

**Basque Capitalization**

# **neuroATLANTIC**

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FINAL REPORT

10 NOVEMBER 2022



CLUSTER  
SAÚDE DE  
GALICIA



**Interreg**  
Atlantic Area  
European Regional Development Fund



## MEETING PARTICIPANTS

Entity	Contact
<p>Cluster Saúde de Galicia, CSG</p>  <p>CLUSTER SAÚDE DE GALICIA</p>	<p><b>Gisela García Álvarez</b> – Managing Director <a href="mailto:gerencia@clustersaude.com">gerencia@clustersaude.com</a></p> <p><b>Rebecca Eckhardt</b> – Business Development <a href="mailto:business@clustersaude.com">business@clustersaude.com</a></p> <p><b>Melina Sánchez</b> – Audiovisual Communication</p>
<p>CIC biomaGUNE</p>  <p>MEMBER OF BASQUE RESEARCH &amp; TECHNOLOGY ALLIANCE</p>	<p><b>Jordi Llop</b> – Principal Investigator, Radiochemistry and Nuclear Imaging Lab <i>Consortium member neuroATLANTIC</i></p> <p><b>Oscar Moreno</b> – Ph.D. Student in Radiochemistry and Nuclear Imaging</p>
<p>Dreamgenics</p>  <p>NGS ANALYSIS EXPERTS</p>	<p><b>Leyre Larzabal</b> – Clinical Genetics Manager</p> <p><b>Carlos Martínez</b> – Chief Executive Officer (Online)</p>
<p>GOGOQ</p> 	<p><b>Carlos Fernández</b> – CEO &amp; Founding Partner</p>
<p>Brainomix</p>  <p>BRAINOMIX</p>	<p><b>Constantin Thiopoulos</b> – Senior Business Development Manager &amp; Co-Founder</p>
<p>University College Cork</p>  <p>UCC</p> <p>University College Cork, Ireland Coláiste na hOllscoile Corcaigh</p>	<p><b>Christian Waeber</b> – Professor of Pharmacology (Online) <i>Consortium member neuroATLANTIC</i></p>
<p>STABVIDA</p>  <p>Your easy genetics laboratory</p>	<p><b>Sofia São Marcos</b> – Personal Assistant (Online) <i>Consortium member neuroATLANTIC</i></p>

# AGENDA

## Location:

Address:

**CIC biomaGUNE**

Parque Científico y Tecnológico de Gipuzkoa.

Paseo Miramón 194,

20014 Donostia / San Sebastián, Gipuzkoa. Spain.

ZOOM link:

[https://us04web.zoom.us/j/79802632642?](https://us04web.zoom.us/j/79802632642?pwd=5HSNDt4JpbwvbrebrZiZXCFOllxzfJZ.1)

[pwd=5HSNDt4JpbwvbrebrZiZXCFOllxzfJZ.1](https://us04web.zoom.us/j/79802632642?pwd=5HSNDt4JpbwvbrebrZiZXCFOllxzfJZ.1)

**Date & Time:** Thursday, 10 November 2022 at 09:30 - 13:00 CET

## **Agenda 10 November 2022**

**09:30 - 09:40 Welcoming and introductions**

**09:40 - 10:20 Final capitalization presentation** – overview of the neuroATLANTIC project and summary of capitalization activities

*Rebecca Eckhardt, Business Developer at Cluster Saúde de Galicia, CSG*

**10:20 - 10:50 Presentation CIC biomaGUNE**

*Jordi Llop, Principal Investigator, Radiochemistry and Nuclear Imaging Lab at CIC biomaGUNE*

**10:50 - 11:20 Coffee break**

**11:20 - 11:50 Company presentations**

Dreamgenics – *Leyre Larzabal, Clinical Genetics Manager*

Brainomix – *Constantin Thiopoulos, Senior Business Development Manager & Co-Founder*

GOGO A – *Carlos Fernández, CEO and Founding Partner*

**11:50 - 12:10 Discussion & Questions**

**12:10 - 12:15 Closing meeting**

**12:15 - 13:00 Tour of the Molecular Imaging Facility of CIC biomaGUNE**

# CAPITALIZATION MEETING

Cluster Saúde de Galicia, CSG

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On Thursday, November 10<sup>th</sup> 2022 the Cluster Saúde de Galicia, CSG organized the sixth and final capitalization meeting in collaboration with consortium member CIC biomaGUNE as part of the Interreg Atlantic Area project neuroATLANTIC. The objective of this meeting was to present the neuroATLANTIC project and research results of the consortium to interested stakeholders and to create an open space for companies to introduce their business activities that allowed for identifying

collaborations for a possible project continuation, as well as networking and connecting companies working within the field of neurological diseases. This meeting was a hybrid event hosted at the CIC biomaGUNE facilities in San Sebastián, Spain.

Rebecca Eckhardt, Business Developer at the Cluster Saúde de Galicia, CSG started the meeting with the general presentation of the neuroATLANTIC project. She explained why the project was created, what the project goals are, and which entities are included in the project consortium. After this, she briefly introduced the Cluster Saúde de Galicia to the participants to provide them with a clear overview of the services the CSG offers and to highlight why the CSG participates in the neuroATLANTIC project. As part of this introduction of the CSG, Rebecca mentioned the three pillars that form the strategy of the cluster:

1. **Collaboration** → the CSG is a non-profit public-private collaboration platform to improve the competitiveness of the Galician health and social care ecosystem. The CSG collaboration on a local, regional, national, and international level.
2. **Innovation & Internationalization** → the CSG has developed multiple innovative and international platforms to empower and support the growth of its members and partners. These platforms include:
  - *Forum RIES* → an annual showcase event for the most innovative developments in the healthcare and social care fields. Great opportunity to connect, network, and learn.
  - *Learning Expeditions* → internationalization strategy of the CSG.
  - *Living Lab network* → the CSG has created its own private social care living lab named **ITGALL**. Besides, the CSG is in charge of managing the LABSAÚDE healthcare living lab of the regional Ministry of Health. The CSG also collaborates with Cebiovet which is a one-health living lab and it includes a logistical living lab named Smartiago as well.
3. **European projects** → The CSG participates in multiple European-funded projects, including the neuroATLANTIC project.

Rebecca then presented an overview of global and Spanish statistics that show the importance of projects such as neuroATLANTIC that address the impact of neurological diseases on both people and economic/health systems. She also explained the capitalization process, and since this was the final capitalization activity, some results of the capitalization process were shared with the meeting participants. Moreover, she gave an overview of the research results achieved by the consortium members so far. The project consortium finalized the establishment of the Green Paper and R&D

Mission-Oriented Guidelines, which will be shared with all interested stakeholders once published.  
Specific results obtained per consortium member:

- **IDIS** → a study on a standardized rat model for ischemia and a study on the development of advanced neuroimaging processing software.
- **University College Cork** → a study on fingolimod as a drug to control the immune response in other diseases like ELA, which shows neuroprotective effects in the mouse model for ischemia (stroke).
- **CICbiomaGUNE** → a study on butyrylcholinesterase (BChE), an enzyme as an in vivo biomarker of Alzheimer's Disease (shown in mouse models).
- **Inserm (BB@C)** → a study for thrombolysis in ischemic stroke by looking at tPAs (testing this on a mouse model).
- **University of Coimbra (CNC)** → recently published a paper about the modulation of cell activity by gene editing coupled with optogenetics.
  - Also developed a model for Cre-UCNPs.
- **STAB VIDA** → created **Doctor Vida**, which is a portable, handheld device for isothermal nucleic acid amplification of viral genetic biomarkers.
- **Lincbiotech** → developed **Minerva Stroke**, a software solution to accurately diagnose Stroke and predict the evolution of the infarcted patient, as well as adequately control the episodes of fever and hyperthermia to initiate the correct treatments in the early stages of the disease.
- **Qubiotech** → develop **NEUROCLOUD**, which is a cloud platform for the automatic processing of neuroimaging assisted by Artificial Intelligence.

To finalize her presentation, Rebecca listed the advantages of being part of the neuroATLANTIC platform.

## CIC biomaGUNE

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Then the floor was given to Jordi Llop, Principal Investigator at the Radiochemistry and Nuclear Imaging Lab at CIC biomaGUNE. Jordi started his presentation by giving an overview of CIC biomaGUNE as an entity. They are a non-profit private research center that is located in San Sebastián Spain and was established to promote scientific research and technological innovation in the fields of Bionanomaterials, Molecular Imaging, and Synthetic Bioengineering.

The center is structured and led by 10 main researchers and they have many different research units that are normally linked to hospitals. Nevertheless, CIC biomaGUNE is a facility that combines all different imaging and research units in one location, distinguishing them from all other research centers in Europe. Their main form of income is through public funding and are therefore active members of EU projects. Besides an impressive number of publications (146 in 2021), they also focus on patenting their work to protect and exploit their research results.

Within the neuroATLANTIC project, they have been mainly focusing on doing research for Alzheimer's Disease. For this research, they make use of mice and rat models, which does limit their results since it only mimics the human brain but is not the same. Their research for Alzheimer's Disease is a continuing process.

- They are performing a longitudinal study for the evaluation of Imaging Biomarkers.
  - Within this study they are testing the BChE biomarker, which has shown some positive results.
- They are also performing correlational behavioral studies

Besides performing research with the use of biomarkers, they also do research for the development of therapeutic tools. One of the proteins they are looking at is Transthyretin (TTR).

For the research of Ischemia, they are working on developing (nano)diagnostic tools and they are hoping to create golden particles.

### Questions:

After Jordi's presentation, one of the questions asked was what their next steps will be for the coming years. Jordi explained that in the past 15 years they have been working on research for Ischemia. However, at this moment they are more focused on Alzheimer's Disease, and therefore, their plans for the future will be focused on performing more research for AD, including the development of the TTR therapeutic tool.

- They are interested in collaborating with companies and they can implement a "reversed" approach → if a company has a good idea that needs to be tested and explored, CIC biomaGUNE can support them in this.

## Dreamgenics

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Leyre Larzabel, Clinical Genetics Manager at Dreamgenics, attended the final capitalization meeting in person to give a brief overview of the work they are performing at Dreamgenics.

Dreamgenics is a company that was established in 2011 as a spin-off of the University in Oviedo, Asturias (Spain). They have a platform, called Genome One, which is an easy-to-use software to perform bioinformatic analysis of NGS data. With this software, they can create their “Genome One

Reports”. These reports offer a clear and structured genetic overview of the client. Besides, they offer genetic diagnosis services. With all the work they do, they aim to contribute to the development of Personalized Precision Medicine.

The different genomic analyses they perform include the analysis of Whole Genome (WGS), Whole Exome (WES), and Gene panels. The different pipelines of this analysis can be individual, familial trios, multisample, and somatic.

Leyre then explained how Dreamgenics can add value to a project such as neuroATLANTIC. The company has extensive experience in NGS data analysis and can use its Genome One Reports to visualize research results. They have a team of geneticists to help with the interpretation of results obtained in projects and they work together with different research groups, both nationally and internationally.

### Question:

After her presentation, it was asked in what sort of scenario this type of research results are used. Leyre explained that this information is used for clinical analyses of patients with genetic diseases. But besides this, it can also be used by researchers and for clinical samples.

## Brainomix

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After their positive participation in the French capitalization meeting on June 28<sup>th</sup>, Brainomix attended the final capitalization meeting. This time, Constantin Thiopoulos, Senior Business Development Manager and Co-Founder of Brainomix, represented the company and gave a brief overview of their main lines of work.

Brainomix is a spin-off company from Oxford University and aims to become a world-leading AI medical imaging company to improve patient outcomes by enhancing doctors' decisions. They have developed a platform, e-Stroke to detect and treat stroke patients on a large scale. Results of the platform are available in three main formats: PACS, email notifications, and mobile app/website.

- In the newest version of the e-Stroke platform they have incorporated a communication platform that allows easy and quick interactions between the different parties involved (patient, GP, specialist, etc.).

Their solution is already deployed in many different regions globally, but recently they were rewarded with the opportunity to implement their platform in the national health system of Hungary.

Constantin ended his presentation with an explanation of why they are interested in the neuroATLANTIC project. Since they are a leader in developing and deploying regional stroke imaging solutions, they are interested in participating as a project partner, establishing cooperations with different regions, and collaborating with clinical and technological institutions for joint R&D.

### Questions:

One of the questions asked by the audience was what happens to the patient data when they leave the hospital and if data can be used for research purposes. Constantin explained that all data is carefully managed to ensure patient data safety. Some of the data, when anonymized, can be used for research purposes.



## GOGOIA

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Carlos Fernández, CEO and Founding Partner at GOGOIA, attended the final capitalization meeting and gave a brief overview of the company. GOGOIA was established in 2015 as a spin-off from the CSIC (Consejo Superior de Investigaciones Científicas) in Madrid. Nevertheless, they are a Basque company and their story started in Auggasa, where the percentage of elderly in the population is extremely high. They have created a technical assistance skeleton to support patients affected by stroke, Parkinson, MS, and other neurological diseases in

their rehabilitation.

They have obtained different certifications, and their skeletons are showing good results for the mobility of patients. One of their distinguishing factors is the ability to move your ankle while using the skeleton, which allows for a more natural rehabilitation. The skeleton has a real-time interaction system so that the company can make the use of the robot feel as natural as possible for patients.

Besides offering the robot skeleton, they also have their own rehab centers in Ratu and Bilboa. Thus, GOGOIA has a double business model, offering both products and services.

Carlos explained that GOGOIA would be very interested in participating in projects such as neuroATLANTIC and they will be able to support the research done for the project.

### Questions:

After Carlos' presentation, one participant asked what their skeleton costs. He answered that one Hank Skeleton costs around €150.000.

Carlos also mentioned that at GOGOIA they work on R&D+I projects, after which was asked if they have developed certain protocols/indicators they can follow. Carlos explained that they perform official studies with international partners to demonstrate whether the skeleton actually works. Thus, they do follow specific protocols and indicators.

- These studies are focused on patients affected by neurological diseases. However, a limitation of this research population is that all patients are unique and there is not one common sample.

## CONCLUSION

On November 10<sup>th</sup>, 2022, the CSG organized the final capitalization meeting for the European Interreg Atlantic Area project neuroATLANTIC in collaboration with CIC biomaGUNE in San Sebastián. This meeting aimed to raise awareness about the neuroATLANTIC project among entities operating in the field of neurological diseases in the Atlantic Area. This was a hybrid meeting and consisted of four different presentations provided by the meeting participants.

During the final capitalization, the CSG presented the neuroATLANTIC project to share information about the project, the research results, and the neurological diseases field with the meeting participants. Besides, the companies that attended the meeting in person were able to present their business activities and interests. Based on this, a short discussion took place to explore possible collaborations and participation within a possible neuroATLANTIC continuation project. Based on the topics that were discussed during the final capitalization meeting some conclusions include:

- CIC biomaGUNE is a one-of-a-kind research center that has managed to create a unique location for performing efficient and effective research.
- The prevalence of age-related neurological diseases is increasing in Spain due to the increase in the elderly population.
- The Spanish government has acknowledged the importance of addressing Alzheimer's Disease through the implementation of the National Alzheimer's Plan in 2019.
  - This plan should encourage the improvement of quality and level of care provided to patients and caretakers (both formal and informal).
- Within the Basque region, multiple companies have developed innovative solutions in the form of products and services to improve how neurological diseases are being researched and treated.
- The participating companies showed a high interest in participating in the possible project continuation.



Report by: Rebecca Eckhardt, Business Developer at the Cluster Saúde de Galicia, CSG