Part A. PERSONAL INFORMATION

CV date	12/03/2022

First and Family name	Álvaro Somoza Calatrava		
Social Security, Passport, ID number	50857023K	Age	46
Researcher numbers	Researcher ID	F-8781-2010	
	Orcid code	0000-0001-9873-435X	

A.1. Current position

Name of University/Institution	Fundación IMDEA Nanociencia			
Department	Nanomedicine			
Address and Country	Faraday 9, 28049, Madrid, Spain			
Phone number	912998856	E-mail	alvaro.somoza@imdea.org	
Current position	Research Professor		From	2009
Espec. cód. UNESCO	230600, 230223			
Palabras clave	Nanomedicine, Drug Delivery, Cancer, Oligonucleotides, CRISPR			

A.2. Education

PhD	University	Year
Chemistry	Autónoma de Madrid	2004

A.3.

Articles: 63
Citations: 1790
Citations/year (last 5 years) (2021-2017): 280
H-index: 24
Thesis ongoing: 6
Thesis supervised: 5
Databases used: Google Scholar (Link); Publons (Link); Scopus ID: 7005108173 (Link); SciProfiles: 472025 (Link)

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

Álvaro Somoza obtained his Ph.D. at the Universidad Autónoma de Madrid in the group of Prof. Carmen Carreño focused on the total synthesis of natural compounds. Then, he joined the group of Prof. Eric T. Kool at Stanford University where he worked on the preparation of modified ribonucleosides to study the role of hydrogen bonding interactions between RNA strands in RNA interference. Later on, he moved back to Spain and joined the group of Prof. Ramón Eritja at the Institute for Research in Biomedicine Barcelona. There, he studied the interaction of hydrophobic moieties in RNA derivatives with protein complexes involved in the RNA interference process. In 2009 he joined IMDEA Nanociencia and in 2014 was promoted to Research Professor. His research projects are focused on the use of modified oligonucleotides and nanostructures in diverse applications such as the preparation of smart nanomaterials to detect and treat different diseases such as uveal melanoma, pancreatic cancer or Duchenne Muscular Dystrophy. He is the Principal Investigators of different nanomedicine projects funded by European, National, and private organizations.
Group Web: www.nanobioimdea.com
Nocanther Project Web: www.nocather-project.eu
NanomiR Project Web: www.nanomir-project.eu
Twitter: @alvarosomoza
Outreach activities: Lab24 RTVE, TVE News, EuropaPress, ElMundo , RNE

Part C. RELEVANT MERITS

C.1. Selected Publications as Corresponding Author.

1. Lafuente-Gómez, N.; Milán-Rois, P.; García-Soriano, D.; Luengo, Y.; Cordani, M.; Alarcón-Iniesta, H.; Salas, G.; **Somoza, Á**. Smart Modification on Magnetic Nanoparticles Dramatically Enhances Their Therapeutic Properties. *Cancers (Basel).* **2021**, *13* (16), 4095. https://doi.org/10.3390/cancers13164095.

2. Vegas, V. G.; Latorre, A.; Marcos, M. L.; Gómez-García, C. J.; Castillo, Ó.; Zamora, F.; Gómez, J.; Martínez-Costas, J.; Vázquez López, M.; **Somoza, Á**.; Amo-Ochoa, P. Rational Design of Copper(II)–Uracil Nanoprocessed Coordination Polymers to Improve Their Cytotoxic Activity in Biological Media. *ACS Appl. Mater. Interfaces* **2021**, *13* (31), 36948–36957. https://doi.org/10.1021/acsami.1c11612.

3. Prajapati, R.; Garcia-Garrido, E.; **Somoza, Á**. Albumin-Based Nanoparticles for the Delivery of Doxorubicin in Breast Cancer. *Cancers (Basel).* **2021**, *13* (12), 3011. https://doi.org/10.3390/cancers13123011.

4. Latorre, A.; Latorre, A.; Castellanos, M.; Lafuente-Gómez, N.; Diaz, C. R.; Crespo-Barreda, A.; Lecea, M.; Cordani, M.; Martín-Duque, P.; **Somoza, Á**. Albumin-Based Nanostructures for Uveal Melanoma Treatment. *Nanomedicine Nanotechnology, Biol. Med.* **2021**, *35*, 102391. https://doi.org/10.1016/j.nano.2021.102391.

5. Milán-Rois, P.; Quan, A.; Slack, F. J.; **Somoza, Á.** The Role of LncRNAs in Uveal Melanoma. *Cancers (Basel).* **2021**, *13* (16), 4041. https://doi.org/10.3390/cancers13164041.

6. Prajapati, R.; **Somoza, Á**. Albumin Nanostructures for Nucleic Acid Delivery in Cancer: Current Trend, Emerging Issues, and Possible Solutions. *Cancers (Basel).* **2021**, *13* (14), 3454. https://doi.org/10.3390/cancers13143454.

7. Cordani, M.; Resines-Urien, E.; Gamonal, A.; Milán-Rois, P.; Salmon, L.; Bousseksou, A.; Costa, J. S.; **Somoza, Á**. Water Soluble Iron-Based Coordination Trimers as Synergistic Adjuvants for Pancreatic Cancer. *Antioxidants* **2021**, *10* (1), 66. https://doi.org/10.3390/antiox10010066.

8. Romero-Pérez, S.; López-Martín, I.; Martos-Maldonado, M. C.; **Somoza, Á**.; González-Rodríguez, D. Synthesis of Phosphoramidite Monomers Equipped with Complementary Bases for Solid-Phase DNA Oligomerization. *Org. Lett.* **2020**, *22* (1), 41–45. https://doi.org/10.1021/acs.orglett.9b03801.

9. Latorre, A.; Latorre, A.; Castellanos, M.; Rodriguez Diaz, C.; Lazaro-Carrillo, A.; Aguado, T.; Lecea, M.; Romero-Pérez, S.; Calero, M.; Sanchez-Puelles, J. M.; Villanueva, Á.; **Somoza, Á.** Multifunctional Albumin-Stabilized Gold Nanoclusters for the Reduction of Cancer Stem Cells. *Cancers (Basel).* **2019**, *11* (7), 969. https://doi.org/10.3390/cancers11070969.

10. Vegas, V. G.; Lorca, R.; Latorre, A.; Hassanein, K.; Gómez-García, C. J.; Castillo, O.; **Somoza, Á**.; Zamora, F.; Amo-Ochoa, P. Copper(II)-Thymine Coordination Polymer Nanoribbons as Potential Oligonucleotide Nanocarriers. *Angew. Chemie Int. Ed.* **2017**, *56* (4), 987–991. https://doi.org/10.1002/anie.201609031.

C.2. Research projects and grants

1. Title: Herramientas nanobiotecnológicas para detección y tratamiento de enfermedades raras: cáncer pancreático, melanoma de úvea y distrofia muscular de Duchenne. (PID2020-119352RB-I00)
Funding Agency: Ministerio de Economia, Industria y Competitividad.

PI: Álvaro Somoza & Begoña Sot
Duration: 2021-2023
Budget: 181.500,00 €

2. Title: Nanoestructuras inteligentes contra el melanoma de úvea y el cáncer de páncreas (SAF2017-87305-R)
Funding Agency: Ministerio de Economia, Industria y Competitividad.
PI: Álvaro Somoza & Begoña Sot
Duration: 01/01/2018-31/12/2020
Budget: 121.000 €

3. Title: Preparación y Escalado de Nanopartículas Modificadas Bajo Estándares Farmacéuticos (IND2017/IND-7809)
Funding Agency: Comunidad de Madrid (Doctorado Industrial)
PI: Álvaro Somoza
Duration: 01/01/2018-31/12/2020
Budget: 77.500 €

4. Title: MicroRNA based nanotherapies for the detection and treatment of muscular diseases
Funding Agency: Eranet/Euronanomed (H2020)
PI: Álvaro Somoza
Duration: 01/12/16- 30/11/19
Budget: 93.000 euros

5. Title: Nanomedicine Upscaling for Early Clinical Phases of Multimodal Cancer Therapy
Funding Agency: European Commission (H2020)
PI: Álvaro Somoza & Rodolfo Miranda
Duration: 01/04/2016-31/03/2021
Budget: 665.000 € (Total Consorcio: 7.113.778,75)

6. Title: New approaches for the treatment and detection of Uveal Melanoma based on Functionalised Gold Nanoparticles
Funding Agency: Asociación Española Contra el Cáncer (AECC)
PI: Álvaro Somoza
Duration: 30/12/2015-29/12/2018
Budget: 69.000 €

7. Title: Design and evaluation of therapeutic agents and sensors based on non-coding RNAs and nanostructures
Funding Agency: Spanish Ministry of Economy and Competitiveness
PI: Álvaro Somoza
Duration: 01/01/2015-31/12/2017
Budget: 96.800 €

8. Title: Oligonucleotidos modificados en nanomedicina: deteccion de secuencias de acidos nucleicos e inhibicion de la expresion genica mediante arn interferente
Funding Agency: Dirección General de Investigación y Gestión del Plan Nacional de I+D+I
PI: Álvaro Somoza
Duration: 01/01/2011-31/12/2013
Budget: 40000 euros

C.3. Contracts with Companies

Research Contract: Development of linkers for the conjugation of oligonucleotides and other molecules
Company: SYLENTIS
PI: Álvaro Somoza
Duration: 02/09/2021-01/08/2022

Budget: 153.672,00 €

Research Contract: Development of new microRNA sensors.
Company: Rubió Laboratories
PI: Álvaro Somoza
Duration: 01/08/2014-31/10-2014
Budget: 19.206,33 €

C.4. Awards

- Second price (*accésit*) to the Best European Project of Madrid by *Premios Madri+D 2017*.
- Best dissemination activity on cancer by Spanish Society Against Cancer (aecc) 2018.

C.5. Patents

Title: Nanopartículas Metálicas Funcionalizadas Y Usos De Las Mismas Para La Detección De Ácidos Nucleicos
Inventors: Alfonso Latorre Lozano; Christian Posch; Susana Ortiz Urda; Alvaro Somoza Calatrava*
Institutions: FUNDACIÓN IMDEA NANOCIENCIA
Reference: EP14382033.0
Date: 31/01/2014

Title: Anticancer compositions containing mirna mimics and uses thereof
Inventors: Paula Milán Rois, Alfonso Latorre Lozano; Alvaro Somoza Calatrava*
Institution: FUNDACIÓN IMDEA NANOCIENCIA
Reference: EP18382676.7
Date: 20/09/2018

C.6 Organization of Scientific Events

Title: From Chemistry to Nanomedicine (XXXVII Meeting of the Spanish Royal Society of Chemistry)
Role: Organizer.
Place: San Sebastian, País Vasco, España
Dates: 28/05/2019

Title: XI Reunión de Ácidos Nucleicos y Nucleósidos (RANN) www.rann11.com
Role: Organizer.
Place: Madrid, Comunidad de Madrid, España
Dates: 03/07/2017 - 04/07/2017

Title: X Simposio de Investigadores Jóvenes RSEQ Sigma-Aldrich
Role: Organizer.
Place: Madrid, Comunidad de Madrid, España
Dates: 06/11/2013 - 11/2013

C.7 memberships of scientific societies

Controlled Release Society, European Society for Nanomedicine; British Society for Nanomedicine, International Society of Nucleosides, Nucleotides & Nucleic Acids; Grupo de Química Biológica-RSEQ; Real Sociedad Española de Química;