CURRICULUM VITAE (maximum 4 pages)

Part A. PERSONAL INFORMATION

CV date	June 12th 2021

First and Family name	Rafael Fernández-Chacón		
Researcher codes	WoS Researcher ID *(*)*	E-6303-2010	
	SCOPUS Author ID*(*)*	55840574700	
	Open Researcher and Contributor ID (ORCID) **	http://orcid.org/0000-0002-9845-9885	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	Instituto de Biomedicina de Sevilla (IBiS, HUVR/CSIC/Universidad de Sevilla)		
Department	Dpto. de Fisiología Médica y Biofísica		
Address and Country	Avda. Manuel Siurot s/n, 41013-Sevilla		
Phone number	+34955923047 e-mail	rfchacon@us.es	
Current position	Professor of Physiology (Catedrático) and IBiS Director	From	January 20th 2017 March 1st 2020
Key words			

A.2. Education

MD. Ldo.Medicina y Cirugía	University of Seville	1990
Ph.D. Doctor en Medicina y Cirugía	University of Seville	1995

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

"Sexenios de investigación": 5 (last obtained Dec. 31st 2020). PhD thesis supervised since 2009: 2 (international mention) and 3 thesis in progress. Total citations: 4309, average citations per article: 116. Last five years average number of citations per year 190. Out of 37 publications, 22 within D1 and 32 within Q1. Average impact factor 10.4; h-index 27 (SCOPUS 07feb2021).

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

R. Fernández-Chacón completed his Thesis at the University of Seville (Lab. of Prof. Guillermo Alvarez de Toledo, PhD Award) on the biophysics of the release of transmitters through the transient opening of the fusion pore (kiss and run). From 1995 to 2001 he was trained as postdoctoral fellow at the University of Texas Southwestern Medical Center in Dallas and Howard Hughes Medical Institute (Lab. of Prof. Thomas C. Südhof) and at the Max-Planck-Institut für Biophysikalische Chemie in Göttingen (Lab. of Dr. Christian Rosenmund). The description of key molecular mechanisms of Ca^{2+}-dependent neurotransmitter release, reported in one of his most cited contributions (Fernández-Chacón et al., Nature 2001), supported the awarding of the Lasker Award and the Nobel Prize in Physiology or Medicine in 2013 to his mentor Prof. Thomas C. Südhof. Dr. Fernández-Chacón has carried out short research stays at the Salk Institute (Lab. of Prof. Charles Stevens), Harvard Medical School (Lab. of Prof. Wade Regehr) and the Marine Biological Laboratory at Woods Hole. As first or last author, R. Fernández-Chacón has published original results in Nature, Neuron, PNAS, Journal of Neuroscience, or Journal of Biological Chemistry, as well as reviews in Annual Review of Physiology and Molecular Psychiatry, among others. He has directed as PI more than 20 research projects of competitive public calls (Human Frontiers, ERANET-Neuron, Spanish Statal R+D+i Plan and Project of Excellence of Junta de Andalucía). Since 2006, he leads the group "Molecular Physiology of the Synapse" at the Institute of Biomedicine of Seville (IBiS) and he is a principal investigator at CIBERNED since 2008. His laboratory studies the

molecular mechanisms underlying the maintenance of nerve terminals, specially in the context of the role of a co-chaperone pathway linked to neurodegeneration in humans. He has received several recognitions (Fulbright (1995), EMBO-Young Investigator Award (2001), Prize of the Royal Academy of Sciences of Seville (2001), European Neuroscience Institute Young Investigator (2004) or Grass Imaging Award (2013)). He has given more than 30 invited conferences in international and national meetings (SfN, Gordon Research Conferences, Stem Cell Meeting Shanghai, European Calcium Society, Danish Society of Neuroscience, ENI-Goettingen Meeting, SENC, SEBBM, SECF, SEB, among others) and seminars at North American (Harvard, Yale, Boston University among others) and European universities (Southampton, Zurich, Naples, Göttingen, Tel-Aviv among others). He has led and participated in the organization of national and international congresses. He has been Secretary of the Spanish Society of Physiological Sciences (SECF) and co-coordinated the Molecular Neurobiology Group of the Spanish Society of Biochemistry and Molecular Biology (SEBBM). From 2009 to 2013, he was Deputy (Adjunto) of the Area of Biomedicine of the ANEP (Spanish National Agency for Scientific Evaluation). From 2011 to 2016, he served as Coordinator of the Area of Sciences and Health Technologies of the Department of Economy of the Junta de Andalucía. From 2012 to 2018, he has been Vice-Dean for the Degree in Basic and Experimental Biomedicine at the University of Seville. He belongs to the Direction Committee of CIBERNED. He is the Coordinator of the Seville Node of ENINET and founder of the "Association for the Promotion of Neuroscience" (http://www.eni-net.org/). He has been a scientific collaborator at Area BIO (Agencia Española de Investigación). From March 2020 is IBiS Director.

Part C. RELEVANT MERITS

C.1. Publications (selection)

Nieto-González, J.L, Gómez-Sánchez, L., Mavillard, F., Linares-Clemente, P., Rivero-Mena, M.C., Valenzuela-Villatoro, M., Muñoz-Bravo, J.L., Pardal, R- and **Fernández-Chacón, R.** Loss of postnatal quiescence of neural stem cells through mTOR activation upon genetic removal of Cysteine String Protein-α (CSP-α). **Proc. Natl. Acad. Sci. U. S. A.** 116:8000-8009 (**2019**). Impact factor: **9.504**. **Q1**

Parras A, Anta H, Santos-Galindo M, Swarup V, Elorza A, Nieto-González JL, Picó S, Hernández IH, Díaz-Hernández JI, Belloc E, Rodolosse A, Parikshak NN, Peñagarikano O, **Fernández-Chacón R**, Irimia M, Navarro P, Geschwind DH, Méndez R, Lucas JJ. Autism-like phenotype and risk gene mRNA deadenylation by CPEB4 mis-splicing. **Nature**. 560:441-446 (**2018**) Impact factor: **41.57 .D1**

Ortega-de San Luis C, Sanchez-Garcia MA, Nieto-Gonzalez JL, García-Junco-Clemente P, Montero-Sanchez A, **Fernandez-Chacon R**, Pascual A. Substantia nigra dopaminergic neurons and striatal interneurons are engaged in three parallel but interdependent postnatal neurotrophic circuits. **Aging Cell**. 17(5):e12821. doi: 10.1111/acel.12821. (**2018)** Impact factor: **7.62**. **D1**

Valenzuela-Villatoro, M., García-Junco-Clemente, P., Nieto-González, J.L., **Fernández-Chacón, R.** Presynaptic neurodegeneration: CSP-α/DNAJC5 at the synaptic vesicle cycle and beyond(Review). **Current Opinion in Physiology** 4:65-69 (**2018**). Impact factor: Pending (new Elsevier journal).

Nieto-González JL, **Fernández-Chacón R**.Toward the Inner Nanostructure of a Secretory Vesicle. **ACS Nano**. 11:3429-3432. **(2017)**. Impact factor: **13.942**. **D1**

Servián-Morilla E, Takeuchi H, Lee TV, Clarimon J, Mavillard F, Area-Gómez E, Rivas E, Nieto-González JL, Rivero MC, Cabrera-Serrano M, Gómez-Sánchez L, Martínez-López JA, Estrada B, Márquez C, Morgado Y, Suárez-Calvet X, Pita G, Bigot A, Gallardo E, **Fernández-Chacón R**, Hirano M, Haltiwanger RS, Jafar-Nejad H, Paradas C. A POGLUT1 mutation causes a

muscular dystrophy with reduced Notch signaling and satellite cell loss. **EMBO Mol Med**. 8:1289-1309. (**2016**). Impact factor: **9.249**. **D1**

Lavado-Roldán A, **Fernández-Chacón R**. Two for the Price of One: A Neuroprotective Chaperone Kit within NAD Synthase Protein NMNAT2. **PLoS Biol**. 14(7):e1002522. (**2016**). Impact factor: **9.797**. **D1**

Linares-Clemente P, Rozas JL, Mircheski J, García-Junco-Clemente P, Martínez-López JA, Nieto-González JL, Vázquez ME, Pintado CO, **Fernández-Chacón R**. Different dynamin blockers interfere with distinct phases of synaptic endocytosis during stimulation in motoneurones. **J Physiol.** 593:2867-88 (**2015**). Impact factor: **5.037**. **D1**

Kastl L, Sasse D, Wulf V, Hartmann R, Mircheski J, Ranke C, Carregal-Romero S, Martínez-López JA, **Fernández-Chacón R**, Parak WJ, Elsasser HP, Rivera Gil P. Multiple internalization pathways of polyelectrolyte multilayer capsules into mammalian cells. **ACS Nano**. 7:6605-18 (**2013**). Impact factor: **12.06**. **D1**

Rozas JL, Gómez-Sánchez L, Mircheski J, Linares-Clemente P, Nieto-Gonzalez JL, Vázquez ME, Luján R, **Fernández-Chacón R**. Motorneurons require cysteine string protein-α to maintain the readily releasable vesicular pool and synaptic vesicle recycling. **Neuron.** 74:151-65 (**2012**). See Preview (Neuron. 74:6-8. (2012)) and Faculty 1000. Impact factor: **15.77**. **D1**

Rozas, J.L., Gómez-Sánchez, L., Tomás-Zapico, C., Lucas, J.J. and **Fernandez-Chacon R.** "Increased neurotransmitter release at the neuromuscular junction in a mouse model of polyglutamine disease" **J Neurosci.** 31(3):1106-13 (**2011**). Impact factor: **7.12. Q1**

García-Junco-Clemente, P., Cantero-Nieto, G., Gómez-Sánchez, L., Linares-Clemente, P., Martínez-López, J.A., Luján, R and **Fernandez-Chacon R**. "Cysteine String Protein-alpha prevents activity-dependent degeneration in GABAergic synapses" **J Neurosci**. 30:7377-91 (**2010**). Cover. Impact factor: **7.27**. **Q1.**

C.2. Research projects and grants (Fernández-Chacón as IP, last five years)

Funding agency: **Ministerio de Ciencia e Innovación (PID2019-105530GB-I00).** *Title:* Synaptic dysfunction and protein turnover at cortical and cerebellar neurons (SynPROT). *Dates:* from June 1st 2020 to May 30th 2023 *Amount:* **303.000 euros**

Funding agency: **Consejería de Economía, Conocimiento, Empresa y Universidad (CEI-14-CTS600).** *Title: Análisis bioinformático de cambios transcriptómicos en disfunción sináptica y neurodegeneración. Dates:* from June 1st 2020 to May 30th 2023 *Amount:* **41.301 euros**

Funding agency: **Consejería de Economía, Conocimiento, Empresa y Universidad (PAIDI 2020, P18-FR-2144).** *Title: El papel molecular de un co-chaperón sináptico en la función lisosomal y en la neurodegeneración dependiente de los lisosomas. Dates:* from June 1st 2020 to Dec 31st 2022. *Amount:* **142.500 euros.**

Funding agency: **Fundación Tatiana Pérez de Guzmán El Bueno** *Title:* Synaptic, neuronal and circuit dysfunctions suitable for reversibility of neurodegeneration in vivo *Organismo Dates: from 15-04-2019 to 14-04-2022*. *Amount:* **70.000 euros.** Co-IP: P.García-Junco-Clemente

Funding agency: **Ministerio de Economía y Competitividad (BFU2016-76050-P).** *Title:* Molecular mechanisms of long-term maintenance of glutamatergic synapses in vivo *Dates: from 1-1-2017 to 31-12-2020*. *Amount:* **280.000 euros**

Funding agency: **CIBERNED**. Asignación Grupo 606. *Dates:* from 01-01-2017 to 31-12-2021. *Amount*: **314.871 euros**

Funding agency: **CIBERNED**. Proyecto colaborativo Ref# PI2018/06-4. *Dates:* 01/11/2019-31/12/2020. *Amount*: **48.800 euros**

Funding agency: **CIBERNED**. Proyecto colaborativo Ref# PI2013/09-2. *Dates:* 01/10/2013-30/09/2015. *Amount*: **70.000 euros**

Funding agency: **CIBERNED**. Proyecto colaborativo Ref# PI2015-2/06-4. *Title*: Molecular mechanisms of brain and muscle stem cell function in aging and neurodegeneration. *Dates:* 01/03/2016-31/10/2018. *Amount*: **70.000 euros**

Funding agency: **Junta de Andalucía Consejería de Innovación, Ciencia y Empresas (Proyectos de Excelencia), P12-CTS-2232**. *Title:* Análisis Genético y Funcional de Co-Chaperones Sinápticos en el Mantenimiento y la Degeneración Sináptica. *Dates:* 29-01-2014 hasta 29-01-2018. *Amount:* **268.853,95 euros**

Funding agency: **Ministerio de Economía y Competitividad (BFU2013-47493-P).** *Title:* Molecular and cellular mechanisms of the cerebral and neuronal response to presynaptic degeneration. *Dates:* desde 1 enero 2014 hasta 30 noviembre de 2017. *Amount:* **280.000 euros**

Funding agency: **Ministerio de Ciencia e Innovación (BFU2010-15713)** *Title*: Función molecular de Cysteine String Protein-alfa en sinapsis GABAérgicas en neuronas hipocampales de ratón en cultivo, in situ e in vivo y en neuronas humanas en cultivo. *Dates:* 1-1-2010 to 30-11-2014. *Amount:* **250.000 euros**

Funding agency: **Michael J. Fox Foundation for Parkinson's Research (U.S.A.).** *Dates: 01-12-2015 to 31-05-2017 Title:* LRRK2 – mediated endolysosomal alterations: mechanistics insights and validation as pharmacodynamic readout for kinase inhibitor studies *Amount*: **11.832 euros**. European partners: Sabine Hilfiker (CSIC, Granada); Elisa Greggio (University of Padova, Italy).

Infrastructure Grants

Funding agency: **Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia (FEDER).** *Title:* Equipamiento para microscopía multifotón in vivo for the US Microscopy Facility. *Reference:* **UNSE15-CE-3249.** *Dates:* 2015-2017**.** *Amount:* **543.799,35 euros;** *Scientific responsible:* Rafael Fernández-Chacón.

C.3. Contracts

C.4. Patents