Marie Curie fellowship provided me with access to state-of-the-art facilities, advanced laboratory resources, and the latest techniques. This intensive research experience not only improved my technical skills but also developed my ability to think critically and approach scientific problems from different angles.

One of the most significant benefits of the Marie Curie fellowship was the networking opportunities it afforded me. Attending conferences, workshops, and collaborating with researchers from across the globe broadened my scientific perspective. The exchange of ideas and knowledge with prominent scientists further fueled my passion for stem cell biology. Establishing professional relationships through the fellowship has not only enriched my understanding but also opened doors to future collaborations and potential research projects.

Moreover, the Marie Curie fellowship facilitated personal growth. Immersing myself in a new cultural environment and adapting to different work practices have made me more adaptable, resilient, and globally aware.





## ESR2



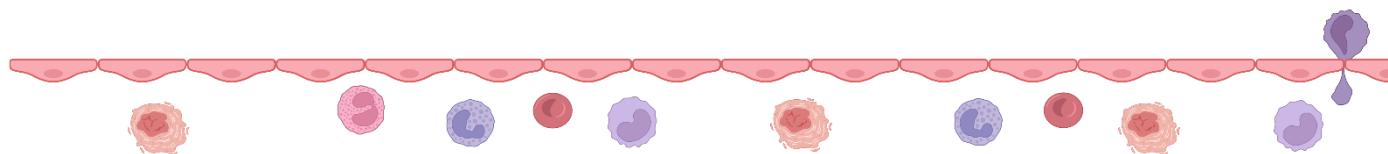
Nazywam się Natalia Skinder i moje studia doktoranckie były realizowane w ramach konsorcjum ARCH, finansowanego przez stypendium Marie Curie. Transformacyjne doświadczenie zdobycia stypendium Marie Curie odegrało kluczową rolę w kształtowaniu mojej drogi zawodowej i umożliwiło mi osiągnięcie sukcesu w mojej dziedzinie. Po ukończeniu licencjatu i magisterium z biotechnologii, zafascynowałam się ogromnym potencjałem badań nad starzeniem się komórek macierzystych krwii.

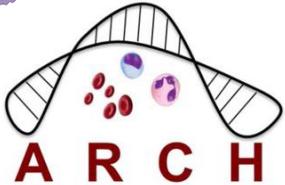
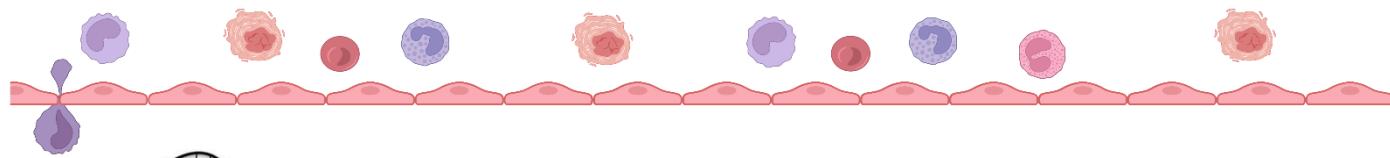
Zdecydowana wnosić wkład w tę ekscytującą dziedzinę, poszukiwałam możliwości poszerzenia swojej wiedzy i zdobycia międzynarodowego doświadczenia. Stypendium Marie Curie wydawało się idealną platformą do osiągnięcia tych celów.

Stypendium otworzyło mi drzwi do renomowanej instytucji badawczej, która skupia się na najnowocześniejszych zagadnieniach związanych z biologią komórek macierzystych. Dołączenie do grupy Stem Cell Biology and Aging pod kierownictwem Geralda de Haan umożliwiło mi pracę u boku niesamowitych naukowców i współpracę z badaczami o różnorodnych doświadczeniach. Wpływ takiego intelektualnie stymulującego i współpracującego środowiska wzmacnił mój rozwój jako badacza.

Pod opieką moich mentorów rozpoczęłam projekt mający na celu wyjaśnienie mechanizmów starzenia się komórek macierzystych krwii. Stypendium Marie Curie umożliwiło mi dostęp do nowoczesnych laboratoriów, zaawansowanych zasobów laboratoryjnych i najnowszych technik. To intensywne doświadczenie badawcze nie tylko udoskonaliło moje umiejętności techniczne, ale także rozwinęło moją zdolność do krytycznego myślenia i podejścia do naukowych problemów z różnych perspektyw.

Jednym z najważniejszych korzyści wynikających ze stypendium Marie Curie była możliwość nawiązywania kontaktów. Udział w konferencjach, warsztatach i współpraca z naukowcami z całego świata poszerzyły moją perspektywę. Wymiana idei i wiedzy z wybitnymi naukowcami jeszcze bardziej podsycała moją pasję do biologii komórek macierzystych. Nawiązane kontakty zawodowe nie tylko wzbogaciły moją wiedzę, ale także otworzyły drzwi do przyszłych współpracy i projektów. Ponadto, stypendium Marie Curie sprzyjało mojemu osobistemu rozwojowi. Zanurzenie się w nowym środowisku kulturowym i adaptacja do różnych praktyk zawodowych uczyły mnie bardziej elastyczną, wytrzymałą i globalnie świadomą.





## ESR3

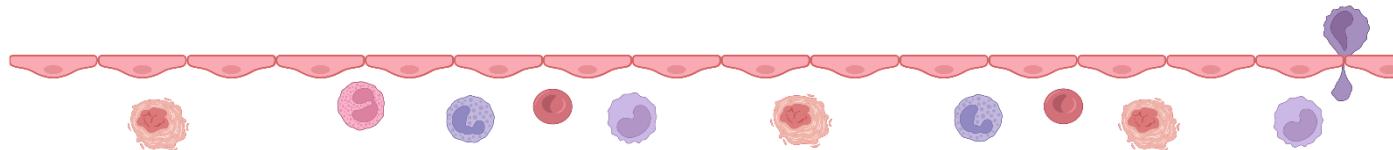


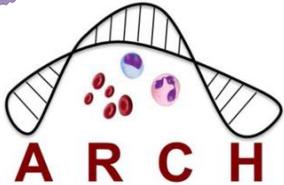
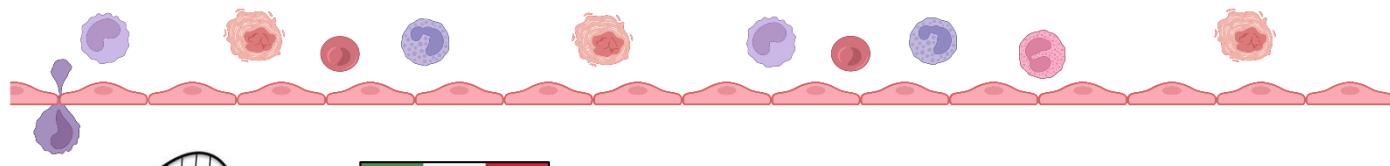
I'm Chiara Taroni, an Italian PhD student and I'm working at the Institute of Genetics and Molecular and Cellular Biology (IGBMC) in Strasbourg, in the lab of "Hematopoiesis and Disease" run by Susan Chan and Philippe Kastner. I joined the team and the ARCH network in 2019, after obtaining my degree in Biology.

Being part of ARCH has been a wonderful experience, it gave me an important opportunity to develop in my professional and personal life. Thanks to this fellowship, I had the chance to join one of the leading research Institutes in France, where I was able to interact with scientists expert in different fields and type of techniques.

The network allowed me to be part of an extremely stimulating environment, which has provided high quality training and allowed to get in touch with the specialists in the field. Despite also the ARCH network programs have been affected, as everybody else, by the global pandemic of Covid-19, I had the unique opportunity to meet several times with the other members, first online and then in person, and I had the possibility to discuss with people about problems and solutions and to establish new collaborations.

On the top of all scientific advantages of being part of ARCH, the fact of get to know wonderful people coming from different countries and background and being part of a group, has allowed me to learn a lot and to acquire a more open attitude inside and outside science. I believe that being part of a Marie Curie Initial Training Network is an excellent opportunity for any young scientist aiming to grow in a professional but also personal context.





**ESR3**

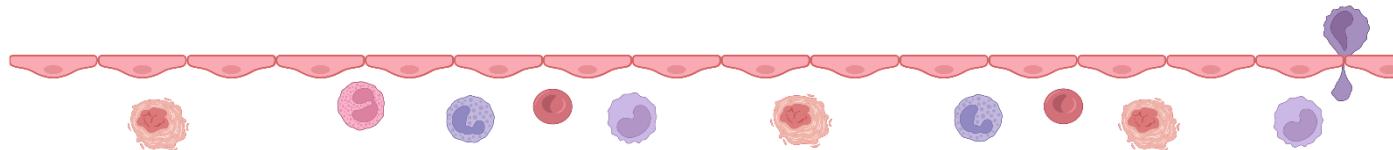


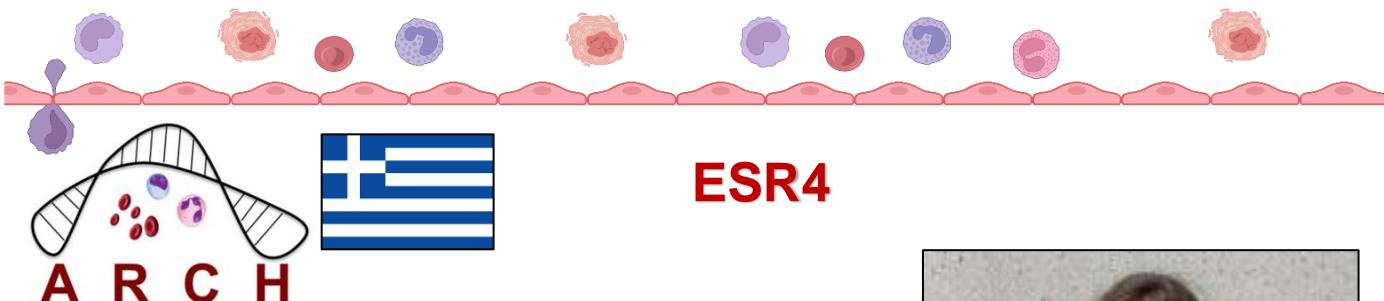
Sono Chiara Taroni, una dottoranda italiana e lavoro all'Istituto di Genetica e Biologia Molecolare e Cellulare (IGBMC) a Strasburgo, nel laboratorio di "Ematopoiesi Normale e Patologica" diretto da Susan Chan e Philippe Kastner. Mi sono unita al gruppo e al progetto ARCH nel 2019, dopo aver ottenuto la laurea in Biologia. Essere parte di ARCH è stata un'esperienza stupenda, che mi ha dato un'importante opportunità per crescere dal punto di vista professionale e personale. Grazie a questa borsa, ho avuto la possibilità di lavorare in uno dei migliori istituti di ricerca in Francia, dove ho potuto interagire con scienziati esperti in diversi ambiti e tecniche.

Il progetto ARCH mi ha anche permesso di entrare a far parte di un ambiente estremamente stimolante, ha fornito un training di alto livello e mi ha permesso di entrare in contatto con gli specialisti del mio settore. Nonostante i programmi del network ARCH siano stati influenzati dalla pandemia di Covid-19, ho comunque avuto la possibilità di incontrare gli altri membri diverse volte, inizialmente attraverso internet e successivamente di persona, ho avuto modo di discutere problemi e soluzioni e di iniziare nuove collaborazioni.

Oltre ai vantaggi scientifici di essere parte di ARCH, il fatto di entrare in contatto con persone provenienti da paesi e culture diverse e di essere parte di un gruppo, mi ha permesso di sviluppare una mentalità più aperta in ambito scientifico e non.

Credo che fare parte di un progetto "Marie Curie Initial Training Network" sia un'ottima opportunità per i giovani dottorandi intenzionati a crescere sotto il profilo professionale e umano.





## ESR4

Marilena Psychogiou is a Greek Ph.D. student currently studying at King's College London. Her academic journey started with a Bachelor's degree in Chemistry and a Master's degree in Biochemistry from the University of Crete. In 2020, she joined the School of Cancer and Pharmaceutical Sciences Ph.D. program at King's College London under the supervision of Professor John Strouboulis. Marilena is a Marie Curie fellow at the "Age Related Changes in Hematopoiesis (ARCH)" where in collaboration with the other members of the consortium they are making significant contributions to the field.

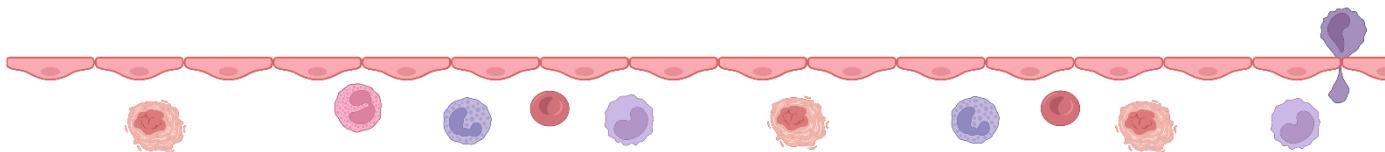


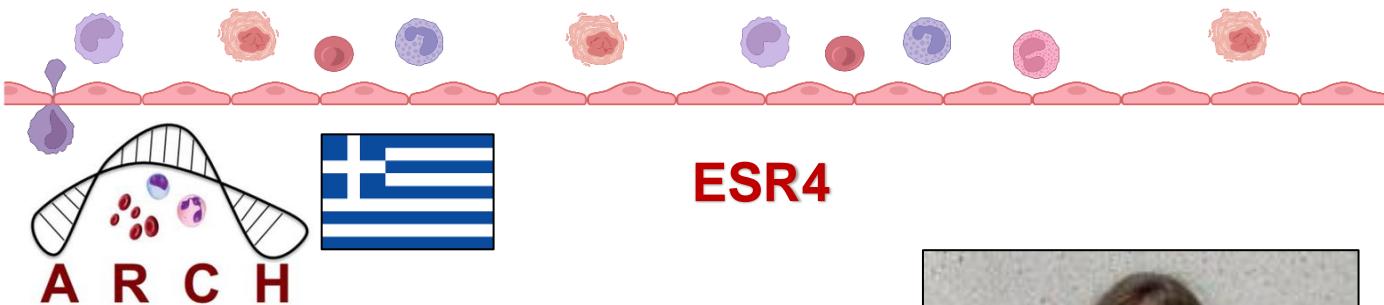
As a member of the ARCH consortium pursuing my Ph.D. studies, I feel privileged to be part of a high-standard research program that focuses on hematology. This program has exceeded my expectations, providing me with an opportunity to engage in an exciting project alongside successful scientists and ambitious students. I believe this experience will have a significant impact on my future career.

Unfortunately, the ARCH program started during the COVID-19 pandemic, which affected my ability to personally connect with the other members of the network during the first year. Despite this setback, sharing my experiences with the other students helped me feel less isolated and motivated me to keep going. This experience led to a publication where we, the students of the network, expressed our Ph.D. journey during the pandemic (Pitsilidou, Christina et al, HemaSphere, 2022). Our frequent meetings allowed me to train my presentation skills, exchange knowledge and discuss with experts about my progress. Since our first in-person meeting in Rome in 2021, our scientific partnership blossomed into lifetime friendships and collaborations in the future.

Furthermore, together with the other students, we were able to share our scientific knowledge with the society, which was a new experience for me. We were engaged in numerous dissemination activities, including speaking about science on social media, and especially our participation in the researcher's night in Madrid, which I really enjoyed and left me with unforgettable memories.

In conclusion, my Ph.D. studies as a Marie Curie fellow were beyond my expectations in every way. Thanks to the ARCH network, I have developed the necessary skills to excel academically and have grown into a mature scientist. Additionally, I have had the pleasure of networking with talented and successful scientists who may become future collaborators, and we have made unforgettable memories together.





## ESR4

Η Μαριλένα Ψυχογιού είναι Ελληνίδα Ph.D. φοιτήτρια που σπουδάζει στο King's College London. Το ακαδημαϊκό της ταξίδι ξεκίνησε με πτυχίο στη Χημεία και Μεταπτυχιακό στη Βιοχημεία από το Πανεπιστήμιο Κρήτης. Το 2020, ξεκίνησε τις διδακτορικές της σπουδές στο πρόγραμμα "School of Cancer and Pharmaceutical Sciences" του King's College London υπό την επίβλεψη του καθηγητή Ιωάννη Στρουμπούλη. Η Μαριλένα είναι υπότροφος Marie Curie στο "Age Related Changes in Hematopoiesis (ARCH)" όπου σε συνεργασία με τα άλλα μέλη του δικτύου συνεισφέρουν σημαντικά στον τομέα της αιμοποίησης.

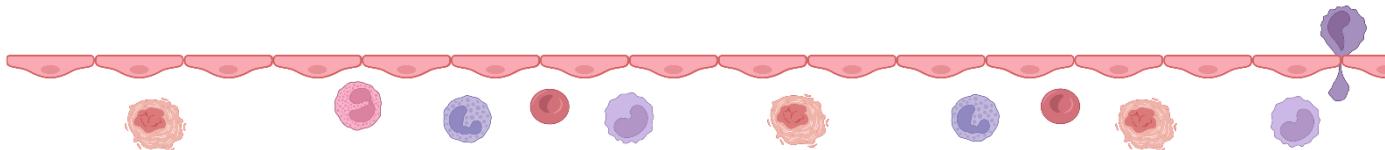


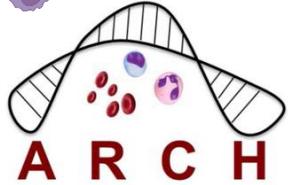
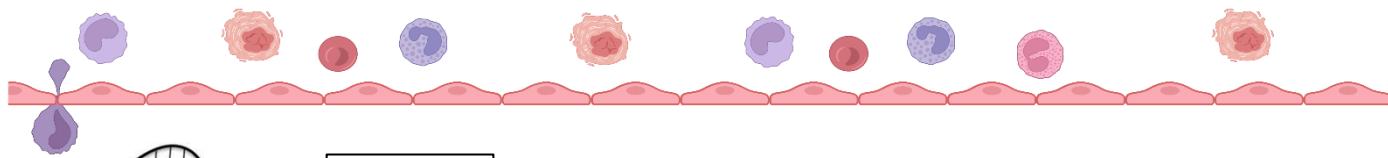
Ως μέλος του δικτύου ARCH κατά της διεκπεραίωση των διδακτορικών μου σπουδών, νιώθω τυχερή που συμμετέχω σε ένα ερευνητικό πρόγραμμα υψηλών προδιαγραφών με αντικείμενο την Αιμοποίηση. Το πρόγραμμα αυτό έχει ξεπεράσει τις προσδοκίες μου, δίνοντας μου την ευκαιρία να μελετήσω ένα εξαιρετικά ενδιαφέρον πρότζεκτ δίπλα σε επιτυχημένους επιστήμονες και φιλόδοξους φοιτητές. Πιστεύω ότι αυτή η εμπειρία θα έχει σημαντικό αντίκτυπο στη μελλοντική μου καριέρα.

Δυστυχώς, το πρόγραμμα ARCH ξεκίνησε κατά τη διάρκεια της πανδημίας COVID-19, γεγονός που επηρέασε την διαπροσωπική μου σύνδεση με τα υπόλοιπα μέλη του δικτύου κατά τη διάρκεια του πρώτου έτους. Παρά αυτό το γεγονός, κατά τη διαδικτυακή μου επικοινωνία με τους υπόλοιπους φοιτητές, είχα την ευκαιρία να μοιραστώ τις ανησυχίες μου, το οποίο με βοήθησε να νιώσω λιγότερο μόνη και μου έδωσε το κίνητρο να συνεχίσω. Αυτό το δύσκολο διάστημα οδήγησε σε μια δημοσίευση όπου εμείς, οι φοιτητές του δικτύου, εκφράσαμε την εμπειρία μας για τη διεξαγωγή διδακτορικών σπουδών κατά τη διάρκεια της πανδημίας (Pitsilidou, Christina et al, HemaSphere, 2022). Οι συχνές συναντήσεις μας, με βοήθησαν να αναπτύξω τις δεξιότητές μου σε επιστημονικές παρουσιάσεις, να ανταλλάξω γνώσεις και να συζητήσω με ειδικούς επιστήμονες για την πρόοδό μου. Η πρώτη μας συνάντηση πραγματοποιήθηκε στη Ρώμη το 2021, όπου η επιστημονική μας συνεργασία μετατράπηκε σε φλίξες ζωής και μελλοντικές συνεργασίες.

Επιπλέον, μαζί με τους άλλους φοιτητές, είχαμε την δυνατότητα να μοιραστούμε τις επιστημονικές μας γνώσεις με την κοινωνία, κάτι που ήταν μια νέα εμπειρία για μένα. Συμμετείχαμε σε πολλές διαδραστικές δραστηριότητες, συμπεριλαμβανομένης της προώθησης της επιστήμης μέσω των μέσων κοινωνικής δικτύωσης, και ιδιαίτερα μέσω της συμμετοχής μας στη βραδιά του ερευνητή στη Μαδρίτη, η οποία μου προσέφερε αξέχαστες αναμνήσεις.

Συμπερασματικά, οι διδακτορικές μου σπουδές ως υπότροφος Marie Curie ήταν μια ασύγκριτη εμπειρία για εμένα από κάθε άποψη. Μέσω της συμμετοχής μου στο δίκτυο ARCH, έχω αναπτύξει απαραίτητες δεξιότητες για να διακριθώ ακαδημαϊκά και έχω εξελιχθεί σε έναν ώριμο επιστήμονα. Επιπλέον, είχα τη χαρά να δικτυωθώ με ταλαντούχους και επιτυχημένους επιστήμονες που εύχομαι να γίνουν μελλοντικοί συνεργάτες και με τους οποίους δημιουργήσαμε μαζί αξέχαστες αναμνήσεις.





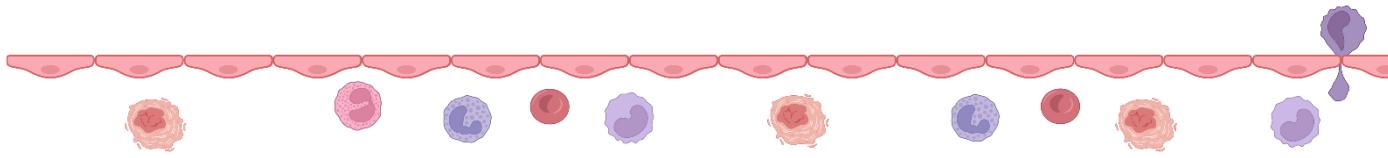
## ESR5

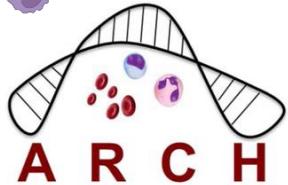
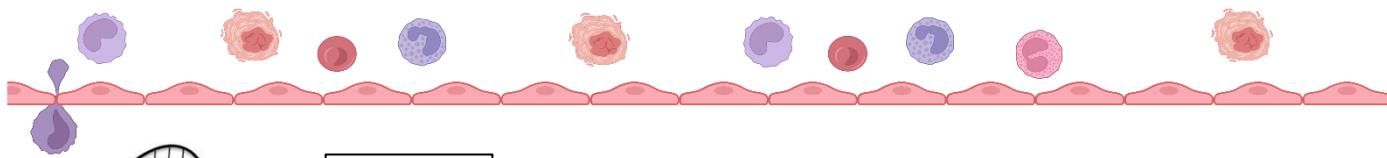
Christina Pitsillidou is Cypriot and has obtained a BSc in Genetics from the University of Essex in the UK and an MSc in Reproductive Science and Women's health from the University College London (UCL). She lived in the UK for seven years where she completed her studies and then moved to a haematology laboratory at the University of Southampton to be a research technician. Following these ventures she moved to Milan in Italy during 2020, as she enrolled as a PhD student at the University of Milano Bicocca to start the PhD programme titled "Translational and Molecular Medicine (DIMET)". This project was however conducted at Flowmetric Europe S.p.A (FME), Italy and marked one of the industry PhD's of the ARCH program.



She said.. "The most valuable lesson learnt while completing my PhD via the ARCH project was the processes and the mechanisms of learning how to manage the social and emotional aspects of life."

As the only Cypriot of the ARCH project I feel privileged to have been part of such a valuable learning experience. I feel proud to represent the Cypriot flag and be able to take back to my own roots all the knowledge I have attained from this project. During this course of time, through the ARCH project I participated in multiple meetings in Rome, Madrid and Heraklion where all the members interacted and exchanged scientific knowledge. These trips helped me scientifically and to develop my projects prospective but also gave me the opportunity to explore different cultures. Through these trips we were able to constantly interact with the members of the network and this paved way for all the members of the ARCH consortium to be more than just research colleagues, by continuing to be good friends.

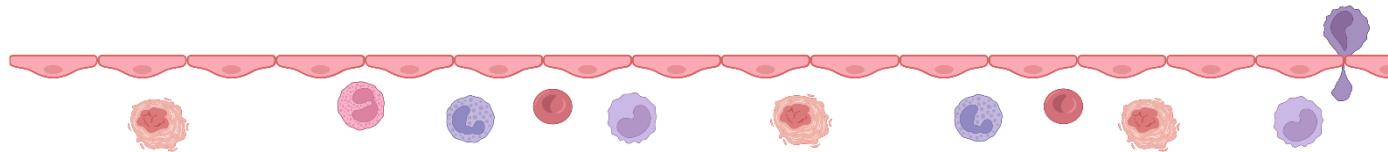


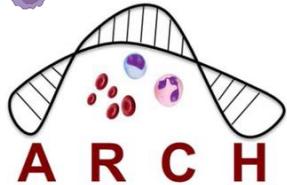
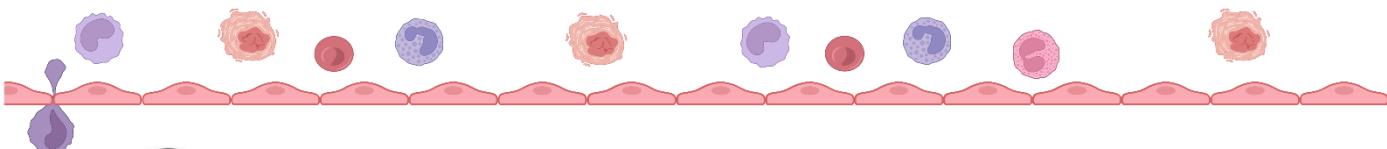


## ESR5

Ως η μόνη Κύπρια μέλος του προγράμματος ARCH, νιώθω προνομιούχα που συμμετείχα σε μια τόσο πολύτιμη μαθησιακή εμπειρία. Νιώθω περήφανη που εκπροσωπώ την Κυπριακή σημαία και μπορώ να επαναφέρω στις ρίζες μου όλη τη γνώση που απέκτησα από αυτό το έργο.

Κατά τη διάρκεια αυτής της περιόδου, μέσω του προγράμματος ARCH συμμετείχα σε πολλαπλές συναντήσεις στη Ρώμη, τη Μαδρίτη και το Ηράκλειο όπου όλα τα μέλη αλληλεπιδρούσαν και αντάλλαξαν επιστημονική γνώση. Αυτά τα ταξίδια με βοήθησαν επιστημονικά αλλά και μου έδωσαν την ευκαιρία να εξερευνήσω διαφορετικούς πολιτισμούς. Μέσα από αυτά τα ταξίδια ήμασταν σε θέση να αλληλεπιδρούμε συνεχώς με τα μέλη του δικτύου και αυτό άνοιξε τον δρόμο για όλα τα μέλη του προγράμματος ARCH να είναι κάτι περισσότερο από συνάδελφοι ερευνητές; να είμαστε καλοί φίλοι.





## ESR6



Hi there! I'm Guillermo Fernandez, a biologist from Seville, Spain. I am one of the 15 fellows who belong the ARCH-Network and the one that did his PhD at Sapienza University of Rome, in the fantastic city of Rome.

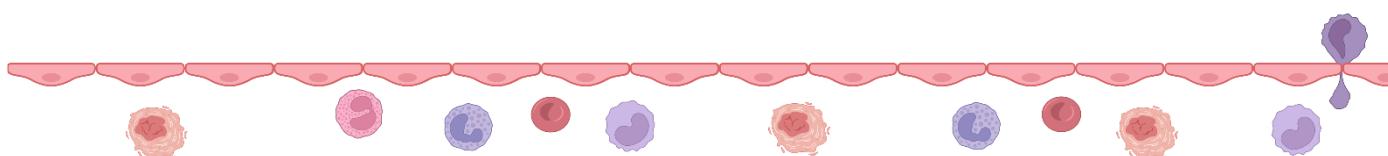
It has been an unforgettable experience that began just before the Covid-19 pandemic hit, making it quite a stressful and weird time to start my doctoral studies. Even though it was not so easy, I did it, and it turned out to be one of the best experiences of my life.

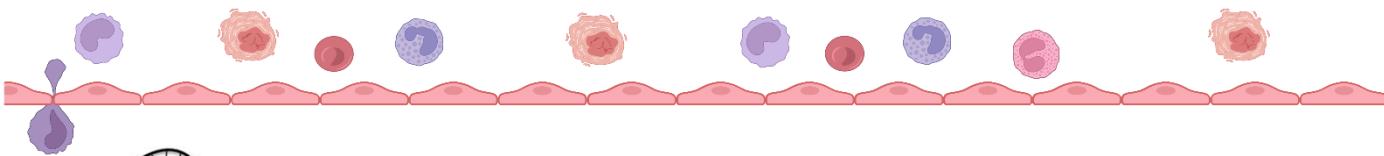
When I first arrived at Sapienza University, little did I know that the world would soon be engulfed by a global pandemic. It was a challenging period, with remote learning and limited on-campus activities becoming the new normal. Adapting to this new way of studying and conducting research was not easy, but I was determined to overcome the obstacles and give my best. As a Marie Curie fellow, I had the privilege of participating in international meetings organized by the consortium. Despite the pandemic forcing most of these events to move online, it was still an incredible opportunity to connect with fellow researchers from all over the world. The virtual meetings allowed me to share my research findings, exchange ideas, and learn from renowned experts in my field. The connections I made during these events were invaluable, and they significantly broadened my perspectives in molecular biology and leukemia research.

But it wasn't just the professional aspect that made my time at Sapienza University so amazing. Rome, in my opinion, is the most beautiful city in the world, and I enjoyed every moment of my stay there. I took the time to explore its rich history, visit iconic landmarks like the Colosseum and the Vatican City. The city's vibrant atmosphere and cultural heritage provided a unique backdrop for my studies.

Moreover, I had the opportunity to form meaningful connections with my lab mates and friends outside the university. Collaborating with researchers in the lab was not only intellectually stimulating but also created a sense of support. Beyond the academic setting, I enjoyed getting to know my friends outside of university, exploring the city together, and immersing myself in the local culture. These personal connections were an essential part of my overall experience, and they made my time in Rome all the more special.

In conclusion, my PhD journey at Sapienza University in Rome, despite the initial challenges of starting during the Covid-19 pandemic, was truly one of the best experiences of my life. I successfully completed my research in molecular biology and leukemia, met incredible people through the Marie Curie fellowship, and fell in love with the beauty of Rome. The combination of professional growth, personal connections, and the enchanting atmosphere of the city made my PhD years an unforgettable and rewarding chapter in my life.





## ESR6



¡Hola! Soy Guillermo Fernández, biólogo de Sevilla, España. Soy uno de los 15 becarios que pertenecen a la Red ARCH y el que hizo su doctorado en la Universidad Sapienza de Roma, en la fantástica ciudad de Roma.

Ha sido una experiencia inolvidable que comenzó justo antes de que llegara la pandemia de Covid-19, por lo que fue un momento bastante estresante y extraño para comenzar mis estudios de doctorado. Aunque no fue tan fácil lo hice y resultó ser una de las mejores experiencias de mi vida. Cuando llegué por primera vez a la Universidad Sapienza, no sabía que el mundo pronto se vería sumergido en una pandemia global.

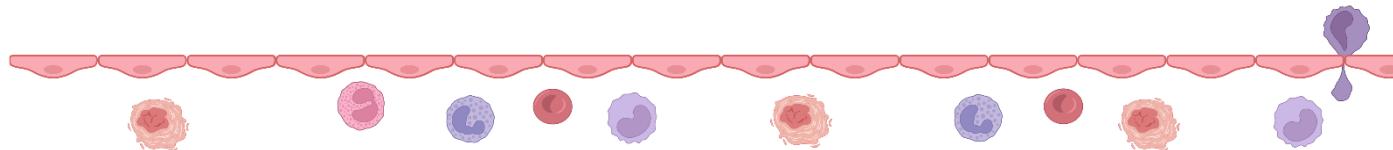
Fue un período desafiante, en el que el aprendizaje remoto y las actividades limitadas en el campus se convirtieron en la nueva normalidad. Adaptarme a esta nueva forma de estudiar y realizar investigaciones no fue fácil, pero estaba decidido a superar los obstáculos y dar lo mejor de mí.

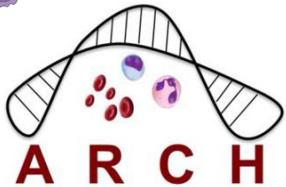
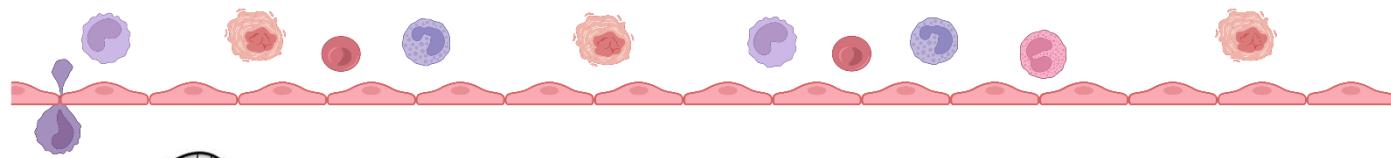
Como becaria Marie Curie, tuve el privilegio de participar en reuniones internacionales organizadas por el consorcio. A pesar de que la pandemia obligó a que la mayoría de estos eventos se realizaran en línea, seguía siendo una oportunidad increíble para conectarse con colegas investigadores de todo el mundo.

Las reuniones virtuales me permitieron compartir los resultados de mi investigación, intercambiar ideas y aprender de reconocidos expertos en mi campo. Las conexiones que hice durante estos eventos fueron invaluables y ampliaron significativamente mis perspectivas en la biología molecular y la investigación de la leucemia.

Pero no fue sólo el aspecto profesional lo que hizo que mi estancia en la Universidad Sapienza fuera tan maravillosa. Roma, en mi opinión, es la ciudad más bella del mundo y disfruté cada momento de mi estancia allí. Me tomé el tiempo para explorar su rica historia y visitar lugares emblemáticos como el Coliseo y la Ciudad del Vaticano. La vibrante atmósfera y el patrimonio cultural de la ciudad proporcionaron un telón de fondo único para mis estudios.

Además, tuve la oportunidad de establecer conexiones significativas con mis compañeros de laboratorio y amigos fuera de la universidad. Colaborar con investigadores en el laboratorio no solo fue intelectualmente estimulante sino que también creó una sensación de apoyo. Más allá del entorno académico, disfruté conocer a mis amigos fuera de la universidad, explorar la ciudad juntos y sumergirme en la cultura local. Estas conexiones personales fueron una parte esencial de mi experiencia general e hicieron que mi estancia en Roma fuera aún más especial.





## ESR7



My name is Ludovica Proietti, I come from Italy and I obtained my Bachelor's degree in Biology in 2017 and Master's degree in Genetics and Molecular Biology in 2029 at Sapienza University of Rome. I moved to Vienna in 2020 to join the laboratory of Florian Grebien as a PhD student at the University of Veterinary Medicine Vienna. Since then, I have been a Marie Curie Fellow in the context of the "Age Related Changes in Hematopoiesis" (ARCH) consortium.

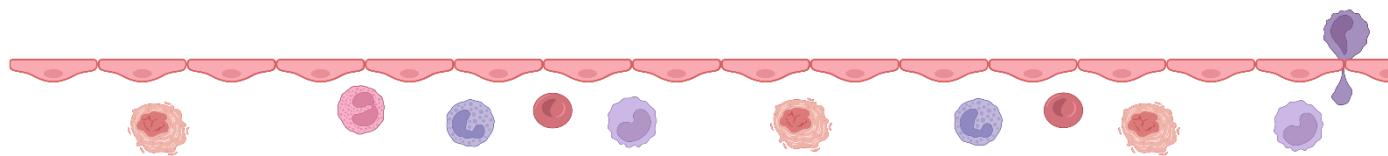
This journey has been truly exceptional, and I am incredibly grateful for the opportunities and support I have received especially given the extraordinary circumstances we had to face due to COVID-19 pandemic.

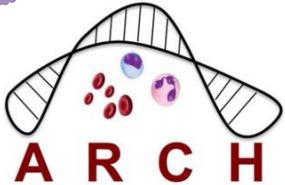
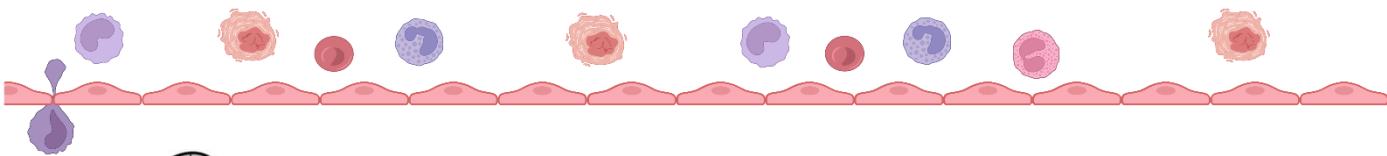
From the outset, the Marie Curie program offered a unique and enriching environment for my doctoral studies. The emphasis on cross-disciplinary research and international collaboration has broadened my horizons and enabled me to work alongside some of the brightest minds in my field. The exposure to diverse perspectives and methodologies has been instrumental in shaping my research and personal growth.

One of the standout aspects of this experience has been the invaluable mobility opportunities. I've had the privilege to undertake research in different countries and meet other young scientists, which has not only enriched my academic pursuits but also broadened my cultural understanding. These experiences have fostered international friendships and collaborations that I am confident will endure well beyond my PhD.

The program's commitment to career development is another standout feature. The emphasis on transferable skills and career planning has not only made me a better researcher but also prepared me for a successful future beyond academia. The soft skills, networking opportunities, and mentoring have been instrumental in shaping my career path.

I want to extend my sincere gratitude to all those involved in making this experience possible. It has been a wonderful chapter in my academic and personal life, and I look forward to carrying the knowledge and connections I've gained into the future.





## ESR7



Mi chiamo Ludovica Proietti, vengo dall'Italia e ho conseguito la Laurea Triennale in Biologia nel 2017 e la Laurea Magistrale in Genetica e Biologia Molecolare nel 2029 presso La Sapienza Università di Roma. Mi sono trasferito a Vienna nel 2020 per unirmi al laboratorio di Florian Grebien come studente di dottorato presso l'Università di Medicina Veterinaria di Vienna. Da allora sono Marie Curie Fellow nel contesto del consorzio "Age Related Changes in Hematopoiesis" (ARCH).

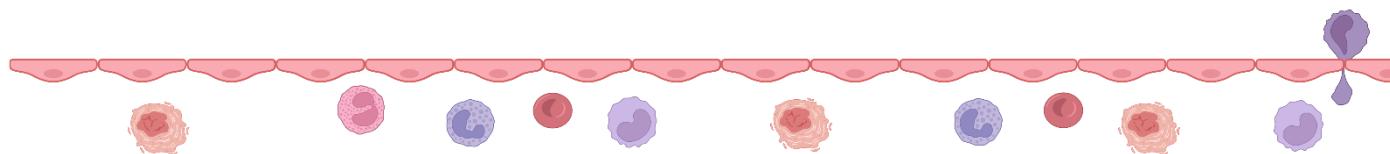
Questo viaggio è stato davvero eccezionale e sono incredibilmente grata per le opportunità e il sostegno che ho ricevuto, soprattutto date le circostanze straordinarie che abbiamo dovuto affrontare a causa della pandemia di COVID-19.

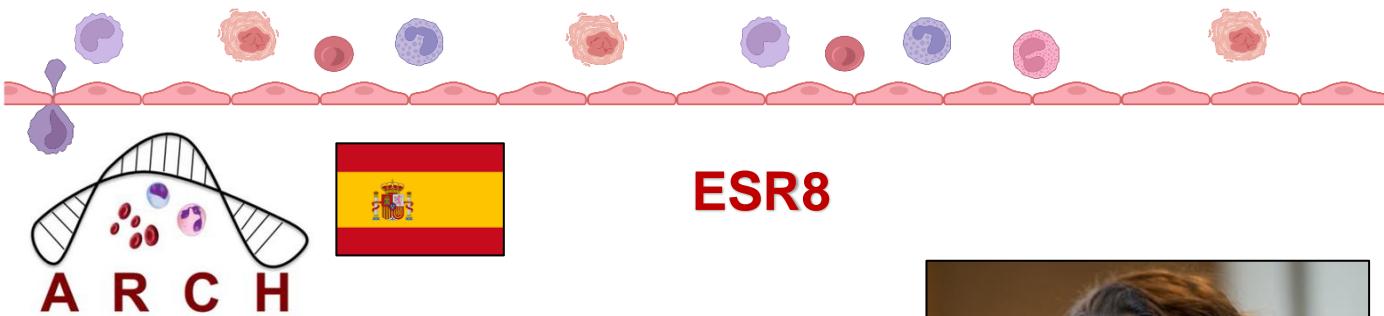
Fin dall'inizio, il programma Marie Curie ha offerto un ambiente unico e arricchente per i miei studi di dottorato. L'enfasi sulla ricerca interdisciplinare e sulla collaborazione internazionale ha ampliato i miei orizzonti e mi ha permesso di lavorare al fianco di alcune delle menti più brillanti nel mio campo. L'esposizione a diverse prospettive e metodologie è stata determinante nel plasmare la mia ricerca e la mia crescita personale.

Uno degli aspetti più straordinari di questa esperienza sono state le preziose opportunità di mobilità. Ho avuto il privilegio di intraprendere ricerche in diversi paesi e di incontrare altri giovani scienziati, il che non solo ha arricchito le mie attività accademiche ma ha anche ampliato la mia comprensione culturale. Queste esperienze hanno favorito amicizie e collaborazioni internazionali che sono fiduciosa dureranno ben oltre il mio dottorato.

L'impegno del programma per lo sviluppo della carriera è un'altra caratteristica distintiva. L'enfasi sulle competenze e sulla pianificazione della carriera non solo mi ha reso un ricercatore migliore, ma mi ha anche preparato per un futuro di successo oltre il mondo accademico. Le competenze trasversali, le opportunità di networking e il tutoraggio sono stati determinanti nel plasmare il mio percorso professionale.

Voglio estendere la mia sincera gratitudine a tutti coloro che hanno contribuito a rendere possibile questa esperienza. È stato un capitolo meraviglioso nella mia vita professionale e personale e non vedo l'ora di portare con me in futuro le conoscenze e le connessioni che ho acquisito.





ARCH

ESR8

Mari Carmen Romero-Mulero is Spanish and obtained a Bachelor degree in Biochemistry at the University of Sevilla in 2019 and a Master degree in Bioinformatics at the Universitat Autònoma de Barcelona in 2020. She moved to Germany in 2020 after her master's and was enrolled as PhD student in the Ph.D. Program "MeInBio" organized by the University of Freiburg.

My experience as a Marie Curie PhD fellow in ARCH has been a very important part of both my professional and personal life. Not only has it given me the opportunity to work in an amazing scientific environment, but it has also shaped my eagerness to be always surrounded by inspiring and multicultural people.

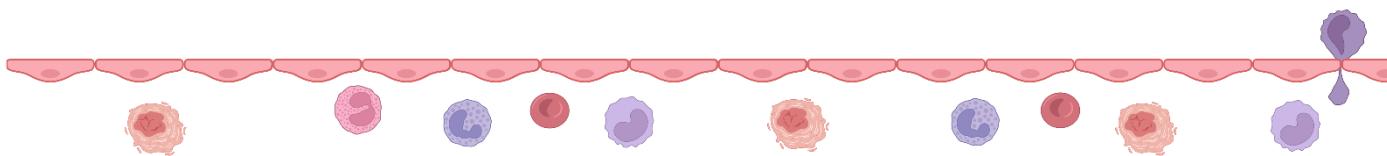


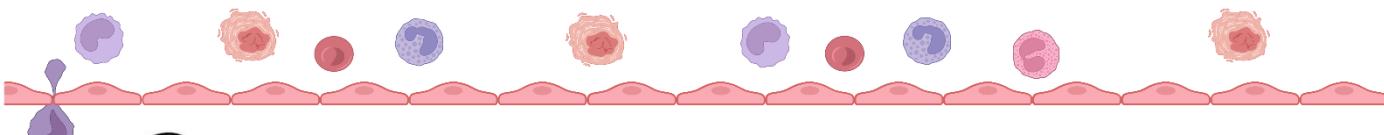
During these more than three years, I have had the privilege to carry out my project in a leading scientific network in Germany, the Max-Planck society. This environment offers the students the possibility of using cutting-edge technologies and facilities and do the most out of their projects. As a bioinformatician, it is very satisfying and rewarding to get to analyse sequencing data from state-of-the-art technologies, and it gives you a whole load of expertise for your future career. The constant visit of renowned scientists who you can talk to and discuss your project with is another of the main advantages, as you will always be able to have the point of view of an expert in your field. Moreover, it is a multicultural setup where you meet many friends and get to know and respect their cultures.

Another important point of the Marie Curie fellowships is the valorisation of the contribution of PhD students to society and the improvement of their projects. The salary permits the students to live a comfortable life in any of the European countries that participate, and come back home to our respective countries to charge our energies once in a while. Given the amount of money destined to your project, you can also have the best opportunities in terms of experiments, analyses, training, international conferences where you can present your data, and secondments in other renowned institutes and universities.

Last but not least, the ARCH project for me represents friendship and comprehension. It has been a network of PhD students who always helped each other professionally, but also emotionally when the project was in a low moment or when the coronavirus pandemic was too difficult to deal with. The multiple meetings were a way of discussing very interesting science together, but also to finally meet your ARCH friends again. They are all inspiring young scientists who will shape science in the next decades, and hopefully also future collaborators and friends to enjoy conferences and reunions with.

A Marie Curie fellowship entails undertaking a successful PhD while creating an amazing scientific network and, at the same time, meeting people from every part of the world, visiting other countries and living unforgettable experiences.





## ESR8



Mi experiencia como estudiante de doctorado Marie Curie en ARCH ha sido una parte muy importante de mi vida tanto profesional como personal. No solo me ha dado la oportunidad de trabajar en un entorno científico increíble, sino que también ha moldeado mi afán por estar siempre rodeada de personas inspiradoras y multiculturales.

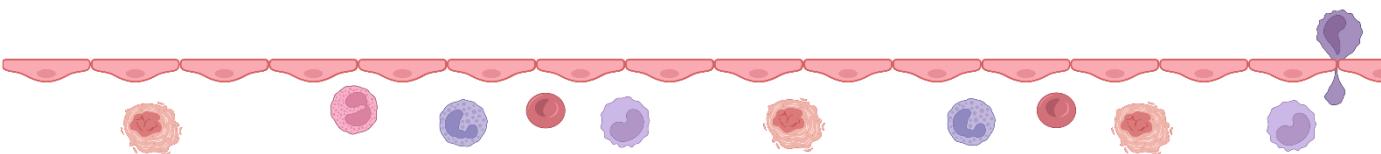
Durante estos más de tres años, he tenido el privilegio de llevar a cabo mi proyecto en una red científica líder en Alemania, la sociedad Max-Planck.

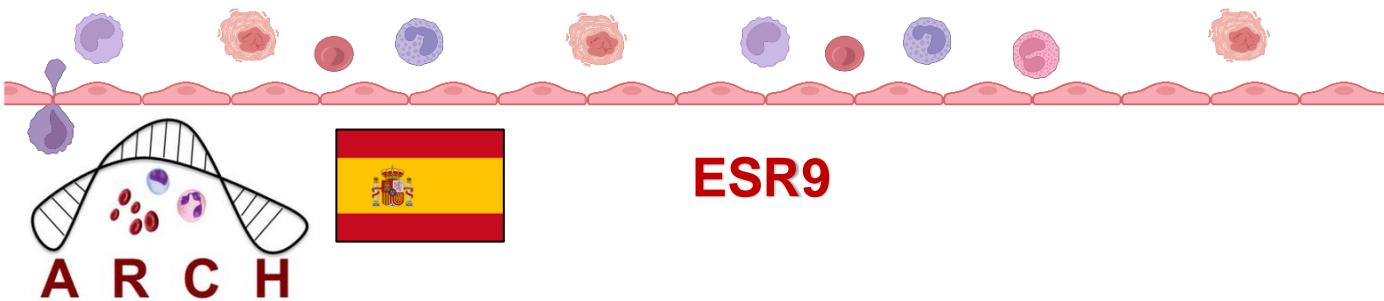
Este entorno ofrece a los estudiantes la posibilidad de utilizar tecnologías e instalaciones punteras y sacar el máximo partido a sus proyectos. Como bioinformática, es muy gratificante y satisfactorio poder analizar datos de secuenciación de tecnologías de última generación, y te brinda mucha experiencia para tu futura carrera. La visita constante de científicos de renombre con los que puedes hablar y discutir tu proyecto es otra de las principales ventajas, ya que siempre podrás contar con el punto de vista de un experto en tu campo. Además, es un ambiente multicultural donde haces muchos amigos y aprendes a conocer y respetar sus culturas.

Otro punto importante de las becas Marie Curie es la valorización de la contribución de los doctorandos a la sociedad y la mejora de sus proyectos. El salario permite a los estudiantes vivir una vida cómoda en cualquiera de los países europeos que participan, y volver a casa a nuestros respectivos países para cargar energías de vez en cuando. Dada la cantidad de dinero destinada a tu proyecto, también puedes tener las mejores oportunidades en términos de experimentos, análisis, aprendizaje, conferencias internacionales donde puede presentar sus datos y estancias en otros institutos y universidades de renombre.

Por último, pero no menos importante, el proyecto ARCH para mí representa amistad y comprensión. Es una red de estudiantes de doctorado que siempre se han ayudado entre sí profesionalmente, pero también emocionalmente cuando el proyecto estaba en un momento bajo o cuando la pandemia de coronavirus era demasiado difícil de manejar. Las múltiples reuniones han sido una forma de discutir ciencia interesante juntos, pero también de finalmente ver a tus amigos de ARCH de nuevo. Todos son jóvenes científicos inspiradores que darán forma a la ciencia de las próximas décadas y, con suerte, también futuros colaboradores y amigos con quienes disfrutar de conferencias y reuniones.

Una beca Marie Curie implica realizar un doctorado exitoso mientras se crea una red científica increíble y, al mismo tiempo, conocer gente de todas partes del mundo, visitar otros países y vivir experiencias inolvidables.





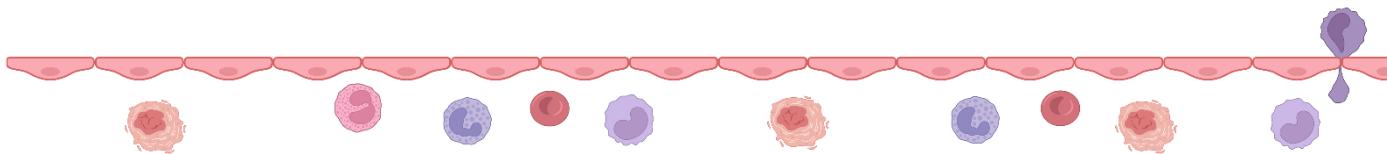
My name is Clara Tellez Quijorna and honestly, I don't know how to start. It is kind of difficult to summarize and simplify these three years in a few lines, but I will try my best: having had the opportunity to do my PhD as part of the ARCH\_Marie Curie network has undoubtedly marked my professional and personal life. I have always dreamed of doing a PhD in Biomedicine, but unfortunately the conditions in Spain are not the best, so I decided to move abroad. To this day, I still can't believe what a great opportunity it is to be part of a European project of such magnitude.

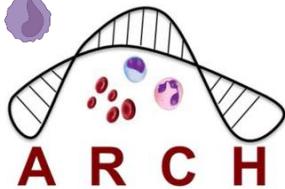
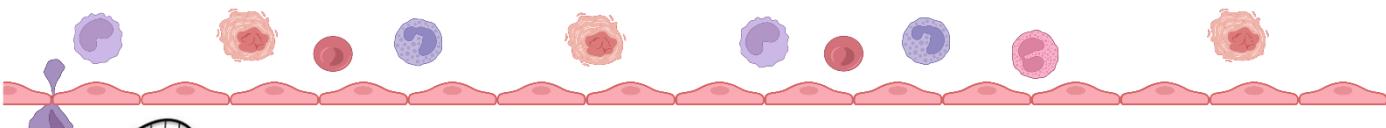


However, not everything was going to be ideal from the beginning... it's hard enough moving to another country, with another culture and another language (French in my case) and having to deal with a global pandemic a month after starting...., not the best approach for sure! Even though, I have to say that this experience has far exceeded all my expectations.

On a professional level, I have acquired a lot of knowledge: understand more epigenetics (being totally new to the field), different techniques in the lab, the handling of big data which implies a background in bioinformatics, as well as working in a multidisciplinary and international team. Despite the COVID, which inevitably had an impact on the different activities and trainings planned in the programme, I felt that the training was still there, adapted to the screen but at the same time it helped us to be able to combine it with the experiments we were carrying out at the time. Moreover, being part of ARCH has allowed me to travel to different cities in Europe that I had never visited before, to visit other laboratories (I was able to stay in one of them) and companies, but above all to be able to defend my work in front of experts and professionals in the field.

However, I have to say that it has not been an easy journey, we already know how hard and difficult a PhD in Science can be: the pressure to get results as soon as possible, the pressure to publish, the competitiveness that you can often find in academia and above all dealing with failure every day (no one prepares you for it), so I have to thank ARCH for giving me my 14 ESRs, who are my friends and family. Knowing that you could count on their support and above all that they would understand you every time has been a great support during all my months of my PhD, especially every time we had the opportunity to meet in person, it was the necessary dose to find the motivation again. I also have to thank all the people I have met during these years in Marseille, my colleagues in the lab and at the centre in general, as well as the people I have met along the way, who have made me disconnect a bit and being available to enjoy the city and the country.





# ESR9

Sinceramente no se por dónde empezar, es difícil resumir y simplificar estos tres años en unas líneas, pero allá voy: haber tenido la oportunidad de hacer mi doctorado siendo parte del consorcio ARCH\_Marie Curie sin duda ha marcado mi vida profesional y personal.

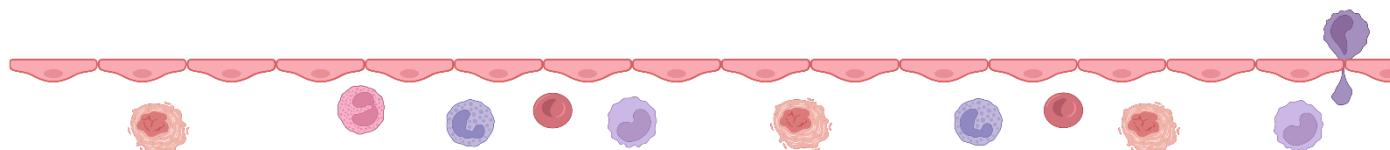
Siempre he aspirado a hacer un doctorado y dedicarme a la investigación, sin embargo, las condiciones en España no son muy buenas por ello decidí embarcarme en la aventura de probar fuera.

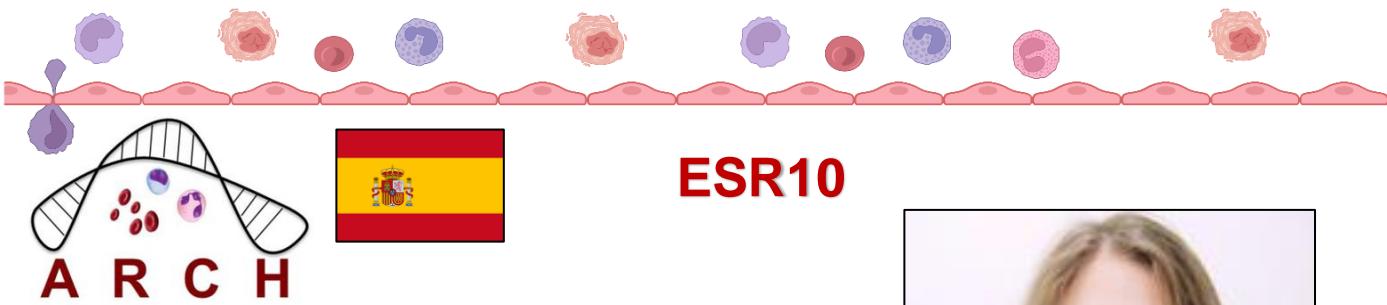


A día de hoy sigo sin poder creerme la gran oportunidad que es formar parte de un proyecto europeo de tal magnitud. Sin embargo, no iba a ser todo tan idílico desde el inicio...ya es difícil de por si mudarte a otro país, con otra cultura y con otro idioma (el francés en mi caso) como encima lidiar ante una pandemia mundial al mes de empezar, jeso sí que es empezar con buen pie y lo demás son tonterías! Aun con todo tengo que decir que esta experiencia ha superado con creces todas mis expectativas.

A nivel profesional he adquirido un montón de conocimientos: en epigenética (siendo totalmente nueva en el campo), diferentes técnicas en el laboratorio, el manejo de big data que implica una base en bioinformática, como a trabajar en un equipo multidisciplinar e internacional. A pesar del COVID, que inevitablemente supuso un impacto en las diferentes actividades y trainings planteados en el programa, he sentido que el training ha estado ahí, adaptado a la pantalla pero que a la vez nos ayudó a poder compaginarlo con los experimentos que estábamos llevando a cabo en esos momentos. Además, ser parte de ARCH me ha permitido poder viajar por diferentes ciudades en Europa que casualmente nunca antes había visitado, conocer otros laboratorios (poder realizar una estancia en uno de ellos) y empresas, pero sobre todo a ser capaz de defender mi trabajo ante expertos y profesiones en el campo.

Sin embargo, tengo que decir que no todo ha sido un camino de rosas, ya sabemos lo duro y difícil que puede llegar a ser un doctorado en ciencia: la presión de tener resultados lo antes posible, presión por publicar, la competitividad implícita que te puedes encontrar muchas veces en academia y sobre todo el lidiar con el fracaso día a día (que nadie te prepara para ello), por ello tengo que dar las gracias a ARCH por darme a mis 14 ESRs, que sin ninguna duda son amigos y son familia. El saber que tenías el respaldo y sobre todo que te iban a entender en todo momento ha sido un gran apoyo durante todos mis meses de doctorado, sobre todo cada vez que teníamos la oportunidad de reencontrarnos en persona, era la dosis necesaria para volver a encontrar la motivación. Tengo que dar las gracias también a toda la gente que he conocido en estos años en Marsella, a mis compis de laboratorio y del centro en general como a gente que me he ido encontrando por el camino que sin duda me han hecho desconectar, disfrutar de la ciudad y desconectar un poco de la ciencia que muchas veces viene bien.





## ESR10

Natalia is Spanish and obtained the masters of Molecular Life Science masters specialized in Biomedical research and Biotechnology masters specialized in Food specialization at the University of Wageningen, The Netherlands in 2011. She moved to Madrid in 2018 and 2019. Afterwards she enrolled as PhD student in the “Molecular Biosciences PhD program” at the Autonomous University of Madrid.

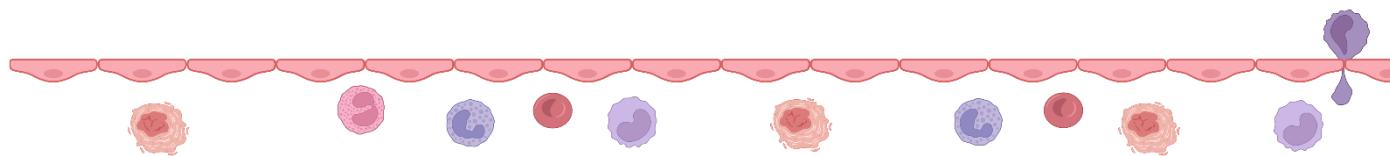


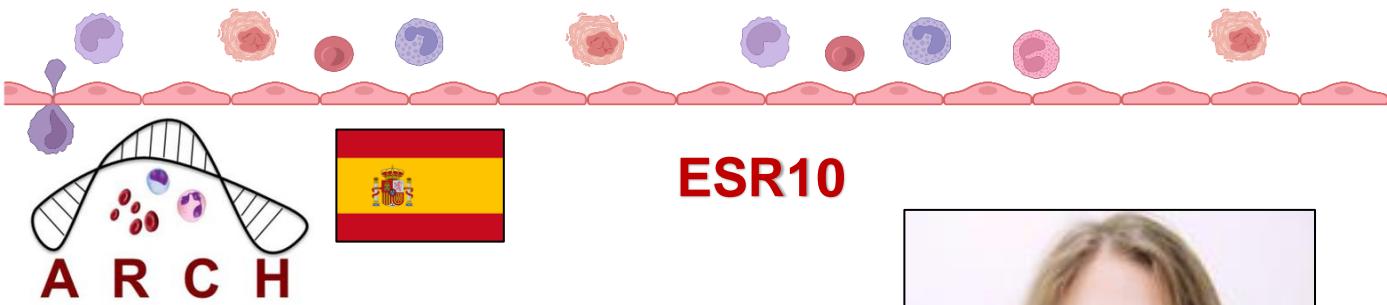
She runs her project “Genetic analysis of PRC1 function in homeostatic and malignant hematopoiesis” under the supervision of Miguel Ángel Vidal in Spain.

I still remember myself three years ago meeting Miguel Ángel Vidal and applying for the ESR10 position at the ARCH. Now, three years later, my PhD project is coming to its end and I am positively surprised of how much I have gained, learned and trained during this time.

The opportunity of joining the ARCH Marie Curie Network has not only promoted the developing of my career but it also gave me the chance to create a social network that enabled me to exchange knowledge and ideas about hematopoiesis between all ESR members within the network. I believe that the translation of science into real life applications becomes benefited from the collaboration of different scientists and the consequent exchange of knowledge and ideas. I have had the chance to discuss a wide variety of scientific concepts with different scientist who are working in the same field, exchange ideas, share problems and debate potential solutions and in some cases establish real collaborations. It was quite interesting to realize how our capabilities to understand each other projects and issues improved over time and as a result of collaborating more and more closely between us. Additionally, the fact that we were in an international network resulted in the creation of a wide-open mindset that had a positive impact not only in the research field but also in my personal development.

As I have already mentioned, this project will not only give you the opportunity of developing yourself in a lab, being able to independently solve problems or learning to emerge with your own ideas, it will also give you the chance to train a wide variety of skills which are not only useful in science but also in your future career and a personal mature development. More importantly, the chance to meet and collaborate all the rest of ESR participating in the European network will give you the chance to discuss problems with people who are working in the same field, to get different points of view, establish a network and widen your horizon and get a more wide-open mindset.





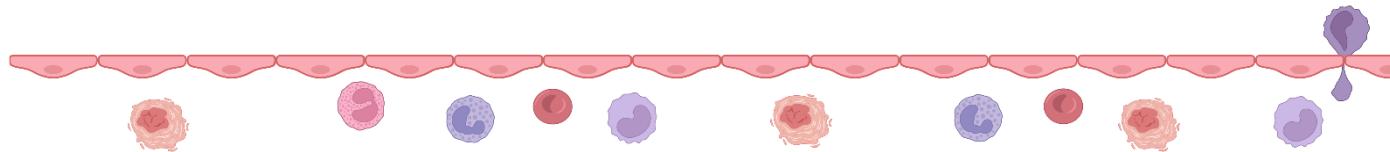
## ESR10

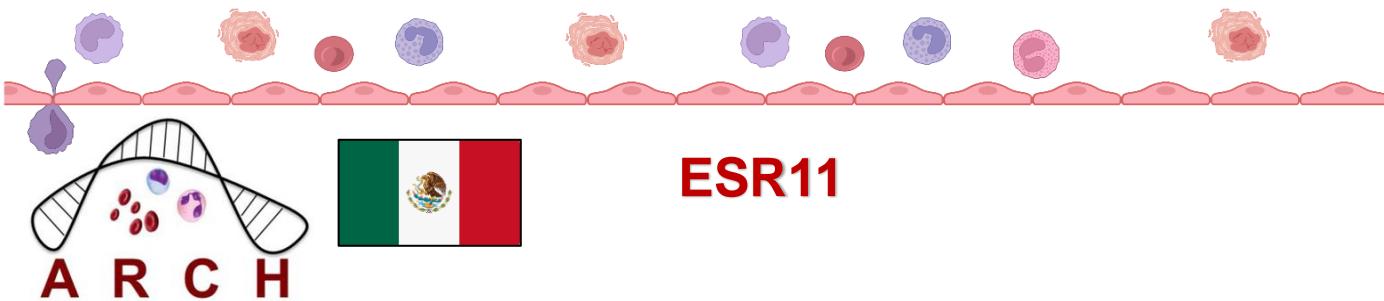
Todavía me recuerdo cuando hace tres años fui a Madrid a conocer a Miguel Ángel Vidal y realizar la entrevista para el puesto de ESR10 como parte del Proyecto europeo ARCH. Ahora, tres años después, mi proyecto de doctorado está llegando a su fin y estoy gratamente sorprendida de lo mucho que he ganado, aprendido y adquirido durante este tiempo.



La oportunidad de participar en el consorcio ARCH de Marie Curie no solo ha impulsado el desarrollo de mi carrera, sino que también me ha dado la oportunidad de crear una red social que me permitió intercambiar conocimientos e ideas sobre hematopoyesis entre todos los miembros del consorcio. Creo que la traslación de la ciencia a aplicaciones de la vida real se beneficia de la colaboración de diferentes científicos y el consiguiente intercambio de conocimientos e ideas. Durante todo este tiempo, he tenido la oportunidad de discutir una amplia variedad de conceptos científicos con diferentes científicos que trabajan en el mismo campo, intercambiar ideas, compartir problemas y debatir posibles soluciones y, en algunos casos incluso establecer colaboraciones reales. Fue bastante interesante darme cuenta de cómo nuestras capacidades para comprender los proyectos y problemas de los demás mejoraron con el tiempo y como resultado de una colaboración cada vez más estrecha entre nosotros. Además, el hecho de estar en una red internacional resultó en la creación de una mentalidad más abierta en todos nosotros, que desde luego tuvo un impacto positivo no sólo en el campo de la investigación sino también en mi desarrollo personal.

Como ya he mencionado, este proyecto no solo te dará la oportunidad de desarrollarte en un laboratorio, siendo capaz de resolver problemas de forma independiente o aprendiendo a tener tus propias ideas, sino que también te dará la oportunidad de entrenar una gran variedad de habilidades que no solo son útiles en la ciencia sino también en tu futuro personal y laboral. Más importante aún, la oportunidad de conocer y colaborar con todo el resto de ESRs que participan en la red europea te dará la oportunidad de discutir problemas con personas que trabajan en el mismo campo, obtener diferentes puntos de vista, establecer una red y ampliar tu horizonte.





ARCH

ESR11

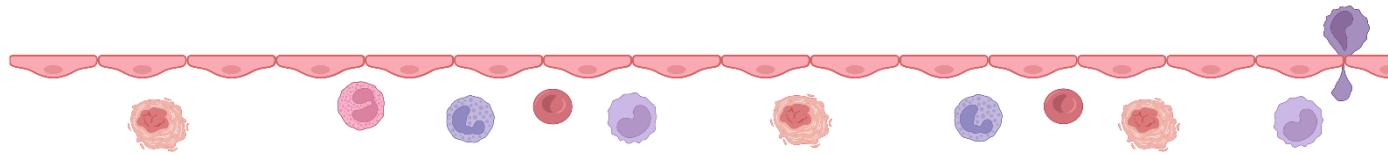
My name is Andrea Ávila Ávila, and I joined the ARCH network of the Marie Skłodowska-Curie Actions (MSCA) of the European Union as an Early Stage Researcher. I worked at the Curie Institute on a project titled "Improving the anti-leukemic properties of the therapeutic anti-CD3 antibodies in T-cell Acute Lymphoblastic Leukemia (T-ALL)."

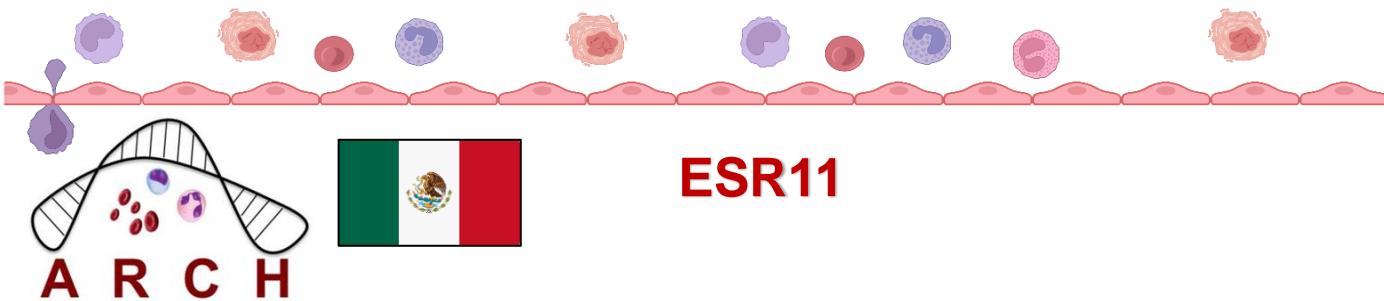
Being an ESR in the ARCH network for my PhD project was a three-year journey filled with great opportunities and fulfillment. The ARCH network provided me integral professional training that undoubtedly encompassed scientific aspects, immersed in a collaborative environment, and importantly complemented with a sense of social commitment.

Regular scientific meetings with fourteen excellent scientific teams of the network broadened my vision of research. Discovering in a collaborative environment that different perspectives exist and that diverse approaches can be used to address common scientific questions was a motivating experience.

Importantly, the ARCH consortium included laboratories both in academia and industry, which gave me the incredible opportunity to stay and conduct research in an industrial setting, an experience that greatly broadened my perspective on my future career.

Finally, to share the passion and excitement about science with incredible and talented PhD students is a priceless experience that has imprinted my scientific career.





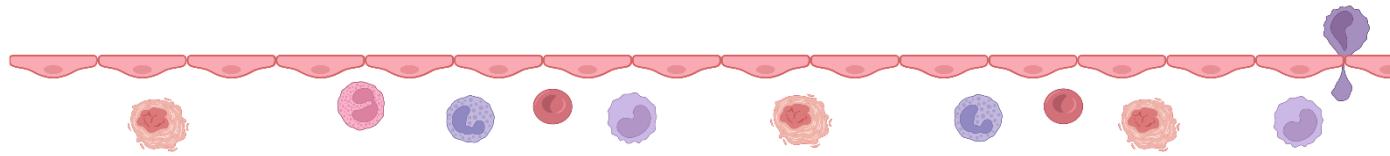
Me llamo Andrea Ávila Ávila y fui parte del consorcio ARCH de las acciones Marie Skłodowska-Curie Actions (MSCA) como joven investigadora estudiante de doctorado (ESR). Realicé mi trabajo de investigación en el Instituto Curie con el proyecto titulado "Mejoramiento de las propiedades antileucémicas de los anticuerpos terapéuticos anti-CD3 en la leucemia linfoblástica aguda de células T (T-ALL)".

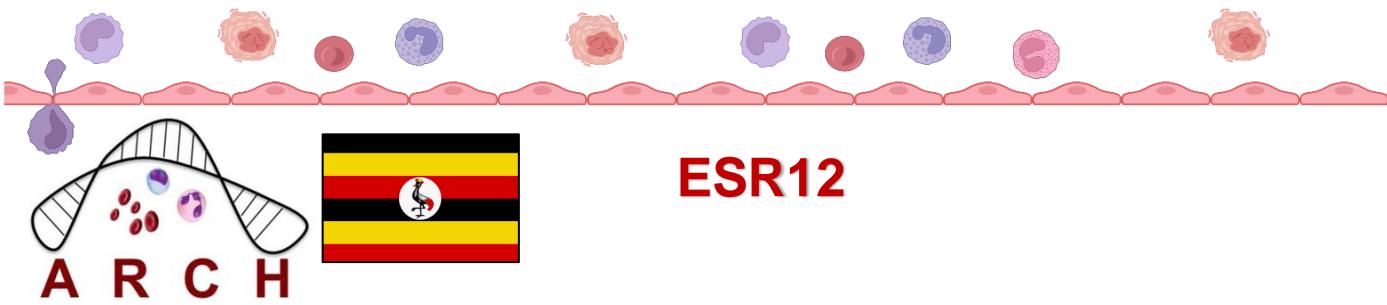
Ser estudiante ESR en el consorcio ARCH para mi proyecto de doctorado fue una experiencia de tres años lleno de grandes oportunidades y satisfacciones. ARCH me proporcionó una formación profesional completa que abarcó aspectos científicos inmersos en un entorno de colaboración y, lo que es más importante, complementados con un sentido de compromiso social.

Las frecuentes reuniones científicas con catorce excelentes equipos científicos del consorcio ampliaron mi visión de investigación. Descubrir en un ambiente de colaboración que existen diferentes perspectivas y que se pueden utilizar diversos enfoques para abordar cuestiones científicas comunes fue una experiencia motivante.

Cabe destacar que el consorcio ARCH comprendía laboratorios en academia e industria, lo que me brindó la increíble oportunidad de realizar una estancia y llevar a cabo investigaciones en un entorno industrial, experiencia amplió enormemente mi perspectiva sobre mi futura carrera profesional.

Finalmente, compartir mi pasión y entusiasmo por la ciencia con estudiantes de doctorado de increíble talento ha sido una experiencia invaluable que marcará mi carrera científica.





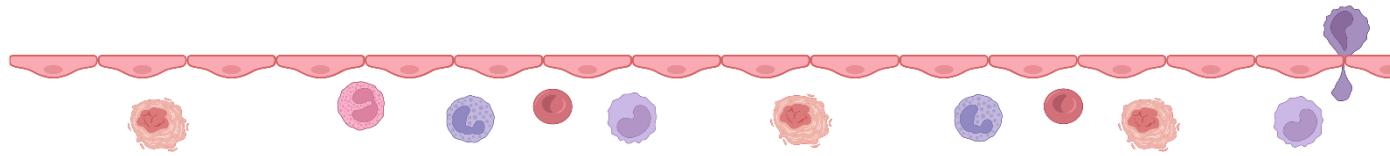
Hillary Maniriho, born in Uganda, obtained a Master of Science degree in Biochemistry at University of Mysore (Karnataka, India) in 2017 after which he was offered a junior research fellowship at the Indian Institute of Science (IISc), Bangalore, India. In 2020, he was admitted in the Sackler Faculty of medicine, Tel Aviv University to pursue a PhD, under the supervision of Prof. Shai Izraeli, in the department of Human Molecular Genetics and Biochemistry

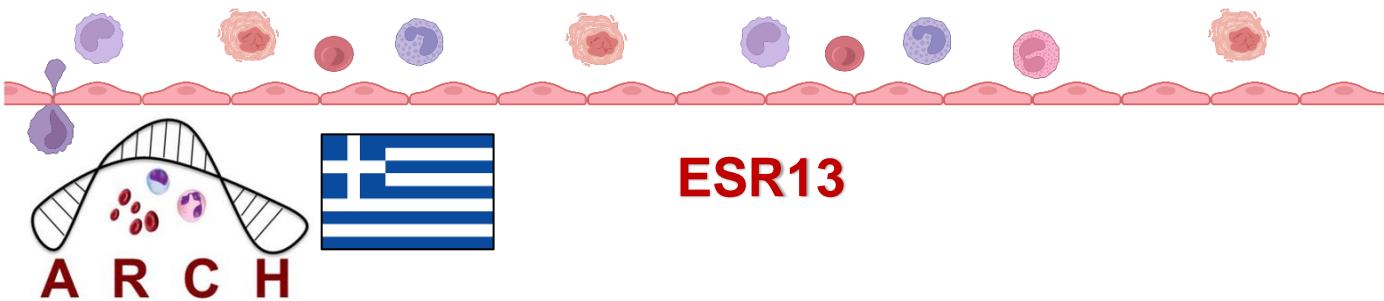
It was such a huge privilege to be considered to undertake a project funded by ARCH (Age-related changes in Haematopoiesis) project under the Marie Skłodowska Curie Actions of the European Commission (MSCA-ITN-EU).

I consider it a rare fit of a natural progression of my rather young career as a prospective full researcher in basic and translational oncology. My research project; “Modelling the role the Thymic stromal Lymphopoitin (TSLP) and its receptor (TSLPR) in acute lymphoblastic leukemia (ALL)” was such an open problem that kept alight my elated sense biochemistry in me. Naturally, I am drawn to phenomena that I can set in motion, control and intervene. And so, this was the aspect that made my project interesting; from transforming normal progenitors, regulating TSLPR oncogenic signalling with TSLP, identifying the associated biochemical signals in the context of leukemia evolution and treatment. It was such a dream project that I could ever undertake at this level. I hope my yet-to-be published findings might be a ‘lump’ to the leukemia knowledge-base and could be salvaged to design treatment protocols and therapeutics especially for Philadelphia-like ALL

Most importantly, the opportunity for closely-knit scientific exchange between the members of the ARCH project made this rather challenging pursuit extremely rewarding. The meetings that were usually hosted in culturally rich cities made both formal and informal scientific interaction so refreshing. The benefits of this network, for us young scientists and mentors would have been far more enriching had it not been the stagnating 2 years of COVID-19 pandemic

Now, I can practically realise with first-hand, how the research initiatives funded by the European Commission drive positive change and how they benefit those of us at the grassroot. I would like to add my voice, like other student beneficiaries, to appreciate the ARCH project (and the supervisors) for which I (will) owe my PhD studies.





Thanos Oikonomou comes from Greece and obtained the MSc Immunology & Inflammation by the University of Copenhagen, Denmark in 2019. He moved to Italy in September 2020 as Early Stage Researcher under the ARCH MSCA project to enrol at the Translational and Molecular Medicine (DIMET) PhD school of the University of Milano-Bicocca, carrying out his doctoral thesis in Fondazione Tettamanti under the supervision of prof. Giovanni Cazzaniga. The focus of his project is pediatric Acute Lymphoblastic Leukemia (ALL) and modelling of targeted treatment for poor outcome subgroups under precision medicine approaches and high-throughput screening compound identification.

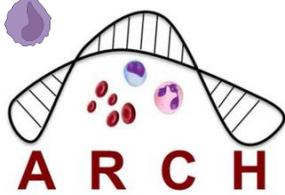
It is incredible how much these three years of my phd project made me grow and personally and scientifically mature, while enriching my skills and knowledge and foremost my connections and interactions. I am honestly very grateful for this immense opportunity to carry out my research within a MSCA network, comprised by experts in the field of hematology and aging, while also promoting scientific excellence by continuous support and engagement and the chance to disseminate scientific and social aspects to society and within the scientific community.

My choice was motivated by the fact that MSCA projects have much more to offer beyond the experimental research part, such as an efficient mentoring of students and their progress through regular reports and meetings while also enabling them to move beyond their bench and engage in science dissemination activities and social aspects, standing as a bridge between society and the scientific community. To that added, also of importance was the frequent exposure to workshops and seminars with speakers from different parts of the planet promoting creative and open scientific discussions and providing with multidisciplinary skills and knowledge. Finally, I highly enjoyed the mindset of welcoming and sustained collaboration with members of the project and it has been a rich resource of scientific exchange accompanied by the cultural experiences to enjoy in a new workplace and country.

Looking back throughout these three years, I can now feel the strength and dedication that was sustaining me to work hard and develop myself and my project, especially under critical circumstances like the Covid-19 pandemic. And more importantly, I had the pleasure to never feel alone as belonging to the ARCH network and enjoying all the support I needed to get full of energy and motivation towards a successful completion of my project. In this way, I made important friends and colleagues with students and professors that I will carry with me in life and use their words and attitude as an inspiring guidance to go through future plans and challenges.

Overall, the benefits I have received throughout all this period have been invaluable and if I could simply describe all the nature of this network in a few words, I would emphasize excellence, creativity and innovation, friendship, multidisciplinarity, diversity, cultural and scientific development.



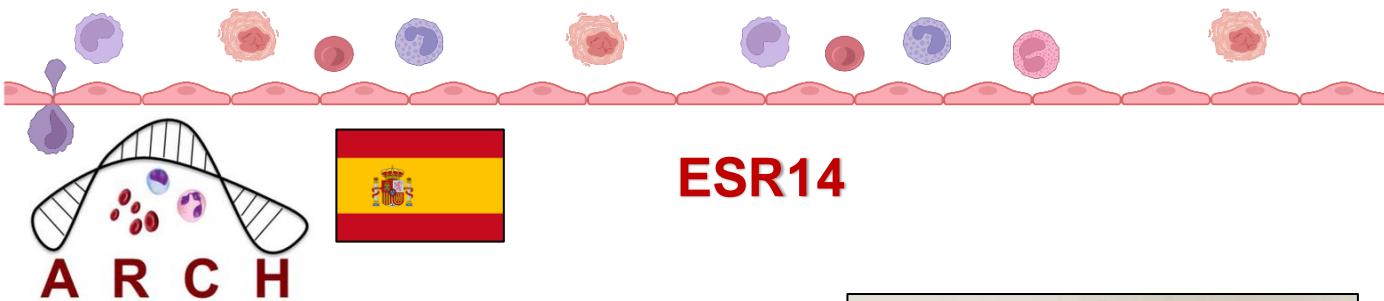


# ESR13

Είναι απίστευτο πόσο αυτά τα τρία χρόνια του διδακτορικού μου με έκαναν να ωριμάσω προσωπικά και επιστημονικά, εμπλουτίζοντας παράλληλα τις δεξιότητες και τις γνώσεις μου και κυρίως τις σχέσεις και τις αλληλεπιδράσεις μου. Ειλικρινά είμαι πολύ ευγνώμων για αυτή την τεράστια ευκαιρία να πραγματοποιήσω την έρευνά μου σε ένα τέτοιο δίκτυο, το οποίο αποτελείται από ειδικούς στον τομέα της αιματολογίας και της γήρανσης, ενώ παράλληλα προάγει την επιστημονική αριστεία με συνεχή υποστήριξη και αλληλεπίδραση καθώς και την ευκαιρία για διάδοση επιστημονικών και κοινωνικών πτυχών στην κοινωνία και εντός της επιστημονικής κοινότητας.



Πάντα ήθελα να ήμουν μέρος ενός MSCA, καθώς από την αρχή μπορούσα να αναγνωρίσω την ποικιλόμορφη και πολυεπιστημονική φύση που το χαρακτηρίζει, ενώ παράλληλα εμπλουτίζεται από τα οφέλη της διεθνούς και διατομεακής έκθεσης, ένας συνδυασμός χαρακτηριστικών που δεν είναι πάντα εύκολο να βρεθεί. Επιπλέον, η επιλογή μου υποκινήθηκε επίσης από το γεγονός ότι οι δράσεις MSCA έχουν πολύ περισσότερα να προσφέρουν πέρα από το μέρος της πειραματικής έρευνας, όπως η αποτελεσματική καθοδήγηση των μαθητών και η πρόοδος τους μέσω τακτικών εκθέσεων και συναντήσεων, ενώ παράλληλα τους επιτρέπει να προχωρήσουν πέρα από τον πάγκο τους και να ασχοληθούν σε δραστηριότητες διάδοσης της επιστήμης και κοινωνικές πτυχές, στέκοντας ως γέφυρα μεταξύ της κοινωνίας και της επιστημονικής κοινότητας. Επιπλέον, πρέπει να σημειωθεί η επιθυμητή στάση που πρωθείται από τις δράσεις MSCA για την υποστήριξη της συμμετοχής των φοιτητών σε συνέδρια και μαθήματα που δεν θα ήταν δυνατά χωρίς την ανάλογη συνεισφορά και αποτελούν ορόσημο επιστημονικής ανταλλαγής, καινοτομίας και συνεργασίας. Ομοίως, σημαντική ήταν και η συχνή έκθεση σε εργαστήρια και σεμινάρια με ομιλητές από διάφορα μέρη του πλανήτη που πρωθούν δημιουργικές και ανοιχτές επιστημονικές συζητήσεις και παρέχουν πολυεπιστημονικές δεξιότητες και γνώσεις. Τέλος, απόλαυσα ιδιαίτερα τη νοοτροπία της φιλόξενης και διαρκούς συνεργασίας με τα μέλη του προγράμματος και ήταν μια πλούσια πηγή επιστημονικής ανταλλαγής συνοδευόμενη από τις πολιτισμικές εμπειρίες που μπορεί κανείς να απολαύσει σε έναν νέο χώρο εργασίας και χώρα. Κοιτάζοντας πίσω όλα αυτά τα τρία χρόνια, μπορώ τώρα να νιώσω τη δύναμη και την αφοσίωση που με στήριξαν να δουλέψω σκληρά και να εξελίξω τον εαυτό μου και το επιστημονικό μου έργο, ειδικά κάτω από κρίσιμες συνθήκες όπως η πανδημία του Covid-19. Και το πιο σημαντικό, είχα τη χαρά να μην αισθανθώ ποτέ μόνος ως ανήκοντας στο δίκτυο ARCH και απολαμβάνοντας όλη την υποστήριξη που χρειαζόμουν για να γεμίσω ενέργεια και ερεθίσματα και να συνεχίσω. Με αυτόν τον τρόπο, έκανα σημαντικούς φίλους και συναδέλφους με φοιτητές και καθηγητές που θα έχω μαζί μου στη ζωή και θα χρησιμοποιήσω τα λόγια και τη στάση τους ως έμπειση για καθοδήγηση στα μελλοντικά μου σχέδια και προκλήσεις.



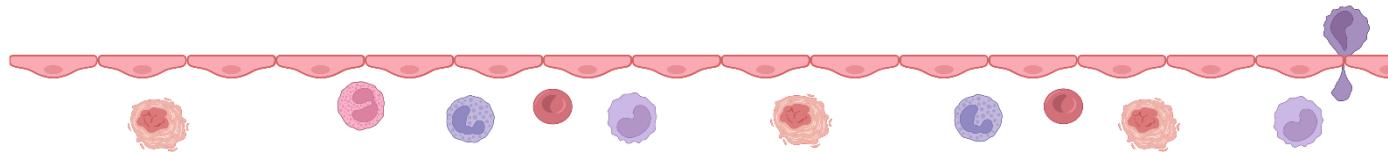
My name is Sandra Alonso Rubido, I'm a Spanish PhD candidate who obtained a master's degree in biotechnology by the Autonomous University of Madrid. Shortly after, I moved to the city of Liège in the south of Belgium, where I started my doctoral research at Diagenode, a private company under the supervision of Dr. Anne-Clemence Veillard and Dr. Céline Sabaté while I was enrolled in the PhD Program "Translational and Molecular Medicine" (DIMET) organized by the University of Milano Bicocca. I am part of a Marie Curie program, ARCH, which has offered huge opportunities not only professional but also personal.

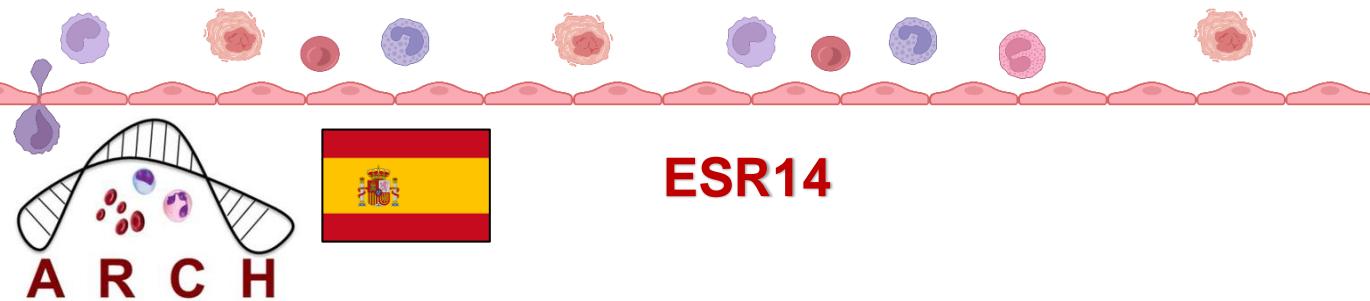


I have been working on my doctoral thesis for almost three years now and during this period of time I had the great opportunity to work with a broad variety of researchers and collaborators in a multidisciplinary environment. Carrying out the doctoral thesis in a private company offers a different perspective from academia, both fields having their different strengths. I have to say that after working for three years as research assistant in academia, the opportunity of working in company has challenged me a lot, helping me develop skills and tools to work with a variety of different departments such as marketing or sales.

ARCH has offered me the opportunity to travel to different countries to work in other laboratories focusing on diverse topics and to learn new approaches that I could have never learned before. All the training and courses I did with my colleagues from the ARCH network over these three years allowed us to exchange ideas and knowledge but also to get to know each other. The support of my fellow students was always present even if we were in different countries, every time a meeting was held our friendship grew stronger. Moving to a different country, studying a new language, and just starting over in a different place was challenging but we always knew that we could share these struggles together and find kindness in our words.

I am grateful for the opportunity to have this experience and to go through it with the support of my colleagues, friends, and family, but I have to dedicate a special note to my colleagues from Diagenode, their support and guidance was always crucial for the development of my thesis.





ARCH

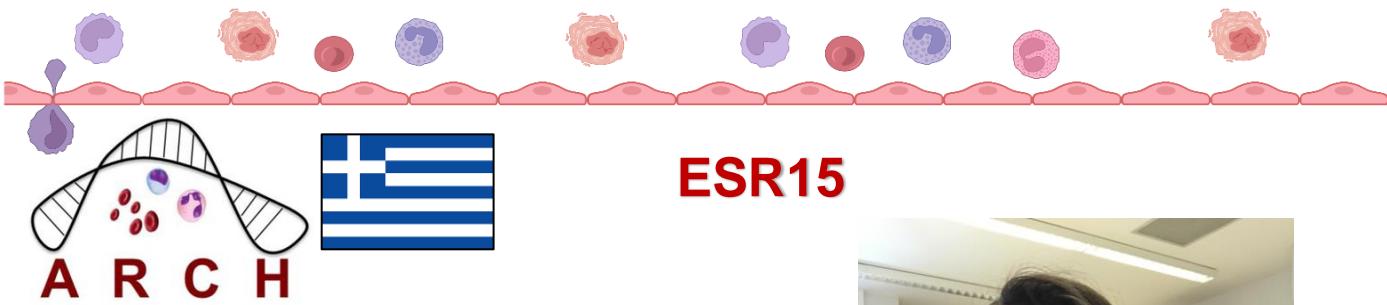
Mi nombre es Sandra Alonso Rubido, estoy realizando mi tesis doctoral después de completar un máster en biotecnología en la Universidad Autónoma de Madrid. Poco después, me mudé a Liège, en el sur de Bélgica, para llevar a cabo mi tesis doctoral en Diagenode, una empresa privada dedicada a la producción de soluciones para investigación. Estoy realizando mi tesis bajo la supervisión de Dr. Anne-Clemence Veillard y Dr. Céline Sabaté. Sin embargo, estoy afiliada al programa doctoral DIMET de la Universidad de Milán Bicocca además de ser parte del programa Marie Curie, ARCH, el cual me ha ofrecido grandes oportunidades tanto profesional como personalmente.



He estado trabajando en mi tesis doctoral durante casi tres años, período en el que he tenido la gran oportunidad de trabajar con grandes investigadores y colaboradores en un ambiente multidisciplinar. Al llevar a cabo mi tesis en una empresa privada he tenido la oportunidad de experimentar un enfoque diferente al de centros de investigación. Después de trabajar en un centro de investigación durante tres años, tener la oportunidad de trabajar en una empresa privada me ha ayudado a crecer, y a desarrollar diferentes habilidades necesarias en tal ambiente de trabajo debido a la colaboración con departamentos como publicidad o ventas.

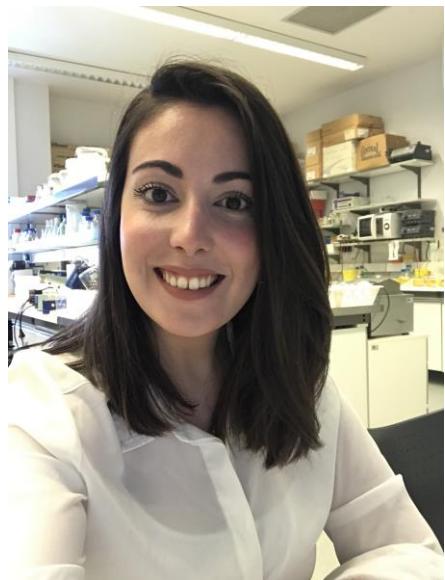
ARCH me ha ofrecido la oportunidad de viajar a diferentes países para trabajar en otros laboratorios cuya área de investigación difiere con la mía. Así, he aprendido nuevas técnicas que no podría haber practicado en otras circunstancias. Todo el entrenamiento y cursos realizados dentro del consorcio con mis compañeros durante los últimos tres años también nos ha permitido intercambiar ideas y conocimiento, pero sobre todo conocemos mejor los unos a los otros. El apoyo de mis compañeros siempre ha estado presente incluso viviendo en diferentes países, cada vez que nos encontrábamos para las reuniones anuales, para realizar cursos formativos o visitar otros centros de investigación nuestra amistad se afianzaba. Mudarse a otro país, aprender una lengua nueva, conocer gente nueva... Comenzar una nueva vida es difícil, pero teníamos siempre el apoyo los unos de los otros incluso en la distancia.

Estoy agradecida por la oportunidad de esta experiencia y por haber tenido el apoyo de mis compañeros, amigos y familia, pero debo dedicar una mención especial a mis compañeros de Diagenode, sin sus consejos el desarrollo de mi tesis hubiese sido mucho más lento y complicado.



## ESR15

My name is Eirini Sofia Fasouli and I come from Salamis, a small island in Greece. I studied Molecular Biology and Genetics in the Democritus University of Thrace, Greece and then moved to London to obtain my MSc in Biopharmaceuticals from King's College London. In 2017 I joined the Teichmann group at Wellcome Sanger Institute in Cambridge, where I worked for two years in the field of cellular genetics in the Human Cell Atlas project. Successively, I became a member of the Katsantoni lab in the Basic Research Center of the Biomedical Research Foundation of Athens to pursue my PhD in the hematology field as part of the ARCH ITN network.

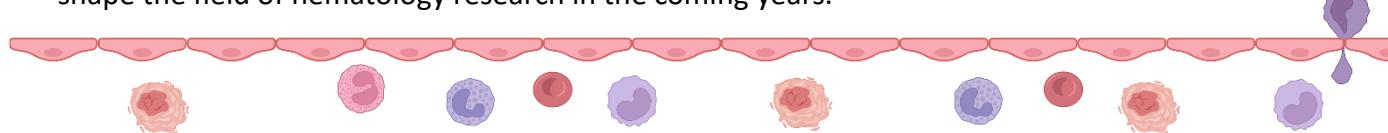


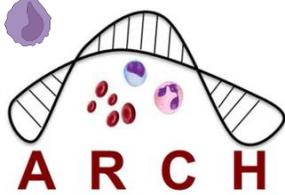
Being part of the ARCH project provided me with innumerable professional and personal opportunities. Although the start of our shared PhD journey coincided with the COVID-19 pandemic, being part of a consortium provided me with confidence and reassurance. Furthermore, sharing this bizarre and challenging experience with the other 14 ESRs made me feel less confined and even led to good friendships.

During these three years through the ARCH project I had the chance to participate in outstanding research and be part of very challenging scientific project attempting to address current challenges for the European Healthcare system due to the increased lifespan of the European population. As a result I expanded my knowledge in the field of hematopoiesis and honed my skills in several disciplines including hematology, molecular biology and bioinformatics working in a stimulating and inspiring environment.

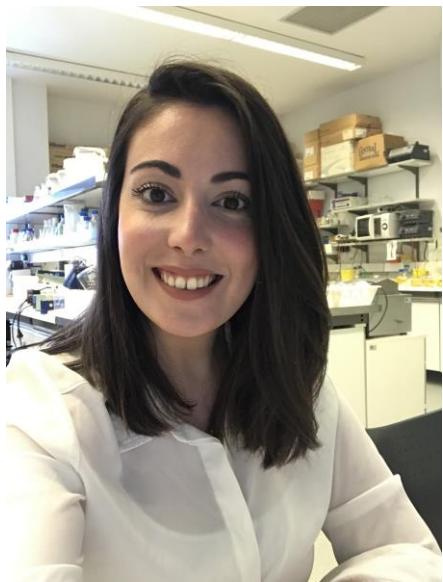
Also, I had the privilege of being part of an excellent scientific consortium and enjoy the advantages of high quality training and collaboration between leading scientists from highly esteemed institutions in both the academia and industry sectors from all over Europe. Through science communication and knowledge exchange ARCH project has given me the necessary technical and interpersonal skills and knowledge to become a diligent and efficient scientist. Furthermore, I was provided with the benefit to perform experiments for my research in industrial setting through collaboration with Diagenode, for which I am immensely grateful since it firstly provided a unique opportunity to experience research outside Academia and secondly allowed me to utilise the technical expertise and knowledge of Diagenode's R&D team to secure the success of my experiments.

Additionally, through the ARCH project I had the amazing opportunity to engage in several dissemination activities and to interact with children and adults outside the scientific community, which helped me re-evaluate the significance of science communication and outreach as a tool to generate support for scientific research, address misinformation and promote science education. My participation in an ITN has been an incredible journey with amazing collaborations, academic experiences, conferences, meetings and friendships with young scientists that are expected to shape the field of hematology research in the coming years.





## ESR15



Ελλάδα και κατόπιν μετακόμισα στο Λονδίνο προκειμένου να αποκτήσω το Μάστερ μου στη Βιοφαρμακευτική από το King's College του Λονδίνου. Το 2017 έγινα μέλος της ομάδας Teichmann στο Wellcome Sanger Institute στο Κέιμπριτζ, όπου εργάστηκα για δύο χρόνια στον τομέα της κυτταρικής γενετικής και πιο συγκεκριμένα στο "Human Cell Atlas project". Ακολούθως επέστρεψα στην Ελλάδα, στο εργαστήριο Κατσαντώνη, στο τμήμα Βασικής Έρευνας του Ιδρύματος Ιατροβιολογικών Ερευνών της Ακαδημίας Αθηνών, προκειμένου να πραγματοποιήσω τις διδακτορικές μου σπουδές στον τομέα της αιματολογίας ως μέλος του δικτύου ARCH ITN.

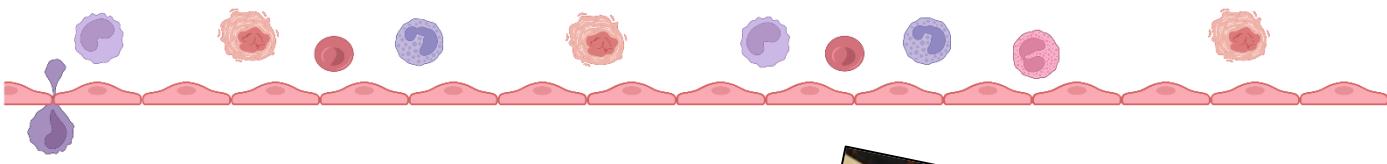
Ως μέλος του project ARCH απήλαυσα αναρίθμητες επαγγελματικές και προσωπικές ευκαιρίες. Παρότι το ξεκίνημα του διδακτορικού μου συνέπεσε με το ξέσπασμα της πανδημίας COVID-19, η συμμετοχή μου σε ένα κοινό project κατεύνασε τις ανησυχίες και τους φόβους μου. Ακόμα, το να μοιράζομαι αυτή την δύσκολη και πρωτόγνωρη εμπειρία με άλλους 14 ESRs με βοήθησε να νιώθω λιγότερο απομονωμένη και οδήγησε στη απόκτηση καλών φίλων.

Κατά τα τρία χρόνια του ARCH project είχα την ευκαιρία να συμμετάσχω σε πρωτοπόρα έρευνα και να μετέχω ενός απαιτητικού επιστημονικού προγράμματος, σκοπός του οποίου ήταν να διευθετήσει τις παρούσες προκλήσεις που αφορούν το Ευρωπαϊκό Σύστημα Υγείας εξαιτίας της αύξησης της διάρκειας ζωής στον πληθυσμό της Ευρώπης. Ως αποτέλεσμα, επέκτεινα τις γνώσεις μου στον τομέα της αιμοποίησης και διεύρυνα τις δεξιότητες μου σε πολλούς τομείς συμπεριλαμβανομένης της αιματολογίας, μοριακής βιολογίας και βιοπληροφορικής, εργαζόμενη σε ένα συναρπαστικό περιβάλλον.

Επίσης, είχα την τύχη να συμμετάσχω σε μία αξιοθαύμαστη επιστημονική σύμπραξη και να απολαύσω τα προνόμια εξαιρετικά ποιοτικής εκπαίδευσης και συνεργασίας με εξέχοντες επιστήμονες από διαπρεπή ιδρύματα από τον ακαδημαϊκό αλλά και το χώρο της βιομηχανίας σε όλη την Ευρώπη. Μέσω της επικοινωνίας και της ανταλλαγής γνώσεων και τεχνογνωσίας το ARCH project μου προσέφερε τα απαραίτητα τεχνικά και διαπροσωπικά προσόντα και γνώσεις ώστε να διαπρέψω.

Επιπλέον, είχα το πλεονέκτημα να πραγματοποιήσω πειράματα για το ερευνητικό μου έργο σε βιομηχανικό περιβάλλον μέσω της συνεργασίας με την εταιρεία Diagenode, για το οποίο είμαι απεριορίστως ευγνώμων, καθώς πρώτον είχα την ευκαιρία να βιώσω το ερευνητικό έργο εκτός του ακαδημαϊκού χώρου και δεύτερον μου επέτρεψε να χρησιμοποιήσω την τεχνική κατάρτιση και γνώση του τμήματος Έρευνας και Ανάπτυξης της εταιρείας Diagenode, εξασφαλίζοντας την επιτυχία των πειραμάτων μου.

Ακόμα, μέσω του ARCH project είχα την καταπληκτική ευκαιρία να εμπλακώ σε αρκετές δράσεις προώθησης της επιστήμης και να αλληλεπιδράσω με παιδιά και ενήλικες εκτός της επιστημονικής κοινότητας. Το γεγονός αυτό συνετέλεσε στην κατανόηση της τεράστιας σημασίας της επικοινωνίας της έρευνας και των δράσεων ενημέρωσης του ευρέως κοινωνικού συνόλου, ως εργαλείο υποστήριξης της επιστήμης, αντιμετώπισης της παραπληροφόρησης και προώθησης της επιστημονικής εκπαίδευσης.



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