MEDIKUNTZA PERTSONALIZATUKO
EHU i+Med GELA
AULA DE MEDICINA PERSONALIZADA
EHU i+Med

II PASSION FOR SCIENCE Congress

13th | November | 2025

FACULTY OF PHARMACY. UNIVERSITY OF THE BASQUE COUNTRY (EHU),
Álava Campus, Vitoria-Gasteiz.

Organized by:

"Aula de Medicina Personalizada EHU i+Med" Faculty of Pharmacy (EHU)

Sponsored by:

Vice-Rectorate for Scientific-Social Development and Transfer and "Aula de Medicina Personalizada EHU i+Med"

Organizing Committee:

- Mirari Ayerbe (Dean of the Faculty of Pharmacy, EHU)
- Rosa Hernández (Director of the "Aula de Medicina Personalizada EHU i+Med")
- Sandra Benito (Member of the Governing Council of the Cooperative, i+Med)
- Nekane Martin (Cooperative Member, i+Med)

Scientific Committee:

- Edorta Santos (Department of Pharmacy and Food Sciences, EHU)
- Javier Vicario (Department of Organic Chemistry I, EHU)
- Nicolás Nazar (Department de Zoology and Animal Cell Biology, EHU)
- Saioa Gómez (Department of Pharmacy and Food Sciences, EHU)
- Víctor Carramiñana (Cooperative Member, i+Med)

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PROGRAMME 13th | November | 2025

II 'PASSION FOR SCIENCE' CONGRESS

Location: Faculty of Pharmacy Auditorium (EHU). Vitoria-Gasteiz

08:30 – 09:00	**Registration & Presentations uploading/poster placement** Main hall of the Faculty of Pharmacy (EHU)
09:00 – 09:15	**Welcome session** • **Joxerramon Bengoetxea** (Rector of the EHU) • **Amaia Esquisabel** (Director of Science Policy for the Basque Government) • **Mirari Ayerbe** (Dean of the Faculty of Pharmacy, EHU) • **Sandra Benito** (Laboratory Manager and Member of the Governing Council of the Cooperative of i+Med) • **Rosa Hernández** (Director of the Aula de Medicina Personalizada EHU i+Med)
09:15 – 10:00	**PLENARY SPEAKER I. *Chairperson: Nicolas Nazar.*** • **Burcu Gumuscu-Sefunc.** Tenure-track assistant professor in the Department of Biomedical Engineering at Eindhoven University of Technology (TU/e): "Enhancing Digital Droplet Microfluidics for Cell Culture and Stimulation"
10:00 – 10:45	**Oral presentations. Session I. *Chairperson: Nicolas Nazar.*** Selected talks: 7-minute presentation, 3 minutes for Q&A • **Gema del Rocío López Buenafé.** Development of PEDOT: PSS-based Microstructured Electrodes for Bioelectronic Interfaces in Cancer Research • **Ramon Roset Visiedo.** RNAzyme-Based Strategies for MicroRNA Detection in Forensic Applications • **Sukayna Ezquerro Berdouzi.** Microfluidic fiber-optic LSPR sensor for VEGF detection in mesenchymal stem cell culture. • **Naiara Lartitegui-Meneses.** Evaluation of PCSK6 expression and secretion in Testicular Germ Cell Tumors by immunohistochemistry and CellStudio platform
10:45 – 11:30	**Coffee break and Poster viewing**
11:30 – 12:45	**Flash poster presentations. *Chairperson: Saioa Gomaz y Victor Carramiñana.*** Make your research unforgettable: 1 poster, 3 minutes. • **Mikel Salmeron.** Towards Reliable Preclinical Testing: Early-Stage Development of a Bioprinted 3D In Vitro Chronic Wound Model • **Martina Gruppuso.** An in vitro model of human glioblastoma multiforme to study early-stage glioma progression in the tumour-associated microenvironment • **Gesala Pérez.** Nutritional interventions in celiac disease: towards a holistic management and future challenges • **Adrián Salazar.** Identification of novel genes potentially involved in the biofilm-forming ability of Arcobacter butzleri • **Nerea Herran-Diaz de Argote.** Analytical techniques for identifying anthropogenic fire in Middle Pleistocene sediment samples • **Eider Sustatxa**. Bioactive hydrogel coatings on titanium implant surface simulators • **Beatriz Sáenz.** Pharmacological inhibition of mTOR improves hERG channel performance in a cellular model of LQTS2

11:30 – 12:45	• **Leyre López de Aguileta.** Synthesis of Nitrogen Heterocycles as Human Topoisomerase Inhibitors • **Asier Inchaurraga Llamas**. Single-Cell Adhesion Dot Array (SCADA) enables high-resolution profiling of breast cancer cell–matrix interactions • **Isabel Poves Ruiz.** A paper-based microfluidic device for the colorimetric detection of scopolamine with the naked eye. • **Alberto Gamalier Casado-Cedano.** SLAMF3 Expression and Adhesion Dynamics of Jurkat Cells in Microfluidic Device. • **Julie Matias Decuyper.** Development of dECM-Based Bioinks for 3D Bioprinting of Tendon Tissue
12:45 – 13:30	**Oral presentations. Session II. *Chairperson: Javier Vicario.*** Selected talks: 7-minute presentation, 3 minutes for Q&A • **Laura Arellano.** Effect of viable and inactivated Lactobacillus rhamnosus GG administration on the prevention of diet-induced obesity in rats: Implication of white and brown adipose tissue and influence of bacterial viability • **Erik Barrio.** E3 ligase Ube3a targets mTOR for degradation • **Angela Trejo.** Novel antiplasmodial compounds via sulfadoxine modification through multicomponent reactions • **Alexander Mirandona-Olaeta.** Hybrid Metal–Organic Framework electrolytes for safer, high-energy rechargeable batteries
13:30 – 14:30	**Lunch Break**
14:30 – 15:15	**PLENARY SPEAKER II. *Chairperson: Edorta Santos.*** • **Eneko Larrañeta.** Chair in Pharmaceutical Materials Science. Queen´s University of Belfast: "Advanced Implantable Platforms for Sustained Drug Administration"
15:15 – 16:00	**Oral presentations. Session III. *Chairperson: Edorta Santos.*** Selected talks: 7-minute presentation, 3 minutes for Q&A • **Maria Rossello-Gelabert.** Prime-LS, a cryoprotectant-free lyophilized MSC-secretome providing complete protection against ulcerative colitis • **Madalen Arribas Galarreta.** Identification of novel antibodies against the ultraconserved MPER region of SARS-CoV-2 by phage display • **Deepti Rana.** Dynamic Biomaterials for Vascularized Engineered Tissues • **Leire Berasategi Asurmendi.** Analysis of Protein Delivery Efficiency using GFP- and Luciferase-Loaded Extracellular Vesicles
16:00 – 16:45	**Experiences beyond the Academy** • **Amaia Huguet.** I+Med Director of R&D Operations • **Susana Egusquiaguirre.** Patent Adviser. ABG Intellectual Property • **Enara Herrán.** Chief Executive Officer of Additum Valoren Salud • **Pablo Ortiz.** Venture Builder at Tecnalia

16:45 – 17:30	**Oral presentations. Session IV. *Chairperson: Edorta Santos.*** Selected talks: 7-minute presentation, 3 minutes for Q&A • **Nekane Martin Mendia.** Mucoadhesive Nanoparticles Based on Chitosan Derivatives for Enhanced Ophthalmic Drug Delivery • **Ainhoa Goenaga.** Dual Targeting of Wnt Signaling and DR5 Activation for Tumor Therapy • **Paula Fernández Muro.** Complement factor H gene supplementation therapy for dry age-related macular degeneration • **Camino Garcia-Blasco.** Development of a colon-targeted delivery system for mesenchymal stromal cell-derived secretome in inflammatory bowel disease
17:30 – 18:15	**Coffee-break and Poster Viewing**
18:15	**Closing Remarks and Award Ceremony**

POSTERS LIST

1. **Mikel Salmeron.** Towards Reliable Preclinical Testing: Early-Stage Development of a Bioprinted 3D In Vitro Chronic Wound Model
2. **Martina Gruppuso.** An in vitro model of human glioblastoma multiforme to study early-stage glioma progression in the tumour-associated microenvironment
3. **Gesala Pérez.** Nutritional interventions in celiac disease: towards a holistic management and future challenges
4. **Adrián Salazar.** Identification of novel genes potentially involved in the biofilm-forming ability of Arcobacter butzleri
5. **Nerea Herran-Diaz de Argote.** Analytical techniques for identifying anthropogenic fire in Middle Pleistocene sediment samples
6. **Eider Sustatxa.** Bioactive hydrogel coatings on titanium implant surface simulators
7. **Laura Merino Fernández**. Development and characterization of heparin-loaded bioinks for 3D bioprinting of elastic tissue.
8. **Susana Abrante.** Stability of added gamma-oryzanol during sunflower oil heating at frying temperatures: kinetics and degradation products
9. **Beatriz Sáenz.** Pharmacological inhibition of mTOR improves hERG channel performance in a cellular model of LQTS2
10. **Irene Diez Aldama.** 3D bioprinted vascular constructs with ECM-mimetic properties: Functional and structural analysis.
11. **Leyre López de Aguileta.** Synthesis of Nitrogen Heterocycles as Human Topoisomerase Inhibitor
12. **Asier Inchaurraga Llamas.** Single-Cell Adhesion Dot Array (SCADA) enables high-resolution profiling of breast cancer cell–matrix interactions
13. **Isabel Poves Ruiz.** A paper-based microfluidic device for the colorimetric detection of scopolamine with the naked eye.
14. **Alberto Gamalier Casado-Cedano.** SLAMF3 Expression and Adhesion Dynamics of Jurkat Cells in Microfluidic Device.

15. Julie Matias Decuyper. Development of dECM-Based Bioinks for 3D Bioprinting of Tendon Tissue

16. Marie J. Gouteron. [6]- and [7]-Helicenic Diols as Scaffolds for the Synthesis of a New family of Chiral Brønsted Acids

17. Lourdes Basabe-Desmonts. Generation and combination of ionogel microstructures using vacuum-driven lithography technique

18. Nahia Ureña Esteban. Isolation, identification, and characterization of bacteriophages for the elimination of Staphylococcus aureus

19. Helen Carr. Sexual dimorphism in the treatment of rats with Opuntia strica var. dillenii fruit extract to prevent obesity and related co-morbidities

20. Irene Besné-Eseverri. Preventive effect of Opuntia extracts in steatosis and autophagy in a murine model of diet-induced liver disease

21. Oier Encinas. Development of hydrogen sulphide-activated theragnostic prodrugs for selective cancer treatment through tetrazine dynamic chemistry

22. Alejandro Serrano. Design of Treg-targeted nanoparticles for cancer treatment

23. Elena Valgañón. Evaluation of biosurfactant-producing halophilic bacteria for the bioremediation of oil-contaminated sands

24. Zuriñe Eraña. Extracellular Vesicles as Biologic Drug Delivery Systems: Pharmacokinetic Advantages over Soluble Forms

25. Ana Alarcia. Population pharmacokinetic modeling of piperacillin administered as extended infusion in critically ill patients

26. P. E. Guevara-Pantoja. Autonomous paper valves using pdms vacuum pumps as actuators for colorimetric chrono-sampling.

KEY DATES

- **30th September 2025 |** Closing of submission period
- **20th October 2025 |** Notification of acceptance of communications

INFORMATION ABOUT AWARDS*

- **Oral communications:** two prizes of €1000 each for participation in congresses of the winner's choice.
- **Posters:** two €300 Elkar gift cards for the best two flash poster presentations.

* Only PhD students who have not defended their thesis by the date of the congress will be eligible for the awards

ABOUT THE SPEAKERS

Dr. Burcu Gumuscu-Sefunc

Dr. Burcu Gumuscu-Sefunc is an assistant professor at the Biomedical Engineering department in Eindhoven University of Technology, where she leads Biosensors and Devices group.

She is a pioneer of hydrogel micropatterned surfaces via capillary pinning and protein-barcoded hydrogel microparticles for single cell analysis.

More recently she focuses on developing digital microfluidic platforms to study cell-biomaterial interactions for long-term experiments.

Gumuscu-Sefunc received prestigious awards and grants from Royal Dutch Academy of Science, Dutch Research Council, and European Commision.

She is an advisory board member at Lab on a Chip Journal, and editorial board member at Micromachines, Frontiers in Digital Health and Frontiers in Lab on a Chip Technologies Journals.

Web: https://www.tue.nl/en/research/researchers/burcu-gumuscu-sefunc

ORCID: https://orcid.org/0000-0003-4843-4724

LinkedIn: https://www.linkedin.com/in/gumuscub/

Eneko Larrañeta

Web: https://pure.qub.ac.uk/en/persons/eneko-larra%C3%B1eta

ORCID: https://orcid.org/0000-0003-3710-0438

LinkedIn: https://www.linkedin.com/in/eneko-larrañeta-48846042/

Eneko Larrañeta is a Professor at Queen's University Belfast, specialising in drug delivery systems and biomaterials.

He holds a BSc in Chemistry and a PhD in Physical Chemistry from the University of Navarra, where his research focused on self-assembled hydrogels. After completing his PhD in 2012, Prof. Larrañeta worked as a research fellow in nanotechnology for drug delivery before moving to Belfast in 2013 to develop microneedle technology for transdermal drug delivery at Queen's University Belfast.

Prof. Larrañeta's expertise includes hydrogels, nano/microparticles, and microneedle-based systems. Currently, he focuses on implantable systems for sustained drug release, using techniques such as melt processing and additive manufacturing. He has published over 100 papers in peer-reviewed journals, edited multiple books, and authored numerous book chapters. Prof. Larrañeta has secured funding from leading organisations and collaborated extensively with pharmaceutical and cosmetics companies.

In 2023, he was named a Clarivate Highly Cited Researcher, and since 2019, he has been recognised as a top 2% scientist in his field by Stanford University's analysis using Scopus data. He is a Fellow of the UK Higher Education Academy and a member of the Royal Society of Chemistry and the Society for Applied Microbiology.

Amaia Huguet

ORCID: https://orcid.org/0000-0001-9724-0921

LinkedIn: Amaia Huguet Casquero, Industrial PhD | LinkedIn

Amaia Huguet Casquero is the Director of R&D Operations at i+Med, with extensive expertise in project management and scientific innovation. She obtained her PhD Cum Laude in Pharmaceutical Technology from the University of the Basque Country (EHU) in 2020, following a Master's in Research, Development, and Innovation of Medicines from the University of Navarra (2015) and a Degree in Pharmacy from EHU (2014).

Her academic training is further strengthened by specialized qualifications in drug development, Good Manufacturing Practices (GMP), and project and innovation management.

Dr. Huguet-Casquero began her professional career as R&D Technical Manager at BIOSASUN, before moving on to lead Project Management at Unikare Bioscience. Since 2023, she has served as Director of R&D Operations at i+Med.

At i+Med, she currently focuses on leading the project management team in securing R&D&I funding, supervising the technical and financial monitoring of projects, coordinating the preparation and submission of competitive national and European research proposals, and spearheading the creation of a new research institute. She is also responsible for fostering strategic collaborations with technology centers, leading universities, physicians, and other professionals across the healthcare sector.

Throughout her career, she has contributed to over 40 public and private R&D projects in areas such as wound healing, 3D bioprinting, bioelectronic sensors, controlled drug release, and nanotechnology, and has authored six high-impact scientific publications.

Susana Egusquiaguirre

Susana Egusquiaguirre is a Patent Adviser in Biotechnology and Life Sciences at ABG Intellectual Property. Her practice is focused on patent drafting, prosecution, and opinion work, particularly in relation to molecular and cellular biology, pharmacogenomics, gene therapy, immunology, animal models, and diagnostic methods.

Before joining ABG IP, Susana worked as a Clinical Research Scientist and as an Intellectual Property Counsel in the pharmaceutical industry. Her responsibilities included patentability identification and evaluation of the company's discoveries, preparation of freedom-to-operate reports and due diligence, or acting as a consultant on patent drafting and prosecution.

Susana holds a Degree in Pharmacy and a PhD in Pharmacy from the University of the Basque Country, at the NanoBioCel Group, where her research focused on the development of nanoparticles encapsulating bioactive peptides or pharmaceutical agents to recover telomerase activity.

During her PhD she did research stays at the Neurodegenerative Diseases unit of the Instituto de Investigación Hospital 12 de Octubre (Madrid), at the Institute for Biological and Medical Imaging (IBMI) of the Helmholtz Zentrum München (Munich), and at the Instituto de Investigaciones Biomédicas Sols-Morreale (Madrid).

After completing her PhD, Susana worked at Dana-Farber Cancer Institute-Harvard Medical School (Boston), where she studied the pathogenic roles of oncogenic transcription factor STAT3 target genes.

Web: https://abg-ip.com/susana-egusquiaguirre/

LinkedIn: (48) Susana Egusquiaguirre, PhD | LinkedIn

Enara Herrán Martínez

LinkedIn: (48) Enara Herran Martinez | LinkedIn

Enara Herrán Martínez is Project Area Director at Additum – Valor en Salud, where she specialises in developing new healthcare models aimed at significantly improving the efficiency of care processes within the healthcare system.

She holds a Bachelor's degree in Pharmacy, two Master's degrees (in Pharmacology and in Clinical Research), and a PhD in Pharmacy from the University of the Basque Country, where her doctoral thesis focused on the development of micro- and nanoparticles as therapeutic tools for neurodegenerative diseases.

After completing her PhD in 2014, Dr. Herrán worked as a researcher and project coordinator in various institutions, including the University of the Basque Country, Biopraxis Research AIE, and the Biokeralty Research Institute, leading initiatives focused on chronic and neurodegenerative diseases.

Currently, her work at Additum is centred on designing new value-based healthcare models that integrate innovative digital technologies to optimise process efficiency and facilitate access to preventive, predictive, and personalised medicine.

She has led over 20 healthcare innovation projects, secured regional and European funding (including H2020, CDTI, and EIT Health), and actively collaborates with academic, clinical, and industrial stakeholders.

Dr. Herrán is the author of 17 scientific publications, holds a patent and an industrial secret, and remains strongly committed to improving patient health through innovative, technology-driven healthcare solutions.

Pablo Ortiz

ORCID: https://orcid.org/0000-0002-3954-5409

LinkedIn: linkedin.com/in/pablo-ortiz

Pablo Ortiz graduated with honors in Pharmacy from the University of the Basque Country (2012). He then obtained a Master's degree in Synthetic and Industrial Chemistry from the University of the Basque Country (2013).

After that, he moved to the Netherlands, where he obtained his PhD in Organic Chemistry from the University of Groningen (2017). That same year, he joined VITO (Belgian Institute for Technological Research), first as a postdoc and then as a researcher. He helped establish the biopolymer development group and was responsible for establishing and managing the VITO satellite laboratory at the Green Chemistry Campus (Netherlands).

In 2020, he joined Tecnalia as a project manager in the field of bio-based materials and CO2 capture and uses.

In 2023, he earned an MBA from the Open University of Catalonia. That same year, he was appointed to the board of directors of the European association promoting CO2 capture and utilization technologies, CO2 Value Europe.

He is a co-author of more than 25 scientific articles and six patents. Since 2025, he is a Venture Builder at Tecnalia, transferring the technology developed at the center to the market by creating new companies and businesses.