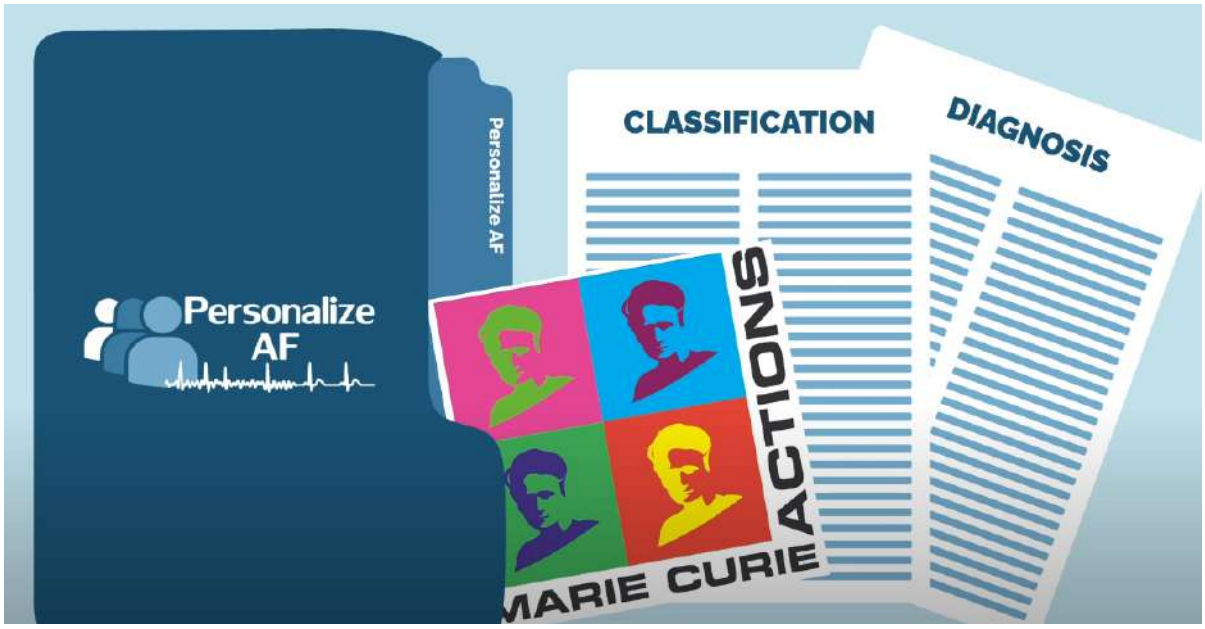
6th Newsletter- June 2023 View online

PersonalizeAF Sixth Newsletter



Welcome to the sixth newsletter of the PersonalizeAF! The objective of this publication is to keep all our public updated with all information and main ongoing activities while our project is under way.

Do not miss it and stay tuned for all the updates of the Early Stage Researchers' work, new conferences, papers, and other news!

And don't forget to suscribe to our social media.

PersonalizeAF, the project bringing universities, hospitals

and companies from all over Europe together to tackle Atrial Fibrillation

What is Atrial Fibrillation?

Atrial fibrillation (AF) is a condition that causes an irregular and often abnormally fast heart rate. With different manifestations in each patient, it causes a worsening quality of life and a drastic reduction in life expectancy. Today, it is the most common cardiac arrhythmia, affecting more than 6 million Europeans and its prevalence is expected to double in the next forty years. Moreover, its cost exceeds 1% of European healthcare budgets (13.5 billion per year).

To reverse these figures - or at least reduce them - experts agree on the need to promote individualised patient management by personalising cardiovascular therapies.

What does PersonalizeAF network do?

PersonalizeAF addresses this challenge by delivering an innovative multinational, multi-sectorial, and multidisciplinary research and training programme in new technologies and novel strategies for individualized characterization of AF substrate to and increase treatments' efficiency.

This initiative involves European universities, hospitals and companies researching atrial fibrillation from different fields. Using artificial intelligence, signal processing and stem cell research, PersonalizeAF brings together engineers, clinicians and biologists to improve treatments, develop new diagnostic methods and optimise patient management.

From the research point of view, PersonalizeAF will integrate data and knowledge from in-vitro, in silico, ex vivo and in vivo animal and human models to:

1) generate an individual description of the state of the atrial muscle identifying the disease mechanisms and characteristics;

2) understand the potential effect that different therapies have on different atrial substrates; and

3) combine this information to generate a specific profile of the patient and the best therapy for each patient.

With this purpose, PersonalizeAF partnership aggregates relevant scientific staff from the academic and clinical world with highly specialised biomedical companies which will be involved in a high-level personalised training programme that will train a new generation of

highly skilled professionals and guarantee ESRs and future PhD students outstanding Career Opportunities in the biomedical engineering, cardiology services and medical devices sectors.

PersonalizeAF project updates

Our 15 ESRs and their research projects

The 15 Early Stage Rresearfcherss are working full-time in their projects around all Europe for more than a year, and they are involved in different sectors: academia, clinics and industry. Each of them is working in his/her individual PhD, but work also collaboratively with the same purpose, improving the paradigma of Atrial Fibrillation patients in Europe from a translational perspective.

Since they have some experience now as Early Stage Researchers, in #PersonalizeAF project, some of them are sharing their updates on their projects and where their research is taking them:

- **ESR1: Marilù Casini:** Hospital Universitario La Fe (Spain)

"Hello everyone! This is ESR1 from Valencia and today I would like to tell you more about my research project. In the last months we setted up the optical mapping instrumentation and, thanks to my engineer colleagues, we analyzed the first optical mapping videos.The goal of this project was to create an in-vitro model of atrial fibrillation using the differentiated atrial cardiomyocytes... and it seems we succeeded! I will present those results at the ESC Congress in Amsterdam. I hope I 'll see some of you there."

- **ESR2: Carmen Martínez Antón:** Karlsruhe Institute of Technology (Germany)

"The months are running faster each time. Since the last Newsletter I've been in Secondment in Barcelona and by the time you are reading this, I'll already be in my last Secondment in Bordeaux. These last months I've been supervising two Bachelor Thesis in Karlsruhe thanks to the collaboration with other institutions and I have to admit that I enjoy working with students a lot! ."

- **ESR3**: **Eric Invers Rubio -**Institut d'Investigacions Biomèdiques August Pi I Sunyer(Spain)

"*In the last months, we could prepare a manuscript with regard to how ECGi predicts response to atrial fibrillation ablation. In addition, we are analysing how high power - short duration radiofrequency ablation is seen non-invasively with LGE-MRI. Last but not least, we are preparing a new prospective protocol to deepen in the capacity of ECGi to characterise substrate non-invasively."*

- **ESR5: Ozan Özgül-** Maastricht University (The Netherlands):

"In the last months, I finalized the validation of composite maps and implemented it as a module to be included in the repetitive pattern mapping software. I collaborated with Victor (ESR14) for the generation of a large dataset of meandering reentries during simulated AF. I have reconstructed composite maps for each of these simulated composite maps and evaluated the success in terms of the local activation times, conduction direction, and source localization errors. We have prepared a manuscript on these analyses which will be submitted very soon! Apart from that, I have started to evaluate our algorithm in clinical recordings."

- **ESR6**, **Teresa Schiatti** at Universitaets-Klinikum Freiburg (Germany):

"I left you last time by saying that I was attending the GRC conference in Houston, texas. here I won a poster award and made so many connections that I am now collaborating with - going to conferences is one of the most motivating and stimulating experiences one can have in the research field. After coming back to Freiburg, Germany, I obtained some super exciting preliminary results. I am right now in my secondment in LaFe, Valencia, where I aim at repeating those experiments to check whether I can reproduce those results. It is always tricky to change location and settings because one needs time to establish the method in another place, however, everybody has been very supportive and I am ready to start with the real experiments! Looking forward to seeing how the results turn out."

- **ESR7: Cristian Barrios Espinosa -** Karlsruhe Institute of Technology (Germany):

"Over the past few months, I have been engaged in research focusing on benchmarking various simulation settings of the DREAM versus Monodomain. Additionally, I have had the opportunity to collaborate with my students on various projects. Hanish Raval has been diligently working on enhancing methods for calculating Cv from clinical data. His improvements involve addressing errors caused by noise present in the clinical activation

maps. Lisa Keller has embarked on an investigation of the diffusion current obtained from monodomain simulations, aiming to enhance eikonal approaches. Silvia Backer's work revolves around analyzing restitution curves of conduction velocity, seeking to comprehend their impact on reentry initiation and maintenance. In terms of recent conferences, I recently attended the Dynamical Systems conference in Portland, USA, where I presented my research on utilising data augmentation with the eikonal model in machine learning. Looking ahead, I have plans to attend another conference in Tokyo in August, where I will discuss the utilization of the eikonal model in cardiovascular research."

- **ESR10**: **Narimane Gassa-** University of Bordeaux (France)

"In the last few months, our work has been focused on the development and testing of a new workflow, specifically to individual patients, aimed at predicting the electrical state of the heart based on personalized simulations and heart imaging. We conducted tests on patients with premature ventricular contractions (PVC) and pacing records, as well as on an atrial model with coronary sinus (CS) pacing. The preliminary results are promising, but there is potential for further improvement. This will be the main subject of our upcoming paper. Additionally, we are collaborating with the ECGI workgroup and providing our collaborators with simulations using the eikonal-MS model.."

- **ESR11: Carlos Fambuena Santos** Universitat Politècnica de València (Spain)

"In the last months I have completed my last secondment in the project. I got the chance to go to EPSolutions, Switzerland. I had a lovely experience and got the opportunity to learn new things about the inverse problem of electrocardiography and ECGI."

- **ESR12**: **Patricia Martínez Díaz-** Karlsruhe Institute of Technology (Germany):

"These past two months have brought me so much joy and fulfillment in my PhD project! Firstly, I had the incredible opportunity to complete my secondment at the Hospital La Fe in Valencia and start my final secondment at the company ADAS3D in Barcelona. These research stays have been truly invaluable as I've had the chance to meet wonderful people and discover new ways of working that have enriched my journey. But that's not all! In April, I had the absolute pleasure of attending the European Heart Rhythm Association (EHRA) Conference in Barcelona. The conference provided a platform to showcase our research and learn from the expertise of others, which was an amazing experience in itself. What made the conference even more memorable was the fact that I was nominated for the prestigious Young Investigator Award in Basic and Translational Science. I am incredibly grateful for this recognition, and I was even more thrilled when I discovered that I won second place. It means a lot to me, as it has given me an extra surge of energy to embark on the final stretch of my PhD with renewed enthusiasm."

- **ESR13**: **Sergio Nabil Gadur-** SIMULA (Norway)

"In the last months I have been performing a mesh refinement study focusing on the computation of shear rates to ensure that my fluid dynamic results are converged. Also, I

have been writing a paper about the importance of non-Newtonian effects in 12 patient-specific geometries.

For the next steps, I have been also reading the literature and planning to improve my model by including the Thixotropic effect of blood. The latter means that when changes in the shear rates are applied, there is not a instantaneous viscosity response and equilibrium viscosity is reached in a finite amount of time.

Intuitively, it is expected that the great influence of non-Newtonian effects that I previously found could be diluted due to the time scale involved in this model."

- **ESR14: Victor Gonzalves Marqués** - Maastricht University (Netherlands):

"In the past months my work has been a lot focused into writing a paper about finding regions maintaining AF with high-density sequential mapping. The work describing how to find these regions is almost concluded, but we also want to know what happens if we focus our treatment on those regions. Thus, I am setting up experiments with a virtual ablation trial focused on such sources..”

- **ESR15: Alexander Lacki** - Universitat Politècnica de València (Spain)

"I'm excited to share that our research has made significant progress. The clustering algorithms we developed have undergone rigorous testing and refinement, and they have shown great promise in effectively grouping AF patients into distinct phenotypic clusters. We believe that publishing these novel clustering algorithms will be a significant contribution to the field of cardiology. By shedding light on the underlying heterogeneity of AF, our research will provide valuable insights for clinicians, allowing them to tailor treatment strategies to individual patients. Ultimately, we hope that our work will pave the way for more personalized and targeted approaches in the management of atrial fibrillation."

If you want to get to know the Early Stage Researchers way better and their pathway, stories and experiences, click here

Conferences and journal papers

We are sharing here some of the participation in conferences and journal papers the ESRs have participated or will be participating. The information of all the publications made by the ESRs will be available in PersonalizeAF website.

ESR2, Carmen, submitted a paper to Computing in Cardiology (CinC) 2023 Conference in Atlanta .

ESR3, Eric Invers has attended EHRA 2023 in Barcelona to present a moderated poster, and HRS 2023 in New Orleans, where he had the pleasure to show a poster about their

study investigating non-invasive conduction velocities with ECGi. "*It was encouraging to see how our research engages the audience and generates debate!*"

ESR5, Ozan Özgül's paper on composite maps in the goat model of AF was accepted! So far he have been trying to reach out to the community and find out their opinion on their work. Simultaneously, he have been working on the application of our technique in simulated AF. I presented the first results of this work at EHRA 2023 in Barcelona. "*It was exciting to have the chance to meet my PersonalizeAF colleagues, as well as to be part of this big event on-site for the first time."*

Our **ESR6**, Teresa Schiatti, she had the great opportunity to attend the Gordon Research Conference on cardiac arrhythmi. "*The discussion is engaging, the presentation of top level and the people are easy to approach and talk to. It is a friendly environment where many fruitful collaborations may arise".*

ESR9 has been selected as finalist to the Young Investigator Award of CINC 2023, that he will defend next september in Atlanta, USA.

ESR10, Narimane Gassa, has attended FIMH 2023 conference at Lyon, together with the HRS Conference at NOLA.

Carlos, **ESR11**, made a submission to the Conference Computing in Cardiology in September 2022.

ESR12: Patricia results presented her results in Gordon Research Conference (GRC) on Cardiac Arrhythmia in Galveston, Texas.

ESR13, Sergio Nabil plans to attend the International Congress on Industrial and Applied Mathematics which will take place in Waseda University, Tokyo, Japan during August 20-25, 2023. he has also aiming to submit his firstfirst paper about atrial blood flow simulations in a cohort of 12 patients to the International Journal for Numerical Methods in Biomedical Engineering.

ESR14 In addition to preparing the paper about improving high-density mapping in AF, he submitted this work to CINC 2023. Hopefully he will be able to present my work for this great audience in October this year, in Atlanta, US!

ESR15 will be attending 21st the International Conference of Artificial Intelligence in Medicine 2023 in Slovenia.

We are glad to announce that we some of the ESRs and supervisors have also submitted journal papers related to the PersonalizeAF network. and you can find the journal papers submitted in our Open Access repository, ZENODO, as well.

We are presenting the list of the publications here:

-"Local Electrical Impedance Mapping of the Atria: Conclusions on Substrate Properties and Confounding Factors", by Laura Anna Unger; Leonie Schicketanz; Tobias Oesterlein; Carmen Martínez Antón; Kerstin Schmidt; Olaf Doessel; Armin Luik;

-"An evaluation on the clinical outcome prediction of rotor detection in noninvasive phase maps". by "C. Fambuena-Santos; I. Hernández-Romero; R. Molero; A.M. Climent; M.S. Guillem;

-"ECGI Periodicity Unraveled: A Deep Learning Approach for the Visualization of Periodic Spatiotemporal Patterns in Atrial Fibrillation Patients" by Alexander Lacki; Ismael Hernández-Romero; María S Guillem; Andreu M Climent;

- "Spatial Relationship Between Atrial Fibrillation Drivers and the Presence of Repetitive Conduction Patterns Using Recurrence Analysis on In-Silico Models" by Victor G Marques; Ali Gharaviri; Simone Pezzuto; Pietro Bonizzi; Stef Zeemering; Ulrich Schotten;

-"Benchmark of deep learning algorithms for the automatic screening in electrocardiograms transmitted by implantable cardiac devices" by Narimane Gassa; Benjamin Sacristan; Nejib Zemzemi; Maxime Laborde; Juan Garrido Oliver; Clara Matencio Perabla; Guillermo Jimenez-Perez; Oscar Camara; Sylvain Ploux; Marc Strik; Pierre Bordachar; Remi Dubois;

-"High Coverage and High-Resolution Mapping of Repetitive Patterns During Atrial Fibrillation" by Ozan Özgül; Ben Hermans; Arne van Hunnik; Sander Verheule; Ulrich Schotten; Pietro Bonizzi; Stef Zeemering;

-"Clinical and electrophysiological predictors of device-detected new-onset atrial fibrillation during 3 years after cardiac surgery" by: Elham Bidar; Stef Zeemering; Martijn Gilbers; Aaron Isaacs; Sander Verheule; Matthias D. Zink; Bart Maesen; Sander Bramer; Michal Kawczynski; Isabelle C. Van Gelder; Harry J.G.M. Crijns; Jos G. Maessen; Ulrich Schotten;

-"Consecutive-Day Ventricular and Atrial Cardiomyocyte Isolations from the Same Heart: Shifting the Cost–Benefit Balance of Cardiac Primary Cell Research" by Joachim Greiner; Teresa Schiatti; Marica Dente; Alina Semenjakin; Thomas Kok; Dominik J. Fiegle; Thomas Seidel; Ursula Ravens; Peter Kohl; Rémi Peyronnet; Eva A. Rog-Zielinska;

-"Spiral Waves Generation Using an Eikonal-Reaction Cardiac Electrophysiology Model" by Narimane Gassa; Nejib Zemzemi; Cesare Corrado; Yves Coudière;

-"AF driver detection in pulmonary vein area by electrocardiographic imaging: Relation with a favorable outcome of pulmonary vein isolation" by Carlos Fambuena Santos; Ismael Hernández-Romero; Rubén Molero; Felipe Atienza; Andreu M Climent; M S. Guillem

-In-silico drug trials for precision medicine in atrial fibrillation: From ionic mechanisms to electrocardiogram-based predictions in structurally-healthy human atria by Albert Dasi; Aditi Roy; Rafael Sachetto; Julia Camps; Alfonso Bueno-Orovio; Blanca Rodríguez

-Combining atrial activation maps for the big picture of simulated atrial fibrillation mechanisms by O Ozgul, BJM Hermans, A Van Hunnik, S Verheule, U Schotten, P Bonizzi, S Zeemering

Events and training courses

Seventh Meeting of the PersonalizeAF Network in Karlsruhe, May 2023

During 4th and 5h of May, the PersonalizeAF consortium celebrated its sixth meeting in Karlsruhe, Germany. Here, the 15 ESRs participating in the network had the opportunity to share their progress during the last months to all their colleagues and supervisors.

Before the beginning of the meeting, the ESRs had also the opportunity of attending the Career Opportunities Workshop organized by Karlsruher Institute of Technology. During 2nd and 3rd of May, they attended lessons such as Career opportunities in academia, in industry, pitch yourself workshop or access to Market.

Moreover, the PersonalizeAF network was able to enjoy different activities during these two days:

-A keynote lecture given by Armin Luk and Axel Loewe, called "It's a moving target- Clinical and modeling perspectives of AFib and AFlut ablation".

-A nice update on all the ESRs' research projects.

-Updates on all Work Packages involved in the project, including Communication updates, ethic and Data management issues.

-An interdisciplinary focus collaborative project about the standardization of atrial regions

-Students committee and Research and Training committee meetings.

-Supervisory Board of the PersonalizeAF Network meeting

-A nice BBQ at KIT!

Thanks to everyone for attending!

Seventh PersonalizeAF meeting in Karlsruhe, 4th and 5th of May

Students in Careers Opportunities Workshop, 2nd of May

Trainings in PersonalizeAF project completed!

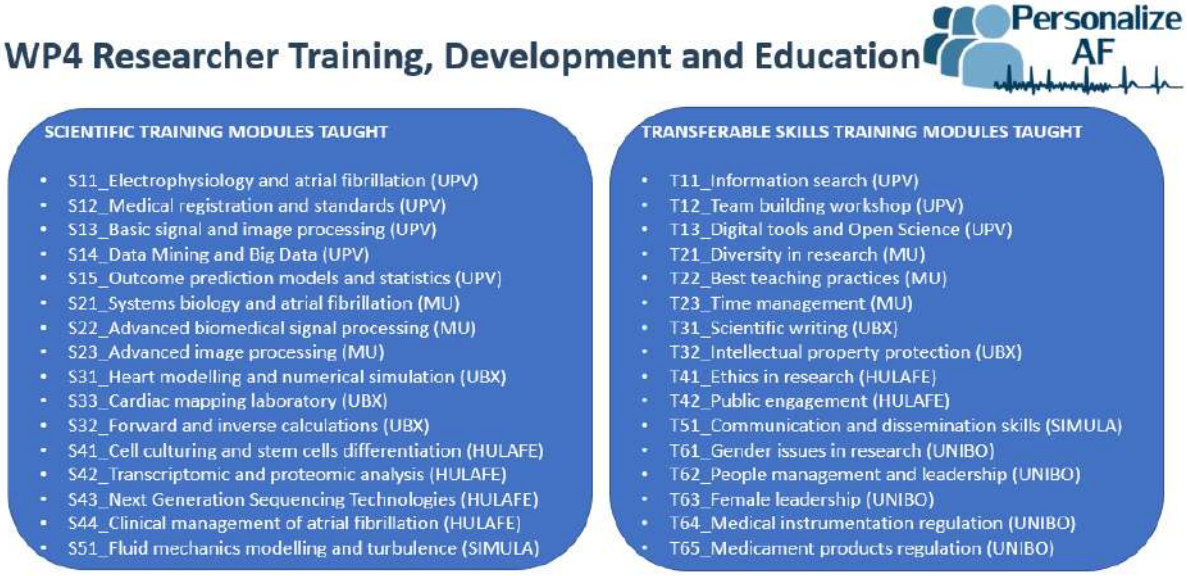
The members of the PersonalizeAF are glad to share that all the trainings planned have been taught successfully. More than 30 workshops in which the Early Stage Researchers but also more PhD students around the world have enjoyed the opportunity to learn about such different topics . An opportunity to learn new scientific and transversal skills, network with other students but also senior researchers, that was possible thanks to the commitment, dedication and optimism of all organisers and all the students!

We are sharing with you some opinions from the ESRs:

- *"In the last month all the ESRs met in Karlsruhe for a workshop about the future of our career. It was extremely helpful. Sometimes PhDs struggle a lot choosing the next step after the PhD, I was one of those. Move to industry? Dedicate myself only to Science Communication? Do a PostDoc? In case so, where? Thanks to this workshop now I have a clearer idea".*- Marilù Casini
- *"Luckily for the ESRs, we had awesome training during the fellowship. From hard skills to soft skills, from computational to biological research, we could deep into cardiac electrophysiology with complete privilege. Personally, I enjoyed the courses of signal processing, image processing and diversity in research."* - Eric Invers
- *"The PersonalizeAF training program was intense but very useful. I especially enjoyed the soft skills training. Throughout my student life, I always complained about presentation tasks, but after our training in Simula, presentations have become something I look forward to. Thanks to the knowledge I gained, I now believe that I can more accurately assess the audience and find the best way to convey my message to them without leaving out important information".*- Ozan Özgül.
- *"Despite all of them being useful for the PhD, I think that the ones that are useful for life are communication and the career path trainings. Communication is important despite the job one decides to pursue. It was well organized, the speakers were knowledgeable and they made the course easy to follow and very interactive. The career path workshop was the last workshop of the PersonalizeAF and it came to the perfect point - some of us might be confused about what to do next. Thus, having the possibility to talk to people that went to either industry or academia after obtaining their PhD, helps put the pros and cons into perspective".*- Teresa Schiatti
- *"In this new post-pandemic era, the personalizeAF trainings have finally transitioned to in-person sessions, and the joy that fills the air when all 15 students and supervisors come together is indescribable. Since our last gathering in Bordeaux back in June of last year, followed by the ones in Bologna and Karlsruhe in 2023, these trainings have become incredibly special moments for us as we've had the opportunity to connect face-to-face. There's truly something special about those Monday mornings, where the anticipation of reuniting with dear friends creates a sense of excitement. Throughout this PhD journey, I've been incredibly fortunate to forge strong bonds with these amazing individuals. Their presence has made this*

path more beautiful over the course of nearly three years. In the years to come, when I revisit these moments, I will fondly remember the friendships we've cultivated and the joy that accompanied all our shared experiences"- Patricia Martínez

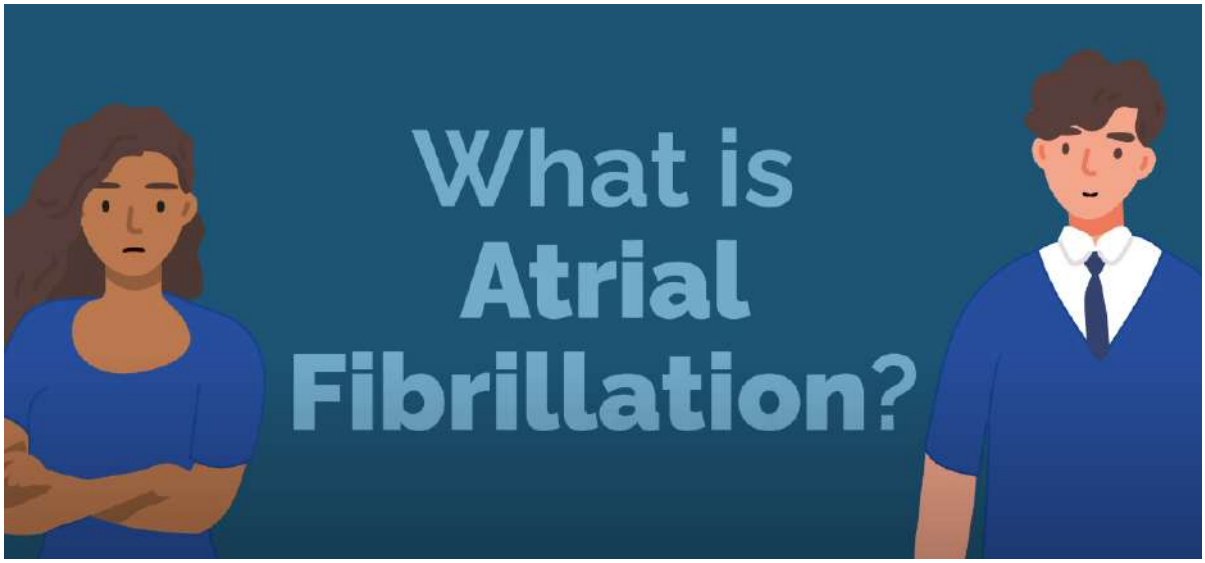
- *"If I had to highlight one course among the many we had over the project, I would go for the Science Communication Workshop, in Oslo. Even though I complained about the workload and the tasks we had to perform, this course has undeniably proven itself to be exceptionally valuable, surpassing my initial expectations. Considering that writing and presenting play significant roles in a scientific career, this workshop provided us with a robust framework to enhance our scientific communication skills and effectively convey our research and contribute to the scientific community in a more compelling manner"*.- Victor Gonçalves



All the workshops taught by PersonalizeAF consortium

PersonalizeAF video

The PersonalizeAF video shared its promotional video, don't miss it!



Here the new video of the PersonalizeAF project

Next Events

Last Consortium meeting in Valencia: October 23rd, 24th

Our next and last meeting meeting will happen in Valencia next Fall, organized by Universitat Politècnica de València, the coordinators of the project. A great (but not last) opportunity to gather all the members of such a inspiring consortium where the ESRs will share the end of their projects, their future steps, and future collaborations!

ECGI SUMMIT 2023

ECGI Summit is organized by the CEI consortium and complete with invited talks and scientific sessions, will focus on new and emerging technologies in ECGI, and seek to develop new connections in the ECGI community. This is an exceptional opportunity to connect with leading experts, engage in valuable networking, and explore the cutting-edge advancements in Electrocardiographic Imaging.

Abstract submission is open. Submission on any topic on either technical aspects or clinical application of electrocardiographic imaging are expected before 30th of June!

You can check the program and much more here

ESC Congress 2023

At ESC Congress 2023 you will have the opportunity to connect, gain new perspectives, and create synergies with the global cardiology community in Amsterdam!

The spotlight of ESC Congress 2023 will be heart failure. Many of the problems cardiovascular professionals deal with are either the cause or complications of heart failure, including coronary artery disease, valvular problems, stroke, arrhythmias and sudden death. Heart failure is relevant to all areas of cardiology and beyond, including obesity, diabetes and chronic kidney disease, which is why it makes such a relevant spotlight for ESC Congress 2023.

Check the scientific programme here

IEEE EMBC 2023

MBC 2023 will happen in Sydney, Australia! EMBC 2023 is the 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society. We are honoured and thrilled to host our EMBS community 'down under' from 24th to 28th July 2023. The scientific tracks will cover the standard topics of the EMBS technical committees with an additional topic, consistent with the conference theme. Alongside the scientific sessions, there will be an exhibition comprising biomedical engineering companies, publishers, SMEs, start-ups, funded biomedical research, and Biomedical Engineering programs, Institutes, and Universities.

More information here

Computing In Cardiology 2023

CinC 2023 is the 50th CinC conference, which has been held annually since 1974. CinC 2023 will again be a hybrid conference with options for both in-person and remote attendance and will happen in in Atlanta, Georgia, USA on 1st - 4th October 2023.

Computing in Cardiology (CinC) is an international scientific conference for computing in clinical cardiology and cardiovascular physiology. Registrations are open until 1st of May, more information in the Registration site

Some ESRs gathered in EHRA Conference 2023 - Barcelona

We recommend: Papers addressing Atrial Fibrillation

In this section, the consortium wants to share some of the Papers addressing Atrial Fibrillation and other arrythmias with were considered of interest and inspiring for our work. Check them out in order to learn more about Atrial Fibrillation, stem cells, image processing, cardiac modelling, etc!

"Atrial fibrosis as a dominant factor for the development of atrial fibrillation: facts and gaps" by Xintarakou, A. et al

"Why translation from basic discoveries to clinical applications is so difficult for atrial fibrillation and possible approaches to improving it "by Nattel, S, et al

"Novel approaches to mechanism-based atrial fibrillation ablation" by Quintanilla, Jorge G. et. al.

"WiChR, a highly potassium-selective channelrhodopsin for low-light one- and two-photon inhibition of excitable cells " by Vierck, J, et. al.

"Short sleep duration and atrial fibrillation risk: A comprehensive analysis of observational cohort studies and genetic study" by Chen, Jun. et. al.

"Increased vulnerability to atrial and ventricular arrhythmias caused by different types of inhaled tobacco or marijuana products" by Huiliang Qiu et. al.

"Abnormal Conduction Zone Detected by Isochronal Late Activation Mapping Accurately Identifies the Potential Atrial Substrate and Predicts the Atrial Fibrillation Ablation Outcome After Pulmonary Vein Isolation" by Kuo M. et.al.

"Controlling cardiac chaos" by A Garfinke et al

PersonalizeAF Youtube Channel

Videoblogs in YouTube

In PersonalizeAF project we are committed to bring closer science to society, which is related to the H2020 objective of contributing to Open Science and research.

That’s why the 15 Early Stage Researchers part of this multidisciplinar and international network are contributing to this challenge staring their own videoblogs' project.

Sharing a common YouTube channel and social networks, they have started a project of Videoblogs, in which we will be able to know periodically the results of their research in #Afib, their activities, but we will also learn about clinical perspective, stem cells, artificial intelligence, signal processing, echocardiography, etc.

Don’t miss their videos, and subscribe to their channel to stay tunned!

Last blog entries and News

Once a month, our researchers are sharing their latest updates about their research pathway. Do you want to learn more about Atrial Fibrillation? About how researchers life is? Check their articles and follow them on Social media!

April 4, 2023

Working (and travelling!)

Working (and travelling!) The combination of research and globetrotting in MSCA Hola a tothom! How is it going? Yes, yes, I’m still alive.…

Read more...

March 15, 2023

PersonalizeAF Project Raises Awareness for Atrial Fibrillation and launches a new video[OBJ]

PersonalizeAF Project Raises Awareness for Atrial Fibrillation and launches a new video With the occasion of the European Day for the Prevention of…

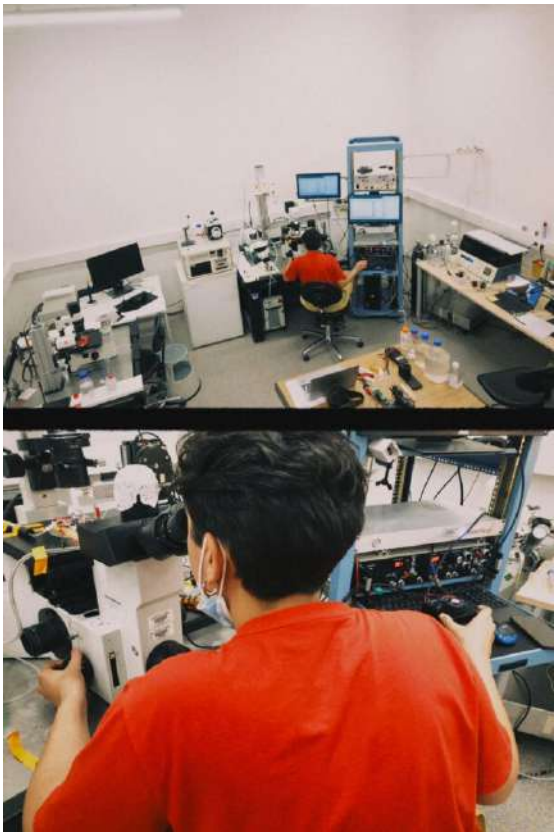
Read more...

February 13, 2023

6th PersonalizeAF meeting in Bologna, Italy

6th PersonalizeAF meeting in Bordeaux, France The University of Bordeaux will host the next PersonalizeAF, during 4th and 5th of July 2022 During…

Read more...

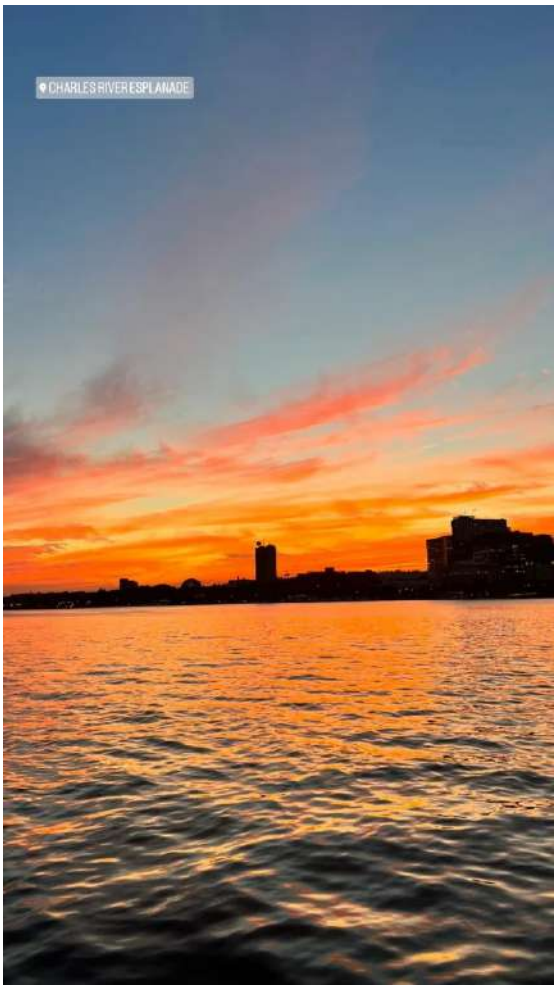


December 9, 2022

My first collaboration published on Science Advances!

My first collaboration is out! My secondment in Freiburg just ended up with an amazing publication Out now on Science Advances! Stem cells…

Read more...



October 3, 2022

The best "non-Summer" of my life

The best "non-Summer" of my life From Karlsruhe all the way to "the most innovative town of the planet" The city of Boston…

Read more...

Co-funded by the Horizon 2020 programme of the European Union

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