



## CURRICULUM VITAE ABREVIADO (CVA)

**IMPORTANT** – The Curriculum Vitae **cannot exceed 4 pages**. Instructions to fill this document are available in the website.

### Part A. PERSONAL INFORMATION

First name	Iñigo		
Family name	Lasa	Uzcudun	
Gender (*)		Birth date (dd/mm/yyyy)	
ID number			
e-mail	ilasa@unavarra.es	<a href="https://www.navarrabiomed.es/en/research/research-units/microbial-pathogenesis">https://www.navarrabiomed.es/en/research/research-units/microbial-pathogenesis</a>	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-6625-9221, Research ID: F-2947-2011 Scopus Author ID: 7003887382		

#### A.1. Current position

Position	Professor of Microbiology		
Initial date	23/02/2008		
Institution	Universidad Pública de Navarra		
Department/Center	Health Science	<a href="#">Navarrabiomed</a>	
Country	Spain	Teleph. number	
Key words	Microbial genetics, biofilms, recombinant DNA technology		

#### A.2. Previous positions (research activity interruptions, see call)

Period	Position/Institution/Country/Interruption cause
2015-2022	Director Navarrabiomed-FMS
2011-2013	Director of the Biotechnology Research center (Idab). Universidad Pública de Navarra/CSIC.
2009-2010	Visiting scientist. Cold Spring Harbor Laboratory. USA
1998-2008	Assistant Professor of Microbiology. Universidad Pública de Navarra
1995-1997	Postdoctoral fellowship. Marie Curie European postdoctoral Fellowship. Institut Pasteur.

#### A.3. Education

PhD, Licensed, Graduate	University/Country	Year
License in Biology	Universidad de Navarra	1988
PhD in Science	Universidad Autonoma de Madrid	1992

### Part B. CV SUMMARY (max. 5000 characters, including spaces)

I completed my undergraduate studies in Biological Sciences at the University of Navarra in 1988 and earned a PhD in Microbiology from the Center for Molecular Biology (CSIC-UAM) at the Autonomous University of Madrid in 1992. I subsequently spent three years conducting research in the laboratory of Professor Pascale Cossart at the Pasteur Institute, focusing on the genetics of *Listeria monocytogenes* actin-based motility. In 1997, I returned to Spain to join the Public University of Navarra (UPNA) in Pamplona as a professor of Microbiology. The following year, I was appointed Associate Professor and established my own laboratory at the Center for Agrobiotechnology, where my research focused on the genetics of bacterial biofilm formation. From 2010 to 2013, I served as Director of the Center. In 2008, I became a Full Professor of Microbiology at UPNA, and between 2015 and 2022, I was Director of Navarrabiomed, a newly established biomedical research institute in Pamplona. As a principal

investigator, I have led nine consecutive research projects funded by the Spanish Ministry of Economy, Industry, and Competitiveness, as well as five grants from the European Union's 6th, 7th, and Horizon Europe Framework Programmes. I have supervised 20 doctoral students and 12 postdoctoral researchers, several of whom now lead their own research groups. My laboratory is dedicated to studying the genetic mechanisms underlying biofilm formation in pathogenic bacteria. Currently, our work focuses on the global function of the two-component sensory network in *Staphylococcus aureus*, transcriptional gene regulation through overlapping mRNAs of adjacent genes, and the development of recombinant phages for therapeutic applications. Among our major scientific contributions are: (i) the identification of a family of proteins, termed Bap, that promote biofilm formation in various bacterial species through amyloid conformations; (ii) the demonstration that the two-component sensory system is dispensable for *S. aureus* growth under laboratory conditions; (iii) the discovery of a transcriptional control mechanism based on overlapping mRNAs processed by RNase III; and (iv) the identification of a novel bacterial gene organization, which we have termed the non-contiguous operon. Throughout my career, I have been deeply committed to translating scientific discoveries into tangible benefits for society. In 2011, I co-founded RECOMBINA S.L. (Pamplona), a biotechnology company specialising in customised genetic engineering services and the development of attenuated microorganisms for veterinary vaccine production.

## Part C. RELEVANT MERITS

### C.1. Publications

#### Top 10 publications as senior author (last 10 years).

1. Published articles in international peer-review journals: 132
  2. Times cited: >11000      Average citation/year: >700 (last 3 years)
  3. Publications with more than 100 citations: 30
  4. h-index: 56 (Web of Science) and 59 (Scopus)
1. García B, Conty A, Fernández-Celis A, Mouzo D, Gil C, Garmendia-Antoñana N, Navascues A, Ezpeleta C, Solano C, Pasquier I, Álvarez V, Sádaba R, Gómez D, López-Andres N, **Lasa I**. 2025. Dual transcriptomic profiling of *Staphylococcus aureus* endocarditis in a porcine model reveals strong parallels with human infection. **mBio** e0231625. 10.1128/mbio.02316-25
  2. Sanmartín Á, Iturbe P, Rodríguez-Beltrán J, **Lasa I**. 2025. ExcludonFinder: mapping transcriptional overlaps between neighboring genes. **Nucleic Acids Res** 53:gakf686.
  3. Rostøl JT, Quiles-Puchalt N, Iturbe-Sanz P, **Lasa I**, Penadés JR. Bacteriophages avoid autoimmunity from cognate immune systems as an intrinsic part of their life cycles. **Nature Microbiology**. 1–13. <https://doi.org/10.1038/s41564-024-01661-6>.
  4. Iturbe P, San Martín A, Hamamoto H, Marcet M, Gabaldón T, Solano C, and **Lasa, I.\*** Noncontiguous operon atlas for the *Staphylococcus aureus* genome. **µLife**. uqae007. <https://doi.org/10.1093/femsml/uqae007>.
  5. Dorado-Morales, P., Garcillán-Barcia, M. P., **Lasa, I.\***, Solano, C. (2021) Fitness Cost Evolution of Natural Plasmids of *Staphylococcus aureus*. **mBio** 12, Doi: <https://doi.org/10.1128/mBio.03094-20>.
  6. Ma J, Cheng X, Xu Z, Zhang Y, Valle J, Fan S, Zuo X, **Lasa I**, Fang X. 2021. Structural mechanism for modulation of functional amyloid and biofilm formation by Staphylococcal Bap protein switch. **EMBO J**. e107500. Doi: 10.15252/embj.2020107500
  7. Rapun-Araiz, B., Haag, A.F., De Cesare, V., Gil, C., Dorado-Morales, P., Penadés, J.R., and **Lasa, I.\***. (2020) Systematic Reconstruction of the Complete Two-Component Sensorial Network in *Staphylococcus aureus*. **mSystems** 18;5(4):e00511-20. doi: 10.1128/mSystems.00511-20.
  8. Sáenz-Lahoya S, Bitarte N, García B, Burgui S, Vergara-Irigaray M, Valle J, Solano C, Toledo-Arana A, **Lasa I.\***. (2019). Noncontiguous operon is a genetic organization for coordinating bacterial gene expression. **PNAS** 116:1733–1738. doi: 10.1073/pnas.1812746116
  9. Villanueva M, García B, Valle J, Ruiz de los Mozos I., Solano C, Martí M., Penades J.R., Toledo-Arana A., **Lasa I.\***. 2018. Sensory deprivation in *Staphylococcus aureus*. **Nature Communications** 9(1):523. doi: 10.1038/s41467-018-02949-y.
  10. Echeverez M, García B, Sabalza A, Valle J, Gabaldón T, Solano C, **Lasa I.\***. (2017). Lack of the PGA exopolysaccharide in *Salmonella* as an adaptive trait for survival in the host. **PLoS Genetics** 13:e1006816. doi: 10.1371/journal.pgen.1006816.

## C.2. Congress (invited speaker)

- 2025 The new Microbiology. EMBO/FEMS lecture course. Spetses. Greece
- 2024 Challenges and Solutions to the AMR Crisis. Singapore National Biofilm Consortium. Singapur
- 2022 The new Microbiology. EMBO/FEMS lecture course. Spetses. Greece.
- 2019 Gordon Research Conference “Staphylococcal diseases”. Barcelona.
- 2019 The Bacterial Cell Envelop: a 12-year-journey. Tubingen, Alemania
- 2019 The new Microbiology. EMBO/FEMS lecture course. Spetses. Greece.
- 2018 8th ASM Biofilms Congress. Washington.
- 2018 Ecole Polytechnique Federal de Lausanne (EPFL). Swiss.
- 2017 Bacterial Networks, BACNET17 EMBO conference.
- 2017 The new Microbiology. EMBO/FEMS lecture course. Spetses. Greece.
- 2015 7th ASM Conference on Biofilms. Chicago, USA.

## C.3. Research projects (last 5 years)

PID2020-113494RB-I00	Spanish ministry of Science and Technology	Noncontiguous operons: a new layer of gene regulation in bacteria	2021-2024	260.000€
VR 2022-00853	Research grant of Swedish Research Council	Strategies against antibiotic resistant biofilms in orthopaedic device-related infection	2023-2025	30.000€
VR 2022-00853	Research grant of Swedish Research Council	Strategies against antibiotic resistant biofilms in orthopaedic device-related infection	2023-2025	30.000€
VR 2022-00853	Research grant of Swedish Research Council	Strategies against antibiotic resistant biofilms in orthopaedic device-related infection	2023-2025	30.000€
RES 277E/2022	University and Innovation Department. Navarra Government	MEDicina PERSONALIZADA para el TRatamiento de la OBESIDAD (PC098-099)	2022-2024	249.901€
RES 157E/2024	University and Innovation Department. Navarra Government	"Microplásticos y microbiota en la salud cardiometabólica: soluciones BIOLógicas innovadoras para la DETECCIÓN y prevención de TOXICOS (BioDETOX)"	2024-2027	203.368€
PID2023-146076NB-I00	Ministry of Science, Innovation and Universities	Unraveling the principles governing the acquisition and adaptation of two-component sensory systems in bacteria (aaTC)	2024-2027	293.750€

101226717 (SHIELD)	HORIZON-TMA- MSCA-DN	Strategies for Healing Implant-associated infections and Enhancing Longevity in Devices	2025-2029	282.188€
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#### C.4. Contracts, technological or transfer merits

2013- Founder of the spin-off company RECOMBINA S.L., I am currently partner and scientific advisor of the company (<https://www.recombina.com/en/services/>).

#### Patents

1. Inventors: Jose Fernando Morán Juez, Javier Buezo Bravo, Pedro Lopez Gomez, Alfonso Cornejo Ibergallartu, Victor Martínez Merino, Ignacio Encío Martinez, **Iñigo Lasa**

Title: Aldoximes as NO donors, and their uses as plant architecture modifiers and in therapy

Number: PCT/EP2023/071478

Priority countries:      Date: 2023

Institution: UNIVERSIDAD PUBLICA DE NAVARRA

2. Inventors Maite Villanueva, Begoña García, Jaione Valle, José R. Penadés, Miguel Marti Jimenez, Alejandro Toledo-Arana, e **Iñigo Lasa**

Title: Novel strains of Staphylococcus aureus and uses thereof

Number: PCT/ES2015/070636

Countries: USA (15/755,531), UE (EP15790164.6), Fecha de prioridad: August 26th, 2015

Institution: UNIVERSIDAD PUBLICA DE NAVARRA

Patent holder: RECOMBINA S.L.

#### Scientific Committees and organization of international meetings

2008 - 2011      Member in the biomedicine area of ANEP

2013 - 2018      Head of the Management Board (MB) of the Biotechnology grant program of the Spanish Ministry

2018 - 2023      Member of the International Advisory Board of the National Biofilms Innovation Center (England)

2019 - 2020      Member of the Scientific Advisory Board of the Microbiology Department at the Pasteur Institut.

2019 -              Member of the editorial board of Biofilms journal

2019 -              Member of the editorial board of  $\mu$ Life journal

2022 -              Associate Editor NPJ Biofilms and Microbiomes

2022-              Member of the Scientific Advisory Board, Max Planck Research Unit for the Science of Pathogens.

2023-              Member of the Evaluation Committee for ERC Consolidator Grants

2024 -              President of the International Advisory Board of the National Biofilms Innovation Center (England)

#### Prizes/Academic memberships

2005              “Jaime Ferran” award. Sociedad Española de Microbiología. Spain

2005              2005 Research award on Basic Science of the Public University of Navarra. Spain

2006              ERANET Pathogenomics prize to the best thesis: Alejandro Toledo-Arana

2008              ERANET Pathogenomics prize to the best thesis: Cristina Latasa Osta

2019 -              Elected member of the European Academy of Microbiology (EAM/FEMS)

