

Part A. PERSONAL INFORMATION		CV date	03/09/2018
First and Family name	JOSE LUIS PEDRAZ MUÑOZ		
Social Security, Passport, ID number	08100938Q	Age	59
Researcher numbers	Researcher ID		
	Orcid code	0000-0002-3938-2267	

A.1. Current position

Name of University/Institution	UPV/EHU		
Department	Pharmacy and Food Science		
Address and Country	Calle Paseo de la Universidad 7 01006 Vitoria/Gasteiz		
Phone number	653593042	E-mail:	jose Luis.pedraz@ehu.eus
Current position	University Professor	From	1-02-1992
Espec. cód. UNESCO	3209		
Palabras clave	Nanomedicine, Drug Delivery, Nanovaccines, Nanocarriers, Gene therapy, tissue engineering		

A.2. Education

PhD	University	Year
Degree in Pharmacy	Salamanca	1981
Doctorate in Pharmacy	Salamanca	1986

A.3. JCR articles, h Index, thesis supervised...

Number of research six-year periods: 5 (Five) . Date of last six-year period: 2013

Number of doctoral theses conducted in the last 10 years: 10 (ten), including 9 international theses with 4 extraordinary doctoral awards. I am currently directing 12 doctoral theses.

Index H: 46 (Scopus), 54 (Google Scholar)

Last 10 years publications: 158

Total citations: 7,350 (Scopus), 10,264 (Google Scholar)

Last 5 years quotes: 3411 (Scopus), 5687 (Google Scholar)

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Degree and doctorate in pharmacy from the University of Salamanca. Professor at the University of Salamanca, until 1992, and professor at the University of the Basque Country since 1992. Postdoctoral stay in the Department of Neonatal Pharmacology at the Mario Negri Institute in Milan in 1986. I completed my training in R&D departments of multinational pharmaceutical companies such as UPJOHN and Merrell Down Research Institute in 1989. I am a principal researcher in the NanoBioCel group of the UPV/EHU, which is a Consolidated Group of Excellence type A of the Basque Government. This research group belongs to the Ciber bbn of the Carlos III Health Institute. Within CIBER BBN, I am the head and director of the medicine formulation laboratory that belongs to the singular scientific infrastructure (ICTS) Nanbiosis. Founder and director of the Pharmaceutical Development Unit of the Basque Country currently TECNALIA Pharma Labs integrated in the Tecnalia Corporation within a joint project with the UPV/EHU of which I am scientific director. TECNALIA Pharma Labs is a Contract Manufacturing and Development Organisation (CDMO) that offers high quality services under a solid quality system, with more than two decades at the service of the pharmaceutical industry.

My research work focuses on the area of Drug Delivery, specifically on the design and development of particular micro systems, non-viral vectors for gene therapy, micro encapsulation of cells for the development of bioartificial organs and scaffolds and 3d bioprinting techniques with applications in cell therapy and generative medicine.

These works have been reflected in my publications: I have edited two books and I am the author of more than 300 international scientific articles and book chapters with more than 10,000 citations (Factor H: 54). I have participated as PI or project coordinator in more than 50 projects financed by public bodies (UPV/EHU, Basque Government, Ministry of Education, Ministry of Industry, Ministry of Health and European Union). Wide trajectory of collaboration in projects with companies with which he has obtained an economic return for the University throughout his professional trajectory superior to 5.000.000 €. As a result of this collaboration, more than 10 patents have been published.

I have directed more than 27 doctoral theses, the majority of which are international theses with 6 Extraordinary Doctoral Prizes. I have been responsible for doctoral programs since 1992, some of them with a mention of quality.

Referee of indexed journals and project evaluator of ANEP, regional, European and South American agencies. Find out more:

- 1) <https://www.ehu.eus/es/web/nanobiocel/home>
- 2) <http://www.nanbiosis.es/portfolio/u10-drug-formulation/>
- 3) <https://www.tecnalia.com/es/servicios-tecnologicos/servicios-por-industria/servicios-por-industria.htm#farmacia-salud>

Part C. RELEVANT MERITS

C.1. Publications (including books)

Artículos de Gene therapy

- 1.-Attia N, Mashal M, Grijalvo S, Eritja R, Zárata J, Puras G, **Pedraz JL**. Stem cell-based gene delivery mediated by cationic niosomes for bone regeneration. *Nanomedicine*. 2018 Feb;14(2):521-531
- 2.-Villate-Beitia I, Gallego I, Martínez-Navarrete G, Zárata J, López-Méndez T, Soto-Sánchez C, Santos-Vizcaíno E, Puras G, Fernández E, **Pedraz JL**. Polysorbate 20 non-ionic surfactant enhances retinal gene delivery efficiency of cationic niosomes after intravitreal and subretinal administration. *Int J Pharm*. 2018 Sep 7;550(1-2):388-397
- 3.-Villate-Beitia I, Puras G, Soto-Sánchez C, Agirre M, Ojeda E, Zarate J, Fernández E, **Pedraz JL**. Non-viral vectors based on magnetoplexes, lipoplexes and polyplexes for VEGF gene delivery into central nervous system cells. *Int J Pharm*. 2017 Apr 15;521(1-2):130-140.
- 4.-Mashal M, Attia N, Puras G, Martínez-Navarrete G, Fernández E, **Pedraz JL**. Retinal gene delivery enhancement by lycopene incorporation into cationic niosomes based on DOTMA and polysorbate 60. *J Control Release*. 2017 May 28;254:55-64.
- 5.-Ojeda E, Puras G, Agirre M, Zarate J, Grijalvo S, Eritja R, Martínez-Navarrete G, Soto-Sánchez C, Díaz-Tahoces A, Avilés-Trigueros M, Fernández E, **Pedraz JL**. The influence of the polar head-group of synthetic cationic lipids on the transfection efficiency mediated by niosomes in rat retina and brain. *Biomaterials*. 2016 Jan;77:267-79.
- 6.-Ojeda E, Puras G, Agirre M, Zarate J, Grijalvo S, Eritja R, DiGiacomo L, Caracciolo G, **Pedraz JL**. The role of helper lipids in the intracellular disposition and transfection efficiency of niosome formulations for gene delivery to retinal pigment epithelial cells. *Int J Pharm*. 2016 Apr 30;503(1-2):115-26.
- 7.-Agirre M, Ojeda E, Zarate J, Puras G, Grijalvo S, Eritja R, García del Caño G, Barrondo S, González-Burguera I, López de Jesús M, Sallés J, **Pedraz JL**. New Insights into Gene Delivery to Human Neuronal Precursor NT2 Cells: A Comparative Study between Lipoplexes, Nioplexes, and Polyplexes. *Mol Pharm*. 2015 Nov 2;12(11):4056-66.
- 8.-Puras G, Martínez-Navarrete G, Mashal M, Zárata J, Agirre M, Ojeda E, Grijalvo S, Eritja R, Díaz-Tahoces A, Avilés-Trigueros M, Fernández E, **Pedraz JL**. Protamine/DNA/Niosome Ternary Nonviral Vectors for Gene Delivery to the Retina: The Role of Protamine. *Mol Pharm*. 2015 Oct 5;12(10):3658-71.
- 9.-Ochoa GP, Sesma JZ, Díez MA, Díaz-Tahoces A, Avilés-Trigueros M, Grijalvo S, Eritja R, Fernández E, **Pedraz JL**. A novel formulation based on 2,3-di(tetradecyloxy)propan-1-amine cationic lipid combined with polysorbate 80 for efficient gene delivery to the retina. *Pharm Res*. 2014 Jul;31(7):1665-75.

10.-Puras G, Mashal M, Zárata J, Agirre M, Ojeda E, Grijalvo S, Eritja R, Diaz-Tahoces A, Martínez Navarrete G, Avilés-Trigueros M, Fernández E, **Pedraz JL**. A novel cationic niosome formulation for gene delivery to the retina. J Control Release. 2014 Jan 28;174:27-36.

C.2. Research projects and grants

- 1) Project Title: **Aid to support the activities of research groups in the Basque university system Consolidated Groups (No Ref: IT428-10)**. Finance: Basque Government. Duration: 2010-2015. Funding received: € 882,000. IP: Jose Luis Pedraz Muñoz.
- 2) Project Title: **Aid to support the activities of research groups in the Basque university system Consolidated Groups (No Ref: IT907-16)**. Financed by: Basque Government. Duration: 2016-2021. Funding received: €623,600. IP: Jose Luis Pedraz Muñoz.
- 3) European Project Title: **"Benznidazol and Triazol Research Group for nanomedicine and Innovation on Chagas disease -BERENICE-. Proposal No 305937-1 FP7 Health 2012. Funding: EUROPEAN COMMUNITY (FP7, HEALTH PROGRAM). Proposal No 305937-1 FP7 Health 2012**. Funding Received: (288,635 €) Duration: 1/11/2012-12/31/2017. IP Partner: Jose Luis Pedraz.
- 4) European Project Title: **Diabetes reversing implants with enhanced viability and long-term efficacy-DRIVE-. Proposal No: 645991-2**. IP Partner: Jose Luis Pedraz. Funding: EUROPEAN COMMUNITY H2020- NMP-10-2014: Biomaterials for the treatment of Diabetes Mellitus. Financing Received: 550,000 € (total amount received: €8, 832,061.50). Duration: 2015-2018.
- 5) European Project Title: **"A pilot line for the next generation of smart catheters and implants"-POSITION II. ECSEL Electronic Components and Systems for European Leadership. Proposal No: 2017-2-783132**. IP Partner: Jose Luis Pedraz. Funding: European Union/Ministry of Economy and Competitiveness Spain Financing received: 250,000 €. Duration: 2018- 2021
- 6) Project Title: **Nanoencapsulated Neurotrophic Factors and gene therapy for the treatment of neurodegenerative diseases using less invasive pathways. NANOTEG. SAF2013-42347-R**. MAIN RESEARCHER: Jose Luis Pedraz and Rosa Maria Hernandez. Funding: Ministry of Economy and Competitiveness (Call: Research Challenges 2013). Funding received: 242,000 €.
- 7) Project title: **Nano lipidic solid particles for subcutaneous administration of marine anti-tumour compounds UNDERLIPIDS (RTC-2015-3301-1)** (Pharmamar S.A).IP: Jose Luis Pedraz. Funding: Ministry of Economy and Competitiveness. Funding: 250,433, 72 €. Duration: 2015-2018.

C.3. Contracts

- **Development of formulations for oral administration of low molecular weight heparins. ROVI s.a. Laboratories FROM: 2006 TO: 2009. 400.000 €**
- **Parental Release Systems Depot. Laboratorios Liconsa S.A. FROM: October 2011 TO: October 2012. AMOUNT: 162.380,00 €.**
- **Development of a new advanced therapy product for the regeneration and reconstruction of the ocular surface in the Eye-Scaff project. Clinical studies of the selected product. Ferrer Internacional S.A.FROM: January 2013 TO: December 2013. 48.400 €**
- **Contract for the performance of repetitive technical services for quantification studies of drugs in biological fluids and pharmacokinetics. Tecnalía. FROM: 2011 TO: Present. 600,000 €**
- **Contract for the performance of repetitive technical services for galenic development studies. Tecnalía. FROM: 2011 TO: News. 900,000 €**

C.4. Patents

1) Perona Rosario, Pedraz Jose Luis, Hernandez Rosa, Igartua Manuela, Eguskiaguirre Susana, Manguan Cristina. Bionanoparticles biodegradable for the release of peptide GSE24-2, procedure for obtaining and use. P201330131.BIOMEDICAL RESEARCH

CENTRE IN NETWORK OF RARE DISEASES (CIBERER) (5%), SUPERIOR COUNCIL OF SCIENTIFIC RESEARCH (CSIC) (22,5%), AUTONOMOUS UNIVERSITY OF MADRID (22,5%), UNIVERSITY OF THE BASQUE COUNTRY (50%). COMPANY/S THAT ARE EXPLOITING IT: Advanced Medical Projects, S.L

2)Gainza Eusebio, Del Pozo Angel, Gainza Garazi, Ibarrola Oihane, Villullas Silvia, Fernandez Raul, Bachiller Daniel, Pedraz Jose Luis, Esquisabel Amaia, Pastor Marta, Fuste Ester, Sans Eulalia, Gil Iraida. Nanoparticle Lipidica Polimixica. EP13382268.4. Biopraxis Research AIE, Praxis Pharmaceutical S.A, Fundacio D 'Investigacio Sanitaria de les Illes Balears, Universidad del Pais Vasco/Euskal herriko Unibertsitatea, Universidad de Barcelona.

3)Gainza Eusebio, Del Pozo Angel, Alonso Gorka, Gainza Garazi, Ibarrola Oihane, Villullas Silvia, Pedraz Jose Luis, Pastor Marta, Igartua Manuela, Hernandez Rosa. Lipid nanoparticles for wound healing. EP13382275.9. Biopraxis Research AIE, Praxis Pharmaceutical S.A, Fundacio D 'Investigacio Sanitaria de les Illes Balears, Universidad del Pais Vasco/Euskal herriko Unibertsitatea, Universidad de Barcelona.

4)Gainza Eusebio, Villullas Silvia, Ibarrola Oihane, Gainza Garazi, Herrán Enara, Aguirre Jose, Del Pozo Angel, Pedraz Jose Luis, Esquisabel Amaia, Moreno María, Viñas Miguel, Vinuesa Teresa, Pastor Marta, Bachiller Daniel. Lipid Nanoparticle of Tobramicina. P201431894. Biopraxis Research AIE, Praxis Pharmaceutical S.A, Fundacio D'Investigacio Sanitaria de les Illes Balears, Universidad del Pais Vasco/Euskal herriko Unibertsitatea, Universidad de Barcelona, Consejo Superior de Investigaciones Científicas.

C.5, C.6, C.7... (e. g., Institutional responsibilities, memberships of scientific societies...)

Member of the Spanish Society of Industrial and Galenic Pharmacy. Member of the Controlled Release Society. President of International Scientific Societies:

President of the Controlled Release Society. Spanish-Portuguese Chapter 1998-2000.

Founder, Coordinator and Director of the Pharmaceutical Development Unit (UDF) of the Basque Country. 1996-present TECNALIA Pharma Labs

Journal of Pharmaceutics. Journal of Pharmaceutical Sciences. Biomacromolecules. Journal of Cellular and Molecular Medicine. Vaccine. Journal Controlled Release

Scientific and Technical Advisor of National and International Pharmaceutical Laboratories:

Scientific Advisor of the Cluster of Oftalmology and Vision Sciences of Spain since September 2012 <http://www.cluster4eye.com/>

Director of the Consolidated and High Performance Research Group of the UPV/EHU: NanoBioCel

Director of the Drug Formulation Unit, ICTS Nanbiosis

Member of the Ibero-American Academy of Pharmacy since 2009

Member of the Royal National Academy of Pharmacy since 2013

XIII Burdinola Research Prize 2007. Annual Prize of the Academy of Sciences of Cuba 2008.

Asedef 2009 Award (Spanish association of pharmaceutical law) in the category of innovation. Best paper award 2013. European Journal of Pharmaceutics and bBopharmaceutics. V Premio sefig

Responsible for PhD programmes: Pharmacy and food sciences (1992-1996), Drug evaluation and research (1995-2001), New advances in nutrition, food science and technology and drug evaluation and research (2001-2005), Drug evaluation and research (2005-2008) (quality mention by the Ministry of Education and Science), Drug evaluation and research (2008-2013) (quality mention by the Ministry of Education and Science), Drug research and evaluation. Application of Pharmaceutical Technology to the development of advanced therapies (2013-present)