

# Irish capitalization **neuroATLANTIC**

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FINAL REPORT

12 MAY 2022



CLUSTER  
SAÚDE DE  
GALICIA



**Interreg**  
**Atlantic Area**  
European Regional Development Fund



## MEETING PARTICIPANTS

Entity	Contact
<p><b>Cluster Saúde de Galicia</b></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>Adrián Dorgambide González</b> – Technician of Internationalization <a href="mailto:internacional@clustersaude.com">internacional@clustersaude.com</a></p>
<p><b>University College Cork</b></p>  <p><b>UCC</b> University College Cork, Ireland Coláiste na hOllscoile Corcaigh</p>	<p><b>Christian Waeber</b> – Professor of Pharmacology</p> <p><b>Barry Boland</b> – Lecturer in Pharmacology</p>
<p><b>CICbiomaGUNE</b></p>  <p>MEMBER OF BASQUE RESEARCH &amp; TECHNOLOGY ALLIANCE</p>	<p><b>Oscar Moreno</b> – PhD Student in Radiochemistry and Nuclear Imaging</p>
<p><b>Health Innovation Hub Ireland</b></p> 	<p><b>Tanya Mulcahy</b> – Director</p> <p><b>Michael Twomey</b> - Clinical Evaluations Manager &amp; Health Innovation Specialist</p>
<p><b>GG Care</b></p> 	<p><b>David Grey</b> – CEO &amp; Co-Founder</p>
<p><b>Nova Bioelectronics</b></p> 	<p><b>Rob Oultram</b> – Director of Sales and Marketing UK, USA &amp; Canada</p>

# AGENDA

## Thursday, 12 May 2022

Cavanagh Pharmacy Building - room UG 22/23, University College Cork Campus – Cork (Ireland)

09:30 – 09:45	Welcoming and roundtable introduction
09:45 – 10:15	Capitalization presentation Cluster Saúde de Galicia
10:15 – 10:45	Presentation Health Innovation Hub Ireland (HIHI)
10:45 – 11:15	<i>Coffee break</i>
11:15 – 11:50	Presentation Christian
11:50 – 12:15	Presentation Barry
12:15 – 12:45	Presentation Nova Bioelectrics
12:45 – 13:05	Presentation GG Care
13:05 – 13:10	Closing

# CAPITALIAZATION MEETING

## Cluster Saúde de Galicia



This meeting was the 3<sup>rd</sup> capitalization meeting that was organized as part of the capitalization process for the European project neuroATLANTIC. The objective of this meeting was to present the project to the interested stakeholders, share the results achieved so far, and allow the participants to introduce themselves and present their company and research. The meeting was hosted in-person at the Cavanagh Pharmacy building of the University College Cork.

The meeting started with a brief roundtable introduction. Then, Rebecca Eckhardt from the Cluster Saúde de Galicia presented the neuroATLANTIC project. She first explained the project's intention of addressing the immense impact of neurological diseases, with a special focus on Alzheimer's Disease and stroke, by creating an innovative platform. The project aims to combine the scientific and technological capabilities found in the neurology field within the Interreg Atlantic Area to accelerate the uptake of innovative solutions.

- The project consortium includes four countries → Spain, Portugal, Ireland, and France.
  - There are different categories of stakeholders, including clinical excellence, exploitation, and capitalization.

After having explained the project's goals and introducing the consortium partners, Rebecca shortly introduces the CSG to the meeting participant to show how the CSG represents the ecosystem and what its relation is to the neuroATLANTIC project.

She then moved on to some statistical data about the global and Irish neurology field to show the importance of the neuroATLANTIC project and creating a collaborative network for entities operating in the neurology field. She ended the presentation by giving a summary of the main research results achieved so far and by stating the advantages of being part of the neuroATLANTIC platform.

## Health Innovation Hub Ireland (HIHI)



Tanya Mulcahy, director at Health Innovation Hub Ireland (HIHI), started her presentation by explaining that HIHI was established by the Irish government to drive collaboration between the health service and companies. HIHI is currently fully funded by the Irish government, and they do not charge companies fees for their services. However, they are looking into this and are trying to adjust their business model.

- Because they are funded by the government, they only receive some employees. If they adjust their business model and start implementing fees, they can hire additional employees and help more companies.

Their hub supports companies that are developing products and services to access the Irish healthcare system. To do this they offer companies the opportunity to test their products via clinical validation and pilot studies, which allows the companies to access innovative products, services, and environments. They cover a large part of the community, including companies, hospitals, patient associations, and research institutions, among others.

They have three main focus areas:

1. **Bringing innovation into the healthcare system** → bringing new products and solutions into the healthcare system. This includes products and solutions on the big spectrum of health technology.
2. **Innovation out of healthcare** → supporting ideas from healthcare staff and helping start-ups to establish.
3. **Innovation education and culture** → living labs, structured program workshops, and ideation activities.
  - How innovation is perceived is changing in Ireland → whereas five years ago innovation was hardly “seen” in the Irish healthcare system, it is now the major driving force.

With the work HIHI does, it tries to focus on the need of the market and tries to find and match the products and services out there with the right need. One benefit for them of working together with the hospitals is that they focus on patients, which offers a good insight into the user spectrum.

HIHI is mainly focused on the Irish healthcare field because they are funded by Enterprise Ireland. Nevertheless, if there is no solution for the need in the Irish market, they do look at other markets as well. Besides, in terms of public procurement, they have the [Rosia Project](#) for which the tender will open very soon. To apply for this tender you do not have to be part of the organization; everyone can bid on this.

The high barrier is “where are you using this tech solution in your own country?” → the thresholds are different in other countries, you need evidence for certain things and otherwise not possible, we are trying to bring groups together (spectrum of companies working on this diseases and providing products/services).

Besides helping companies access the healthcare system in Ireland, HIHI also organizes events. In September 2022, they are organizing an event on FemTech covering all aspects of FemHealth from birth to death. HIHI organizes these events focused on specific healthcare areas and they are open to everybody.

### Christian Waeber – School of Pharmacy University College Cork



Christian Waeber, Professor of Pharmacology at the University College Cork and member of the neuroATLANTIC consortium, presented the research results he has obtained so far for the neuroATLANTIC project. The main interest of his research group is vascular biology with a special focus on stroke. They are also interested in the modulation of neuro-immune interactions, sphingolipid signaling, experimental design, research integrity, and non-reproducibility of preclinical studies



- Researchers are testing drugs that are immune modulators → looking at the effects of these drugs on the immune system.
- Christian explained that 70% of the research performed cannot be reproduced → there is a huge gap and people are aware of this but are not doing anything to tackle this.

A previous research group led by Christian was one of the first to show that fingolimod was effective with stroke. Within his group, they do studies in mice for preclinical trials to guide the clinical trials.

- They did not only test the model they had created in young and healthy mice but also in aged mice and atherosclerotic mice → this conclusion was disappointing because it was less effective than they expected. There was no clear effect and it showed that fingolimod in stroke are less robust than existing literature might indicate and may depend on the inflammatory status of the animals.

Christian's research group gathers a lot of data, which will be published in the database. They also published multiple studies that show that fingolimod does work.

- They did another study, and this showed that it is working, not looking at the function of fingolimod but at the number → another study about their function.
  - It has a dual effect on suppressive function (positive) and resistance to suppression (negative)

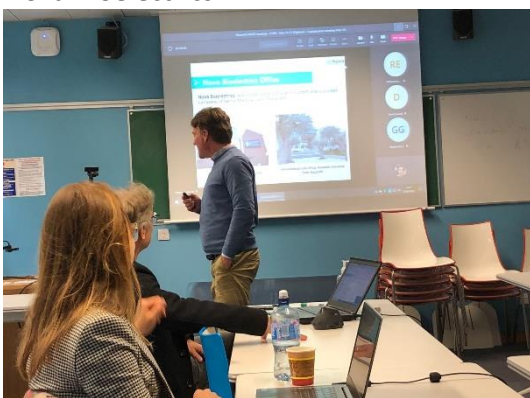
#### **Barry Boland – Department of Pharmacology and Therapeutics University College Cork**



Barry, Lecturer in Pharmacology at the University College Cork, presented some of his research results on neurobiology in Alzheimer's disease. For his post-doc, Barry looked at brain plaques and if Alzheimer's is a Lysosomal Storage disease. The goal of his research group is to identify cellular biomarkers of impaired lysosomal flux and develop therapies that can restore their function and enable early diagnosis and new treatments for Alzheimer's. They have been testing their research in vitro and in vivo in a rat model. Barry would love to move the research into neuro firing.

One of the fields he and his research group have been focussing on is autophagy, which is a neuroprotective mechanism also known as self-eating cells. Barry was interested in seeing whether the autophagy mechanism is active, over-active, or blocked in the case of Alzheimer's Disease.

#### **Nova Bioelectronics**



Rob Oultram, director of Sales and Marketing in the UK, USA, and Canada of Nova Bioelectronics, represented the company and gave a presentation to demonstrate the work that Nova Bioelectronics does. Nova Bioelectronics was established in Cardiff, Wales (the UK) in 2021 and is a sister company of Senso Medical Labs that is based in Israel. Nova Bioelectric is a research and development company that tries to help its customers to design and

develop medical devices that interface with the nervous system

- They are experienced in supporting clients in building medical devices in the neurology field.
- They know CE and FDA requirements and regulatory processes.

Besides research and development, they also work on prototyping, product development, and regulatory processes, and support companies through the entire process of creating products and manufacturing. For the design and manufacturing of neuro devices, they have experience in the areas of wearables, implantables, and deep brain.

- They also developed some OEM platforms that help companies bring their product to market fairly quickly. Some of these platforms include:
  - **BIOPOT** → BIOPOT products (see details below) can be immediately used as they are or they can be modified to fit the purpose of the client.
  - **BIOCHEM** → A Bio-Sensing Platform for Rapid electro-chemical Wearable Development brings the freedom to create your own ideas.
  - **BIOSTIM** → this platform can provide very accurate electrical stimulation based on reading other parameters or predetermined settings.
    - Besides using their platforms (which reduce time, cost and risk for customers), they also do customized devices from scratch.
- Their clients include researchers, clinicians, early-stage companies, entrepreneurs, and engineering teams.

Nova Bioelectronics is interested in joining the neuroATLANTIC project to co-develop technologies within the network to exploit commercialization opportunities and to run a medical device incubator space. Moreover, they are interested in connecting with the entities in the neurology field to collaborate. Rob explained that Nova Bioelectronics can offer help in medical device development, especially since this is becoming more and more complex. They also help to accelerate projects in the preventative and personalized medicine space leveraging data, IoT and AI.

## GG Care



David Grey, Co-Founder and CEO of GG Care, started his presentation by telling his story of how he established GG Care. Coming from a finance background, he explained that his motivation to start his company only aroused after his grandmother, who is living with dementia, moved in with him in London and he became her primary caregiver. He found that there are many support devices and services out there, but that it is almost impossible to manage all of these.

Therefore, he created GG Care, which is a platform that connects smart home devices to help caregivers monitor and automate care while increasing the independence and comfort of their care residents. David explained that challenges regarding dementia are around the increasing cost as well as a decrease in free spaces in care homes. Thus, GG Care's vision was to create an interoperable, technology-assisted platform that helps seniors live independent longer.

The platform is in the form of an app that connects to the Alexa smart device → the app turns Alexa into a virtual assistant that helps the user remind actions (the actions are broken down in easy steps). Alexa interacts with the user and reacts according to their response.

- In the future, they hope to utilize the data of the devices to make the digital interactions smart.

Currently, it is offered for free. They are waiting for clinical testing and hopefully, it can be a clinically approved device in the future.

What makes GG Care different from others offering similar solutions is that competitors do not have interactive voice reminders, and the ones that do are creating their own devices which takes a long time (shipping, distribution issues, costs). GG Care is just interested in the software and making it as easy and affordable as possible.



## CONCLUSION

On May 12<sup>th</sup>, 2022, the CSG hosted the Irish capitalization meeting for the European Interreg Atlantic Area project neuroATLANTIC. The meeting took place at the Pharmacy Faculty of the University College Cork, where one of the project's consortium members is located. This mission was hosted as a possibility to explore possible collaborations and to establish a network of different entities in the neurology field. This meeting was in-person and included six presentations provided by the different meeting participants.

The aim of this mission was to capitalize the project within the Irish environment, with a special focus on the neurology sector. Interest in this meeting was shown by multiple stakeholders active in both the healthcare, social care, and technology sectors related to neurodegenerative disorders.

During the meeting, a lot of information was shared between the participants about the project itself, the research and work performed by the participants, and how the CSG represents the project and its ecosystem. Based on the presentations provided by HIHI, University College Cork, Nova Bioelectronics, GG Care, and the CSG, many new opportunities and collaborations can be explored in future projects. Some conclusions from this capitalization meeting include:

- Ireland is a world leader in brain research but has a lack of experts, thus collaboration with other countries could benefit research and capitalization.
- Due to the expected increase in neurological diseases, the neurological devices sector is expected to be the fastest-growing medical devices sector in the coming years.
- The Irish healthcare system is shifting into a more MedTech focused system where innovation is very important.
- Companies in the healthcare field are supported by the Health Innovation Hub Ireland to be able to access the Irish healthcare system.
- The University College Cork is doing preclinical research in both stroke and Alzheimer's Disease.
- Nova Bioelectronics is helping its customers to develop medical devices in the neurology sector → they could help members of the neuroATLANTIC platform.
- GG Care offers a platform that helps people suffering from dementia live independently for longer.
- During the capitalization meeting, new connections were established between the meeting participants.