Date of the CVA	11/09/2020

Section A. PERSONAL DATA

Name and Surname	Juan Diego Unciti Broceta		
DNI	31865682	Age	41
Researcher's identification number	Researcher ID		
	Scopus Author ID		
	ORCID	0000-0002-4068-5943	

A.1. Current professional situation

Institution	Emerald Health Biotechnology España			
Dpt. / Centre				
Address	Calle Almanzor, 20, 1-4, 14003, Córdoba			
Phone	(0034) 650561937	Email	junciti@emeraldespana.life	
Professional category	Research and Development director		Start date	2019
UNESCO spec. code	239001 - Design. Synthesis and study new drugs; 320801 - Absorption of drugs; 320802 - Action of drugs; 320803 - Activation, multiple processes; 320804 - Active locations, receptora; 320806 - Chemotherapy; 320808 - Mechanism of drug action; 320809 - Metabolic processes of drugs; 320903 - Evaluation of drugs; 320904 - Naturally oceurring drugs; 320907 - Phytopharmaceuticals; 320908 - Preparation of drugs; 320912 - Synthetic drugs			
Keywords				

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

Bachelor/Master/PhD	University	Year
Certificate of competence in animal welfare for animals used for experimental and other scientific purposes (Level C)	University of Granada	2013
PhD in Biomedicine	University of Granada	2012
Master of Science in Research and Advances in Molecular and Cellular Immunology	University of Granada	2007
Master of Advances Studies (D.E.A) in Molecular and Cellular Immunology	University of Granada	2006
Master in Pharmaceutical and Parapharmaceutical Industry	Centro de Estudios Superiores de la industria farmacéutica (CESIF)	2003
Bachelor of Pharmacy degree	University of Granada	2002

A.3. General quality indicators of scientific production

Section B. SUMMARY OF THE CURRICULUM

Juan Diego Unciti Broceta, began his scientific career in 2004 in the Department of Immunology of the Faculty of Medicine of Granada, specializing in gene therapy for the treatment of human genetic immunodeficiencies. During this period, he obtained the Diploma of Advanced Studies in Molecular and Cellular Immunology and the Master of Science in Advances in Research in Molecular and Cellular Immunology. In 2010, in a second scientific period, he focused on the development of new therapeutic approaches to infectious diseases working at the Instituto de López-Neyra de Granada (CSIC). This project allowed him to learn the recombinant genetic technology of nanobody generation, specializing in molecular biology, nanotechnology and animal experimentation. From this time, he published 7 scientific articles, either as main author or co-author, as well as a patent of which he is a co-inventor. Thanks to this project, in 2012,

he obtained the PhD in Biomedicine with the International Doctor mention, thanks to three international fellowships (Brussels, Belgium; Nairobi, Kenya; Maputo, Mozambique).

In October 2013, he was hired as a postdoctoral researcher in the group of Development of therapeutic and diagnostic strategies of the Genomics and Oncology Research Centre ascribed to the Department of Organic Chemistry and Pharmacy of the University of Granada. In this position, he specialized in the use of nanoparticles for iPS cell generation and as directed anti-tumour therapy, and was awarded with his first project as Principal Investigator. In January 2015, he was hired as chief scientist at NanoGetic SL, a nanotechnology spin-off from the technology and know-how generated by the GENyO research group, where he was awarded a Torres Quevedo contract. Here, he acquired experience in the creation and management of a biotechnology company, in the identification of clinical needs, as well as in the design and management of research projects.

In November 2016, he jumped to the translational research joining to the Andalusian Initiative in Advanced Therapies (Junta de Andalucía) as scientific and regulatory compliance manager of GMPs facilities. At this institution he specialized in the development of this type of medicines: basic research, manufacturing and clinical trials. He worked with products for the treatment of cardiovascular, neurological, dermatological, immune and cancer diseases coordinating research groups and the GMP rooms producing the drugs. Thanks to this period, he updated his regulatory experience in GMPs, participating in accredited inspections by the AEMPS, and in Good Clinical Practices, by supervising multicenter clinical trials. This experience allowed him to be chosen as a Deputy coordinator of research projects assessment of advanced therapies area of the concession commission for research projects of the Andalusian Regional Government's Health Ministry.

In May 2018, and thanks to the knowledge and experience obtained in all its research stages, he joined Emerald Health Biotechnology Spain as Research and Development Director, a company that develops cannabinoid-derived drugsfor the treatment of Neurological disorders, cardiovascular, metabolic and inflammation diseases. In this position he has achieved three patent applications, has published four scientific articles as co-author or senior researcher and is leading the completition of a new investigational drug preclinical dossier.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

1 **Scientific paper**. Laura Casares; Juan Diego Unciti Broceta; María E. Prados; et al. (10/2). 2020. Isomeric O-methyl cannabidiolquinones with dual BACH1/NRF2 activity.Redox Biology. Elsevier B.V. ScienceDirect. 37-101689.

2 **Scientific paper**. María Eugenia Prados; Adela García Martín; Juan Diego Unciti Broceta; et al. (9/3). 2020. Betulinic acid hydroxamate prevents colonic inflammation and fibrosis in murine models of inflammatory bowel disease.Acta pharmacologica sinica. Springer Nature Limited.

3 **Scientific paper**. Arben Cuadrari; Federica Pollastro; Juan Diego Unciti Broceta; et al. 2019. The dimerization of Δ9-tetrahydrocannabinolic acid A (THCA-A) Acta Pharmaceutica Sinica B. Elsevier. 9-5, pp.1078-1083.

4 **Scientific paper**. Teresa Valero; Antonio Delgado González; Juan Diego Unciti Broceta; et al. (7/3). 2018. Drug “Clicking” on Cell-Penetrating Fluorescent Nanoparticles for In Cellulo Chemical Proteomics Bioconjugate chemistry. ACS publications. 29-9, pp.3154-3160.

5 **Scientific paper**. Altea Manzano, P.; Unciti Broceta, JD.; Cano Cortes, V.; et al. (7/2). 2017. Tracking cell proliferation using a nanotechnology-based approach.Nanomedicine (London, England). Future Medicine. 12-13, pp.1591-1605. ISSN 1748-6963.

6 **Scientific paper**. JOSE ANTONIO GARCÍA SALCEDO; JUAN DIEGO UNCITI BROCETA; JAVIER VALVERDE-POZO; et al. (4/2). 2016. New Approaches to Overcome Transport Related Drug Resistance in Trypanosomatid Parasites Frontiers in Pharmacology. Frontiers Media SA. 7, pp.351.

7 **Scientific paper**. LUCIANO MESSINA; JOSE ATONIO GAVIRA; SALVATORE PERNAGALLO; et al. (16/4). 2016. Identification and characterization of a bacterial hyaluronidase and its production in recombinant form FEBS Letter. ELSERVIER SV. 14-590, pp.2180-2189.

8 **Scientific paper**. JOSE ANTONIO GARCÍA SALCEDO; JUAN DIEGO UNCITI BROCETA; MIGUEL SORIANO. (3/2). 2015. Could specific cell targeting overcome resistance associated with current treatments for African trypanosomiasis? Nanomedicine. Future Medicine. 10-24, pp.3515-3517.

9 **Scientific paper**. JUAN DIEGO UNCITI BROCETA; JOSE LUIS ARIAS MEDIANO; JOSE MACEIRA PENA; et al. (10/1). 2015. Specific Cell Targeting Therapy Bypasses Drug Resistance Mechanisms in African Trypanosomiasis PLoS Pathogens. PLoS.

10 **Scientific paper**. JUAN DIEGO UNCITI BROCETA; VICTORIA CANO CORTÉS; PATRICIA ALTEA MANZANO; et al. (6/1). 2015. Number of Nanoparticles per Cell through a Spectrophotometric Method - A key parameter to Assess Nanoparticle-based Cellular Assays Scientific Reports. Nature publishing group. 5-10091.

11 **Scientific paper**. MARÍA JOSE PINEDA DE LAS INFANTAS Y VILLATORO; SARA TORRES RUSILLO; JUAN DIEGO UNCITI BROCETA; et al. (9/3). 2015. Synthesis of 6,8,9 poly-substituted purine analogue libraries as pro-apoptotic inducers of human leukemic lymphocytes and DAPK-1 inhibitors Organic & Biomolecular Chemistry. Royal Society of Chemistry. 13, pp.5224-5234.

12 **Scientific paper**. MARIA JOSE PINEDA DE LAS INFANTAS Y VILLATORO; JUAN DIEGO UNCITI BROCETA; RAFAEL CONTRERAS MONTOYA; et al. (7/2). 2015. Amide-controlled, one-pot synthesis of tri-substituted purines generates structural diversity and analogues with trypanocidal activity Scientific Reports. Nature publishing group. 5-9139.

13 **Scientific paper**. JOSE LUIS ARIAS MEDIANO; JUAN DIEGO UNCITI BROCETA; JOSE MACEIRA PENA; et al. (8/2). 2015. Nanobody conjugated PLGA nanoparticles for active targeting of African trypanosomiasis Journal of Controlled Release. Elservier. 197, pp.190-198.

14 **Scientific paper**. JUAN DIEGO UNCITI BROCETA; MARÍA TERESA DEL CASTILLO SANTAELLA; MIGUEL SORIANO RODRÍGUEZ; et al. (5/1). 2013. Novel therapy based on camel nanobodies Therapeutic Delivery. Future Science. 4-10, pp.1321-1336.

15 **Scientific paper**. JUAN DIEGO UNCITI BROCETA; JOSE MACEIRA PENA; SONIA MORALES SANTANA; et al. (6/1). 2013. Nicotinamide inhibits the lysosomal cathepsin b-like protease and kills African trypanosomes Journal of Biological Chemistry. American Society for Biochemistry and Molecular Biology. 288-15, pp.10548-10557.

16 **Scientific paper**. ZULEMA ROMERO; SARA TORRES; MERIEN COBO; et al. (7/5). 2010. A tissue-specific, activation-inducible, lentiviral vector regulated by human CD40L proximal promoter sequences Gene Therapy. Nature group. 18-4, pp.364-371.

17 **Scientific paper**. ZULEMA ROMERO; MIGUEL TOSCANO; JUAN DIEGO UNCITI BROCETA; et al. (5/3). 2009. Safer Vectors For Gene Therapy Of Primary Immunodeficiencies Current gene therapy. Bentham Science Publishers. 9-4, pp.291-305.

18 **Book chapter**. JOSE ANTONIO GARCÍA SALCEDO; JANE C MUNDAY; JUAN DIEGO UNCITI BROCETA; et al. (/3). 2013. Progress Towards New Treatments for Human African Trypanosomiasis.Trypanosomes and Trypanosomiasis.Springer-Verlag Wien. pp.217-238. ISBN 978-3-7091-1556-5.

19 **Book chapter**. SARA TORRES; GUADALUPE ZALDÍVAR; KARINA VEGA; et al. 2009. Expression of WASP in T lymphocytes from Wiskott-Aldrich Syndrome patients alter treatment with Calpain and Proteasome inhibitors Proceedings of the 2nd European Immunology Meeting. 2nd European Congress Of Immunology-ECI. Reinhold E. Scmidt. Medimond-Monduzzi Editore.

C.2. Participation in R&D and Innovation projects

1 Desarrollo preclínico de nuevos triterpenos hidroxamatos (TRIPOXIA) MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES. Marco Calzada. (Emerald Health Biotecnology España S.L.U.). 01/01/2018-31/12/2020. 414.686,64 €.

2 Desarrollo de nanodispositivos inmunodirigidos destinados a su uso como plataforma terapéutica. PTQ-13-06046. Ministerio de Ciencia e Innovación. Investigación. JUAN DIEGO UNCITI BROCETA. (NanoGetic S.L.). 01/12/2015-31/12/2017. 36.653 €.
3 Desarrollo de nanoesferas inmunodirigidas como plataformas terapéuticas Campus de Excelencia Internacional BioTic Granada. JUAN DIEGO UNCITI BROCETA. (University of Granada). 30/05/2014-31/12/2014. 3.000 €.
4 Nueva plataforma nanotecnológica para la administración subcutánea de fármacos Campus de Excelencia Internacional BioTic Granada. ROSARIO Mª SÁNCHEZ MARTÍN. (University of Granada). 30/05/2014-31/12/2014. 19.500 €.
5 Nuevas Terapias para la Tripanosomiasis Africana JOSE ANTONIO GARCÍA SALCEDO. (Fundación Pública Andaluza para la Investigación Biosanitaria de Andalucía Oriental - Alejandro Otero (FIBAO)). 01/01/2012-31/12/2014. 96.800 €.
6 Exploiting Nanobodies in development of new diagnostic tools and treatment methods for Trypanosomiasis Seventh Framework Programme.. Stefan Magez. (Fundación Pública Andaluza para la Investigación Biosanitaria de Andalucía Oriental - Alejandro Otero (FIBAO)). 01/01/2009-30/06/2013. 776.888 €.
7 Desarrollo de vectores lentivirales regulados para aplicación en terapia génica y celular Junta de Andalucía. Consejería de Innovación, Ciencia y Empresa. Convocatoria de Proyectos de Investigación de excelencia.. IGNACIO JESÚS MOLINA PINEDA DE LAS INFANTAS. (University of Granada). 01/01/2007-31/03/2010. 168.008 €.
8 Tratamiento de las inmunodeficiencias primarias mediante terapia génica con vectores lentivirales regulados e inhibidores farmacológicos : Plan Nacional de Salud y Farmacia. IGNACIO JESUS MOLINA PINEDA DE LAS INFANTAS. (University of Granada). 01/06/2006-31/12/2009. 130.000 €.

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

C.4. Patents

1 Juan Diego Unciti Broceta; Eduardo Muñoz Blanco; Giovanni Appedino; Federica Pollastro. EP20382660.7. Use of juniper (juniperus communis) berries extract and agathadiol as positive allosteric modulators of cannabinoid type 1 receptor Spain. 22/07/2020. Emerald Health Biotechnology España.
2 Juan Diego Unciti Broceta; Eduardo Muñoz Blanco; Jon Peñarando. PCT/ES2020/070278. Compounds for use in supressing cancer stem cells Spain. 29/04/2020. Emerald Health Biotechnology España.
3 Juan Diego Unciti Broceta; Eduardo Muñoz Blanco; Giovanni Appedino. PCT/EP2019/084658. Chromenic phytocannabinoids, their synthesis and use in treatment or prevention of disease Spain. 11/12/2019. Emerald Health Biotechnology España.
4 Juan Diego Unciti Broceta; Laura Pilotto; Luciano Messina; Susanna Vaccaro; Salvatore Pernagallo; Rosario María Sánchez Martín. PCT/IB2016/057824. Nanosystems for controlled transport of active molecules for diagnostic, prognostic and therapeutic purposes Italy. 21/12/2015. Fidia Farmaceutic SPA, Nanogetic SL.
5 Juan Diego Unciti Broceta; Jose Antonio García Salcedo; José Maceira Pena; María Teresa Del Castillo Santaella; Miguel Soriano Rodríguez; José Hernández Quero; Jose Luis Arias Mediano; María Adolfina Ruíz Martínez. PCT/ES2013/070619. System for transporting biologically active molecules, comprising a nanoparticle, a peptide and a biologically active molecule Spain. 03/09/2012. FIBAO. SAS. Universidad Almería. Universidad Granada..