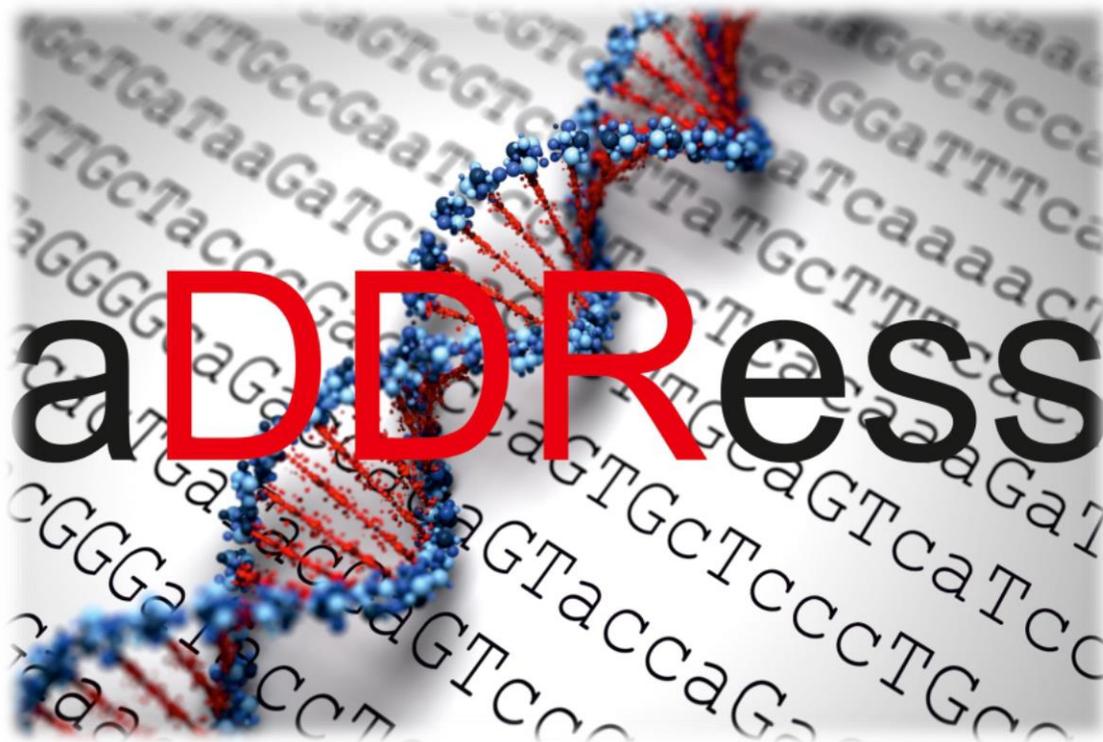


# 2<sup>nd</sup> a**DD**Ress Newsletter

MARIE SKLODOWSKA-CURIE ACTIONS

Innovative Training Networks (ITN)



Joint Training and Research Program on

## **Chromatin Dynamics and the DNA Damage Response**

The ITN-a**DD**Ress is centered around 15 young early-stage Researchers whose work is focused on research aims structured into three functionally-linked thematic areas:

**DNA Repair mechanisms & chromatin architecture**

**Genome maintenance in development and disease**

**Novel approaches to study DNA repair-deficient disorders**

# Our news

Kick-off meeting – IMBB, Heraklion – 20-21 March 2019

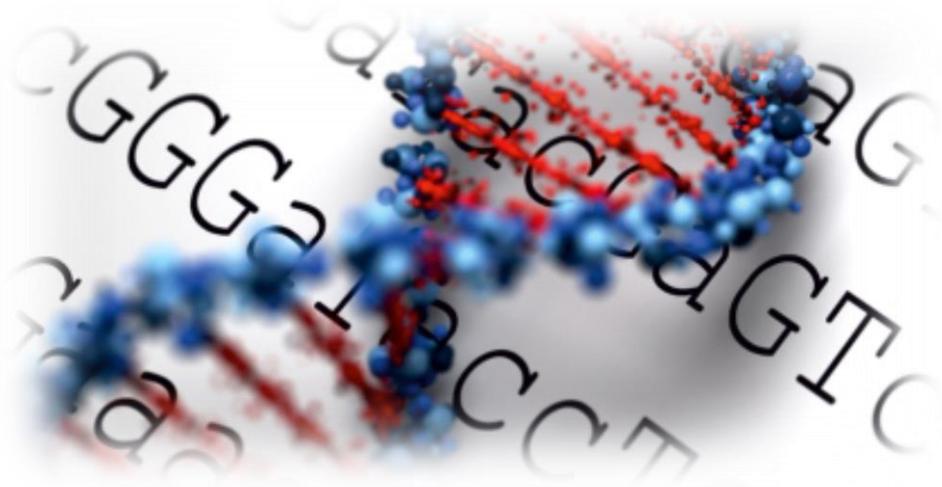
Project management course – teleconference – 5 June 2020

1<sup>st</sup> Annual meeting – teleconference – 23 June 2020

## Coming up

1<sup>st</sup> Workshop – Chromatin dynamics and nuclear organization in genome maintenance (web-based) – 7-10 December 2020

2nd Annual meeting – March 2021



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# Meet our young bright minds



A researcher is not that different from an explorer. You plan your journey based on the knowledge of the maps in that specific moment but then – hopefully – you will reach a far end point where what comes next is unknown. After that, regardless of whether what you found was expected or not, your main goal is to move further the state of knowledge. This idea, which came into my mind during my university studies in Molecular Medicine and Medical Biotechnology, led me into the research field. I joined a genetic project on Twins in the UK at first and then started a PhD project within the ITN-aDDress network. In particular, I am now focused on the unravelling of the role of a tricky protein complex called SMC5/6, which plays critical roles in different essential mechanisms such as the DNA damage repair, chromosome structure and chromatin organization. **Alessandro Morea**

I completed my undergraduate degree in biochemistry and masters degree in bioinformatics both from NUI Galway in Ireland before moving to Toulouse in France to join the Legube Lab as an ESR. My areas of interest are focused around understanding chromatin dynamics following double-strand break repair, specifically using single-cell genomic techniques which have become increasingly popular in recent years. I joined the Legube lab in October 2019 and since then I have been mainly focusing on improving my bench-skills given that I come from a computational background, but I have also used my bioinformatics skills to contribute to ongoing projects within the lab. With this combined training of experimental and computational skills, I will soon be able to perform single-cell experiments as well as completing the data analysis all by myself, which I believe is a valuable trait to have. **Sarah Collins**



I am Enrico, an Italian guy who has always been fascinated by the complexity of chromatin information. After graduating in Functional Genomics in Trieste, Italy, I joined Sophie Polo's team in Paris where I am studying chromatin maintenance upon DNA damage. I am happy to be a part of the ITN aDDress network, which is, in fact, an experience just as dynamic as chromatin itself! **Enrico Pobega**

I studied Biotechnology Engineering in my home country Mexico and I am now based in Munich, Germany in Ladurner's lab. Here I am looking at how the poly(ADP-ribose) polymerase1 (PARP1) recruits non-canonical DNA repair proteins to DNA lesions. In particular, I am looking at the interaction between poly(ADP-ribose) and RNA binding proteins. It is very exciting to be part of the aDDress network, as it creates opportunities to learn new techniques from experts in the field, while also getting the guidance and feedback of a nurturing and supportive cohort.

**Claudia Gonzalez-Leal.**

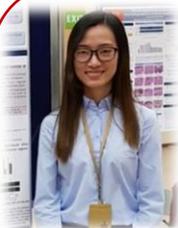


Hi all I am Lance! I am currently working on understanding the role of ubiquitylation in the context of telomere DNA repair. DNA repair machineries and pathways are one complex puzzle to decipher. I am thankful that I am given the chance to understand more about it on the platform of many training and research opportunities provided by the aDDress network, especially with my fellow ESRs who share similar interests in DNA damage responses. An enlightening experience! **Lance Lam**

I've studied biology at the University of Darmstadt (Germany) with a focus on molecular biology. My main research interest is the cellular response to DNA damage from protein signaling events within a cell to translational research. Right now, I have the chance to investigate the function of an uncharacterized protein, which we found to be recruited to damaged DNA. It almost resembles investigative detective work: I find interesting hints for interactions with different proteins and try to clarify why they are interacting, how they interact and what the benefit of the interaction is. The reason for my interest in this is to get a greater understanding of different mechanisms within a cell, which is also crucial for understanding different diseases such as cancer. **Ann Schirin Mirsanaye**

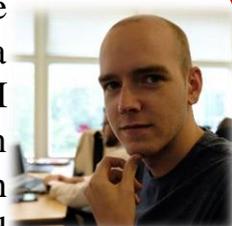


Having performed my studies in the UK, I have a background in biomedicine and neuroscience. I am currently working on DNA damage response and chromatin related alterations in primary murine thymocytes, while investigating the role a nuclear protein (SATB1) has in these areas of interest. This work aims to provide insight into an inflammatory phenotype seen in mice, with possible implication in autoimmune disorders' development. Learning and exploring different techniques and areas of research, while also being given valuable guidance, are only some of the benefits provided to us, from participating in this network. **George Papadogkonas**



I joined J. Lingner lab in 2018 for my PhD after receiving a Bachelor degree in Biomedical Science from the National University of Singapore. My PhD project focuses on how telomeres are protected from oxidative stress, which happens every day and can have very detrimental effects on our cells and bodies. One interesting thing is that both oxidative stress and telomeric abnormalities can contribute and/or be consequences of aging and cancer. With this project, we hope to shed some light on the 'telomeres against oxidative stress' issue, and hopefully it can be applied in aging and cancer prevention and treatment. **Nguyen Thu Trang**

I am from The Netherlands and I'm currently an ITN fellow in the aDDress network in Nicola Crosetto's lab at Karolinska Institutet/SciLifeLab in Stockholm, Sweden. During my Master's I became passionate about bioinformatics, specifically bioinformatics in sequencing based methods. I think it is fascinating what we can do with current technologies and the speed at which new technologies and methods are getting developed. Thus, I am very happy to have the opportunity to be a part of this process and pursue this in Nicola Crosetto's lab. Here we focus on using established sequencing based methods and also on developing new (single-cell) methods to answer biological questions, such as, how can small breaks in the DNA result in large structural variants at a single-cell level. **Luuk Harbers**



Information encoded by DNA defines every living organism and its accurate preservation is therefore essential for life. However, DNA is constantly exposed to exogenous and endogenous physicochemical threats that can modify its nucleotides. Trying to deal with this issue, I would like to provide insights into the functional role of certain factors that compromise normal physiology and promote either cancer or aging, by gaining useful information that could help to maintain genome integrity. **Sakis Siametis**

I have a background in cellular and molecular biology, and I am especially interested in the role of DNA damage in the process of aging. In our research group we use *Caenorhabditis elegans*, a transparent worm, as a study tool. These animals normally live about three weeks but can, under stressful conditions, delay their normal development and enter a stage known as dauer, where they can stay for several months until conditions in their habitat become better. My project aims to discover what makes dauers highly resistant to stresses, as it could help us develop new therapies for aging-related health problems. **João Barata**





My interests lay in structural biology - 3D structures of different proteins. Currently, I am working to determine the 3D structure of a few of them. The most interesting part about 3D structures - when I see it for the first time, it can be completely wrong, and it is up to us, scientists, to verify if it is real what we see. To solve the unknown is one of the reasons why I find science exciting! **Atis Jekabsons**

I got a degree in Pharmacy at the University of Barcelona, and it was during that period when I had a sense of belonging in a research lab. From Barcelona to Grenoble, passing by Copenhagen, I have switched many research areas, although I have always kept an interest and enthusiasm in solving biological puzzles and in learning more about how human cells work and interact. I am currently working on a therapeutic tool to characterize the impact of drugs on the DNA damage repair pathways.



**Marta Oliva Santiago**



I studied biology and computer science in French universities. My work focuses on biomedical data automated analysis. In the course of my first year at Genevia Technologies, I created several tools to detect and characterize mutations in cancer related datasets. Those are actively used by the company teams to work on their projects. **Thomas Bersez**

I am interested in the genome DNA integrity and its connection with the development of disease. My scientific background includes studying of genotoxicology and molecular epidemiology. The current project is focused on developing diagnostic tools for simultaneous assessment of DNA damage and DNA repair, and I am currently involved in the assessment of DNA damage in a set of human cells of different origin. The project is exciting, and I am progressing well. **Congying Zheng**



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# The ITN-aDDress Partners



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