

<b>Section A. PERSONAL DATA</b>		<b>Date of the CVA</b>	21/11/2018
Name and Surname	Juan José Díaz Mochón		
DNI/NIE/passport		Age	
Researcher's identification number	Researcher ID	A-4297-2009	
	Código Orcid	000-0002-3599-1954	

### A.1. Current professional situation

Institution	Universidad de Granada		
Dpt. / Centre	Dep. de Química Farmacéutica y Orgánica (Facultad de Farmacia)& Centro de investigación Genyo		
Address	Edificio GENYO, Avda. de la Ilustración, 114, CP18016 GRANADA		
Phone	Email	juandiaz@ugr.es	
Professional category	Profesor Contratado Doctor indefinido (acreditado Prof. Titular) – Co-IP del grupo NANOCHEMPIO	Start date	17/01/2017
UNESCO spec. code	2302.91 Química de Macromoléculas Biológicas; 3312.99 Otras (Especificar) Biomateriales; 2409.93-1 Genética Molecular. Síntesis de Oligonucleótidos		
Keywords	Chemical Biology- Design of Chemical diagnosis platforms- High Throughput Screening- Peptide Chemistry- Mass spectrometry- Enzymatic assays- Cell-Based assays		

### A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Degree in Pharmacy	University of Granada	1996
PhD in Pharmacy	University of Granada	2001

### A.3. General quality indicators of scientific production

- **Research activity periods: Number of periods:** 3 (2000-2005; 2006-2011, 2012-2017). Date of the last period: 06/06/2018.
- **Citation metrics** Citations. All: 950. Last 5 years: 81.6. Publications in Q1: 49. Publications in Q1: 29 h-index=19

### Section B. SUMMARY OF THE CURRICULUM

Juan J. Díaz-Mochón holds a PhD in Pharmacy from the University of Granada. In 2002 he began a post-doctoral stay at the Combinatorial Center of Excellence in Southampton (England) which lasted until 2005. That year he joined the Mark Bradley Group as Senior Researcher at the University of Edinburgh (Scotland). In 2008, he obtained his first project as an IP that allowed him to develop the use of dynamic chemistry for reading DNA, being the inventor of the patent that protects this technology. In 2010 he founded DestiNA Genomics Ltd. in Scotland with the aim of exploiting this patent, being founding partner, CSO and Director. At the end of 2011, he joined the University of Granada as a Ramón y Cajal Researcher working in the NanoChemBio Research Group whose research laboratory is located in the GENYO Center located in the Health Sciences Technology Park (PTS). Pomegranate. As of 2017, he occupies a position as an indefinite hired doctor with accreditation as a full professor. The NanoChemBio research group will be involved. In this field, he coordinates several multidisciplinary and intersectoral projects focused on the development of chemical and biotechnological platforms, such as the development of new diagnostic tools based on nucleic acid detection, SMART biomaterials for cellular and protein modulation, and the design and synthesis of enzymatic inhibitors as antitumor agents. and antiparasitics, preparation of molecular sensors for the detection and molecular characterization of CTCs for the

prognosis and diagnosis of cancer. In 2012, he helped incorporate DestiNA Genómica S.L. in Spain as a subsidiary of the Scottish company. DestiNA successfully closed a capital increase of € 1.2m in July 2015. Dr. Diaz Mochón is a member of the organizing committee of the First International Symposium on LIQUID BIOPSIES 2016 and co-founder of the International Society of Liquid Biopsy.

## Section C. MOST RELEVANT MERITS (ordered by typology)

### C.1. Publications

56 Publications in scientific journals indexed in JCR of SCI (Q1): 49. (D1): 29. 53 original articles and 3 reviews. First author of 7 articles and corresponding author of 16 articles.

1) Marin-Romero, A; Robles-Remacho, A; Tabraue-Chavez, M; Lopez-Longarela, B; Sanchez-Martin, RM; Guardia-Monteagudo, JJ; Fara, MA; Lopez-Delgado, FJ; Pernagallo, S; **Diaz-Mochon, JJ\***. A PCR-free technology to detect and quantify microRNAs directly from human plasma. *Analyst* 2018, 143, 5676-5682. 5-Year JCR Impact Factor: 3.791. Chemistry Analytical 12/81, Q1.

2) Rissin DM, López-Longarela B, Pernagallo S, Ilyine H, Vliegenthart ADB, Dear JW, **Diaz-Mochon, JJ,\*** Duffy, DC\* Polymerase-free measurement of microRNA-122 with single base specificity using single molecule arrays: Detection of drug-induced liver injury, *PLoS ONE*, 2017, e0179669 (doi.org/10.1371/journal.pone.0179669).

3) Luque-González, MA; Tabraue-Chávez, M; López-Longarela, B; Sánchez-Martín, R.M; Ortiz-González, M; Soriano-Rodríguez, M; García-Salcedo, J; Pernagallo, S; **Díaz-Mochón, JJ\***. Identification of Trypanosomatids by detecting Single Nucleotide Fingerprints using DNA analysis by dynamic chemistry with MALDI-ToF. *Talanta*, 2018, 176, 299-307. 5-Year JCR Impact Factor: 3.937. Chemistry Analytical 10/81, Q1.

4) Altea-Manzano P; Unciti-Broceta JD; Cano-Cortes V; Ruiz-Blas MP; Valero-Griñan T; **Diaz-Mochon JJ**; Sanchez-Martin R\*. Tracking cell proliferation using a nanotechnology-based approach, *Nanomedicine*, 2017. 12, 1591-1605. 5-Year JCR Impact Factor: 5.613. Biotechnology & Applied Microbiology 21/160, Q1.

5) Unciti-Broceta, JD; Cano-Cortés, V; Pernagallo, S; **Díaz-Mochón, JJ**; Sánchez-Martín, RM.\* Number of Nanoparticles per Cell through a Spectrophotometric Method - A key parameter to Assess Nanoparticle-based Cellular Assays. *Scientific Reports*, 2015, 5, 10091. 5-Year Impact Factor 5.525. Multidisciplinary Chemistry. 7/63 Q1.

6) Ortega, FG; Lorente, JA; Garcia-Puche, JL; Ruiz, MP; Sanchez-Martin, RM; Miguel-Perez, D; **Diaz-Mochon, JJ\***; Serrano, MJ.\* miRNA in-situ hybridization in circulating tumor cells – MishCTC. *Scientific Reports*, 2015, 5, 9207 5-Year Impact Factor 5.525. Multidisciplinary Chemistry. 7/63 Q1.

7) M. Conejero-Muriel, J. A. Gavira,\* E. Pineda-Molina, A.Belsom, M. Bradley, M.Moral,J. .D. García-López Durán,.A. Luque González,.J. J. **Díaz-Mochón,\*** R.Contreras-Montoya,.Á. Martínez-Peragón,.J. M. Cuerva, L. Álvarez deCienfuegos\*, Influence of the Chirality of Short Peptide Supramolecular Hydrogels in ProteinCrystallogenes, *Chem. Comm.*, 2015, 51, 3862-3865. (5-Year Impact Factor 6.779- Q1-D1- Multidisciplinary Chemistry)

8) Pineda de las Infantas y Villatoro,M.J., Unciti-Broceta,J.D., Garcia-Salcedo, J.A.,Gallo Mezo,M.A., Unciti-Broceta,A. **Diaz-Mochon, J.J.\***. Amide-controlled, one-pot synthesis of tri-substituted purines generates structuraldiversity and analogues with trypanocidal activity, *Scientific Reports*, 2015, 5 DOI:10.1038/SREP09139 (5-Year Impact Factor 5.597- Q1-D1 Multidisciplinary Chemistry).

9) Unciti-Broceta, A.; **Díaz-Mochón, J. J.**; Sanchez-Martin, R.; Bradley, M. Título: The Use of Solid Supports to Generate Nucleic Acid Carriers Revista : *Accounts of Chemical Research* Volumen: 45 Páginas, inicial: 1140 final: 1152 Fecha: **2012** (5 – Year Impact Factor 26.02 CHEMISTRY, MULTIDISCIPLINARY Q1).

**C.2. Participation in R&D and Innovation projects:** Dr. Diaz Mochon has participated in 20 research projects obtained in competitive programs of the European Union (3),

National Plans of the United Kingdom (4) and Spain (2), in regional calls - Junta de Andalucía (1) and at the level from the University of Granada (8) as well as competitive calls for private entities - Ramon Areces Foundation - (1) and Caixa (1). The most relevant are:

**1. NANOTOF: A new tool for liquid biopsies - Integrating nanotechnology and dynamic chemistry for nucleic acid testing by mass cytometry.** BIO2016-80519-R; IP1: Rosario M. Sánchez Martín-IP2: **Juan José Díaz Mochón**. Ministerio de economía y competitividad. Duración: 30/12/2016-29/12/2019. Cuantía: 140.000 €.

**2. Nano3Devices: Nanosistema multifuncionalizado con aplicación teranóstica en cáncer.** DTS18/00121. IP: Rosario M. Sánchez Martín. Universidad de Granada. Instituto de Salud Carlos III. Convocatoria: Proyectos de desarrollo tecnológico en salud. Duración: 01/01/2019-31/12/2020. Cuantía: 78.650 €. Tipo de participación: Investigador equipo

**3. Implementation of a novel integrated platform to monitor tumour heterogeneity as a crucial determinant for individualized diagnostic and therapeutic outcome.** PIE16/00045 IP: Juan Antonio Marchal. Universidad de Granada. Instituto de Salud Carlos III. Duración: 01/01/2017-31/12/2019. Cuantía: 493.625 €. Tipo de participación: Investigador equipo

**4. Desarrollo de la Plataforma NanoChem-ISH. Plataforma de Alta Especificidad y Sensibilidad para la detección in-situ de ARN en tejidos usando Nanopartículas y Química Dinámica.** BIO-1778. IP: **Juan José Díaz Mochón**. Junta de Andalucía-Consejería de Economía, Innovación y Ciencia. Proyecto de investigación de excelencia- Proyecto motriz y de innovación. Duración: 01/05/14-30/09/18; Cuantía de la subvención: 129.000 €. Tipo de participación: IP

**5. Título: Reliable Novel Liquid Biopsy technology for early detection of colorectal cancer (Liqbiopsens).** Call: H2020-ICT-2015, Topic: ICT-28-2015, Proposal number: 687785; Entidad financiadora: European Union H2020; Entidad de afiliación: Servicio Andaluz de Salud (FIBAO), Destina Genomics Ltd, Advance Wave Sensors S.L., Foundation for research and technology Hellas, BeAble S.L., Université catholique de Louvain. Duración: 01/01/2016 - 31/12/2018; Total Funding: 2307200,63 EUR - WP SAS (FIBAO) funding: 433750,00 €; Investigador responsable: WP SAS IPs: MJ Serrano y J.L. García Puche; Tipo de participación: investigador equipo.

**6. Integrating Nanotechnology with Dynamic Chemistry for Fluorescence in-situ micro-RNA Analysis.** CTQ2012-34778 IP: **Juan José Díaz Mochón**. Entidad financiadora: Ministerio de Economía y Competitividad – Proyectos de Investigación Fundamental no orientada. Duración: 01/01/2013-31/12/2015; Cuantía: 120.000 €. Tipo de participación: investigador equipo.

**7. Título: CHEMiRNA: chemical-based platforms for micro-RNA detection. Towards novel oncomiR assays.** Referencia: FP7-PEOPLE-2012-CIG; Entidad financiadora: Unión Europea; Entidad de afiliación: Univ. Granada; Duración: 01/10/2012 - 30/09/2016; Cuantía de la subvención: 100.000 EUR; **Investigador responsable: Juan José Díaz Mochón**; Tipo de participación: IP

### C.3. Participation in R&D and Innovation contracts

**1. Automatización y desarrollo de sistemas de diagnóstico molecular multiplex para detección de paneles de marcadores ARN/ADN y proteínas en las áreas de patología infecciosa y alergología.** Entidad financiadora: DestiNA Genómica S.L. – business-University contract –INTERCONECTA2015 Investigador responsable: Rosario M. Sánchez-Martín; Entidades participantes: Universidad de Granada – DestiNA Genómica S.L. Duración: 01/12/15- 31/06/18 (31 meses); Financiación: 39.809,00 EUR

**2. Título: Desarrollo de kits de diagnóstico molecular basados en PCR multiplex para identificación de mutaciones puntuales en patologías tumorales e infecciosas;** Entidad financiadora: DestiNA Genómica S.L. –business-University contract -nº 3500-OTRI- financiación CDTI en el marco de la convocatoria de Proyectos

de Investigación en Cooperación (solicitud nº 75812); Entidades participantes: Universidad de Granada – DestiNA Genómica S.L.; Duración: 16/10/14 - 16/04/16 (18 meses); Financiación: 62.630,00 EUR.

**3. Título: Síntesis orgánica en fase sólida y en solución, síntesis y caracterización de fluoróforos y SMART Nucleobases (II);** Entidad financiadora: DestiNA Genomics Ltd. - contrato empresa-Universidad - nº 3249 y3565-OTRI; Entidades participantes: Universidad de Granada - DestiNA Genomics Ltd.; Duración: 01/05/13 - 31/01/16; Financiación: 12.000 EUR; **Investigador principal: J. J. Díaz Mochón.**

**4. Título: PCR Free nucleic acid detection and identificación as revolutionary molecular diagnostic tool;** Empresa/administración financiadora: Scottish Enterprise; Entidades participantes: DestiNA Genomics Ltd.; Duración: 01/01/2011 - 31/12/2011; Financiación: 120.000,00 €; **Investigador responsable: J. J. Diaz Mochon.**

**5. Título: Novel Companion Biomarker Assay for Glioma Cancer Drug Development to Overcame Current lack of in-vivo Test Success;** Empresa/administración financiadora: UK Technology Strategy Board; Entidades participantes: DestiNA Genomics Ltd.; Duración: 01/05/2011 - 31/07/2011; Financiación: 39.800,00 €; **Investigador responsable: J. J. Diaz-Mochon.**

**6. Título: Novel error free test for detecting norovirus in food;** Empresa/administración financiadora: UK Technology Strategy Board; Entidades participantes: DestiNA Genomics y Glycomar; Duración: 01/05/2011 - 31/07/2011; Financiación: 29.600,00 €; **Investigador responsable: Juan J. Diaz Mochon y Charlie Bavington.**

#### **C.4. Patents**

**1. Sanchez-Martin, R.M, Marchal-Corrales, JA., Diaz-Mochon, J.J, Cano Cortes, MV, Navarro-Marchal, SA, Ruiz-Blas, M.P.** Nanopartículas Multifuncionales para Teragnosis. P201830360 España. 12/04/2018

**2. ILYINE, H.; DIAZ-MOCHON, JJ.; PERNAGALLO, S; CHAVEZ, MT; FARA, MA;** PCT/EP2017/067642, PNA PROBES; España 12.07.2016 Entidad titular: DestiNA Genomica SL. Países extendido: Europe, Africa, Eurasia, US; Empresa/s que la explota: Destina Genomica SL.

**3. DIAZ-MOCHON, JJ; DUFFY, DC.; PERNAGALLO, S.; ILYINE, H.; RISSIN, DM.;** LOPEZ-LONGARELA, B.; Single Molecule Detection And Quantification Of Nucleic Acids With Single Base Specificity. US Entidad titular: DestiNA Genomica SL y Quanterix Corp.. Países extendido: Europe, Africa, Eurasia, US; Empresa/s que la explota: Destina Genomica SL.

**4. Delgado González,A. Sanchez- Martin, RM, Diaz-Mochon, J.J., Valero-Griñan, T., Orte-Guitierrez, A., Garcia-Fernandez E.** Sondas Duales para Citometría de Flujo y Citometría de Masas P201730777. España. 07/06/2017.

**5. Serrano MJ; Diaz Mochon JJ; Ortega FG; Lorente JA; Garcia Puche JL; Ruiz Blas MP; Sanchez Martin RM.** Method for the detection of circulating tumor cells, both circulating tumors cells of epithelial phenotype and circulating tumour cells having Epithelial-mesenchymal transition markers (EMTs), by using miRNA-21 as a biomarker. PCT/ES2015/070681. España. 18/09/2014. Licenciada a: VIDIA Health SA.

**6. Bradley, M. and Diaz-Mochon, J.J.** Nucleobase Characterisation; N.º de solicitud: PCT/GB2008/003185; Reino Unido; 17/09/2007; Entidad titular: University of Edinburgh; Países extendido: Europe, Africa, Eurasia, US; Empresa/s que la explota: Destina genomics Ltd. ;

**C5. Bussiness activity:** Companies: Founder of 1 spin-off (DestiNA Genomics Ltd.) in the United Kingdom in 2010 and Founder of 2 Spanish biotech companies Nanogetic S.L. in the year 2013 and Crystalgel in the year 2017. Currently, he is a member of the advisory board of these companies.