MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

CURRICULUM VITAE (maximum 4 pages)

CV date	09/28/2018

Part A. PERSONAL INFORMATION

First and Family name	Inés M. Antón Gutiérrez		
Researcher numbers		Researcher ID	G-6090-2015
		Orcid code	0000-0002-2935-5919

A.1. Current position

Name of University/Institution	Agencia Estatal Consejo Superior de Investigaciones Científicas			
Department	Centro Nacional de Biotecnología, Dpt Cell and Molecular Biology			
Address and Country	Darwin 3, Campus Cantoblanco UAM-CSIC, 28049 Madrid, Spain			
Phone number	915855312	E-mail	ianton@cnb.csic.es	
Current position	Tenured scientist (Científico Titular)		From	June 2006
Espec. cód. UNESCO	2407, 2490, 2415			
Palabras clave	Actin cytoskeleton, adhesion, migration, invasion, neuritogenesis, podosome, invadopodia, signalling, cancer stem cell, metastasis, WIP, N-WASP, glioma			

A.2. Education

PhD	University	Year
Viral Immunology	Universidad Autónoma de Madrid, Spain	1994
Research fellow in Immunology	Harvard Medical School, Boston, MA, USA	2001

A.3. Research quality indicators

48 JCR articles; Sum of the Times Cited: 2112; Average Citations per Article: 44
124 cites/year in the last five years (2013-2017)
h Index: 24; (Q1) 24; (Q1+) 14
Four “sexenios” (last obtained in June 2015)
Five Ph.D. thesis supervised and one undergoing

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

My scientific interest has always focused on the study of the molecular basis of infectious and genetic diseases. During my **Ph.D. (FPU, 1990-1994)** directed by **Prof. Enjuanes**, I developed a project of great economic/veterinary interest to design vaccines against coronaviruses (Anton 1995 Virology 212, Anton 1996 Virus Res 46, Sune 1991 J Virol 65, Risco 1995 J Virol 69, Risco 1996 J Virol 69). I continued my training (Ramón Areces Foundation and Lady Tata Memorial Scholarships, **1995-2001) at Harvard Medical School (HMS)/Children's Hospital** with Prof. Geha and became a **"Research Fellow"** honored with the Paul Dobuler Award for my contribution to the study of genetic immunodeficiencies. My work contributed to the identification and functional characterization of WIP, a novel protein that produced numerous publications in prestigious journals as a collaborating author (JBC, 2xNat Cell Biol, Trends in Cell Biol, PNAS), as first co-author (Ramesh/Anton 1997 PNAS 94, Kettner/Kumar/Anton 2004 J Exp Med 199) and first author (Anton 1998 JBC 273, Anton 2003 J Cell Sci 116). The interest of the *Immunity* publication (Anton 2002) that describes the generation and characterization of WIP-deficient mice, made it to the journal cover and granted its selection by "Faculty of 1000" and a comment in Nature Reviews Immunology 2 (2002). The work originated a patent on the $WIP^{-/-}$ mice that I generated. My experimental work supports that WIP regulates the actin cytoskeleton, B and T lymphoid activation, cell migration, inflammatory response, invasion and neuritogenesis and therefore the murine system constitutes a model for basic science and validation of gene therapy or of therapeutic agents in allergic and/or inflammatory, tumoral and neural diseases. A short stay in the laboratory of Prof. Hall (MRC, UK) introduced me to the study of Rho GTPases and I learned cellular microinjection techniques that led to my first publication as a corresponding author (Anton 2003 J Cell Sci 116). At the **University of Turin (2001-2003)** I started my independent research line and was responsible for a project funded by Serono. We described the murine pathology associated with WIP deficiency (Lanzardo

2007 IJBCB 39, Curcio 2006 J Pathol 211) that has allowed to identify the phenotype produced by WIP absence contributing to the diagnosis of the two first patients with severe immunodeficiency caused by mutations in the WIPF1 gene (Lanzi 2012 J Exp Med 209). Our long standing collaboration with Prof Jones (King's College, UK) produced multiple joint publications in Current Biol, JCS, EJCB, IJBCB and J Microsc. In **2003, I obtained a Ramón y Cajal contract** at the CBMSO where I remained until I won a position as **CSIC Tenured Scientist in 2006** and I moved to the CNB. The most relevant publications of this last period are described in section C.1. Since 2003 I have taught in the doctorate program with a quality mention (UAM) and coordinated a master module of the Campus of Excellence UAM-CSIC. I have done two short stays at HMS (8 weeks in 2010 at Prof. Geha lab, 5 weeks in 2013 at Prof. K. Struhl). I have been invited to present at international congresses and I am part of international evaluation committees of European projects and scholarships and of grants from different member states. **Our group studies the role of actin polymerization in neuritogenesis, cancer stem cell proliferation and metastasis.**

Part C. RELEVANT MERITS

C.1. Publications selected from last 10 years

1. Menotti *et al*. (27/25). 2018. Wiskott–Aldrich syndrome protein (WASP) is a tumor suppressor in T cell lymphoma. **Nature Medicine** *In press*. **IF: 32,6**

2. Rivas S, **Anton IM***, Wandosell F*. 2018. WIP-YAP/TAZ as a new pro-oncogenic pathway in glioma. **Cancers** (Basel) 10: E191. *Equivalent contribution **IF: 5,3**

3. Escoll M, Gargini RA, Cuadrado A, **IM Anton*,** Wandosell F*. 2017. Mutant p53 oncogenic functions in cancer stem cells are regulated by WIP through YAP/TAZ. ***Oncogene*** 36: 3515-3527. *Equivalent contribution **IF: 7,4**

4. Pfajfer L, Seidel MG, Houmadi R, Rey-Barroso J, Hirschmugl T, Salzer E, **Antón IM**, Urban C, Schwinger W, Boztug K, Dupré L. 2017. WIP deficiency severely affects human lymphocyte architecture during migration and synapse assembly. **Blood** 130:1949-1953. **IF: 15,1**

5. Gargini R, Escoll M, Garcia E, Garcia-Escudero R, Wandosell F*, **Anton IM***. 2016. WIP drives tumor progression through YAP/TAZ-dependent autonomous cell growth. **Cell Reports** 17: 1962-1977. *Equivalent contribution **IF: 8**

6. García E, Ragazzini, C, Yu X, Cuesta-García E, Zech T, Sarrio D, Machesky LM*, **IM Anton***. 2016. WIP and WICH/WIRE co-ordinately control invadopodium formation and maturation in human breast cancer cell invasión. **Scientific Reports** 6, article 23590. *Equivalent contribution **IF: 5,6**

7. Franco-Villanueva A, Fernández-López E, Gabandé-Rodríguez E, Bañón-Rodríguez I, Esteban JA, **Anton IM***, MD Ledesma* 2014. WIP modulates dendritic spine actin cytoskeleton by transcriptional control of lipid metabolic enzymes. **Human Mol Genetics** 23: 4383-4395. *Equivalent contribution. **IF: 7,7**

8. García E, Machesky LM, Jones GE, **Antón IM**. 2014. WIP is necessary for matrix invasion by breast cancer cells. **Eur J Cell Biol.** 93:413-23. **IF: 3,8**

9. Bañón-Rodríguez I, Sáez de Guinoa J, Bernardini A, Ragazzini C, Fernández E, Carrasco YR, Jones GE, Wandosell F, **IM Anton**. 2013. WIP regulates persistence of cell migration and ruffle formation in both mesenchymal and amoeboid modes of motility. **Plos One** 8: e0070364 **IF: 3,5**

10. Franco A, Knafo S, Banon-Rodriguez I, Merino-Serrais P, Fernaud-Espinosa I, Nieto M, Garrido JJ, Esteban JA, Wandosell F, **Anton IM**. 2012. WIP is a negative regulator of neuronal maturation and synaptic activity. **Cereb Cortex** 22:1191-1202. **Cover image**. **IF: 6,8**

C.2. Research projects and grants

1- Interactoma diferencial de WIP: actividad oncogénica versus supresor de tumores
Fundación Ramón Areces; **PI: Inés M. Antón Gutiérrez**; 2017-2019; 119.925 €

2- **SAF2015-70368-R**: Análisis de la señalización mediada por Akt en neurodegeneración y en proliferación, migración/invasión celulares
MINECO/FEDER; PI1: Francisco Wandosell; **PI2: Inés M. Antón Gutiérrez**
2016- 2018; 242.000 €

3- **i-COOP LIGHT 2015CD0005**: Arrojando luz sobre la inflamación
CSIC; **PI: Inés M. Antón Gutiérrez** 2015- 2016; 24.950 €

4- **SAF2013-45937-R**: Nueva acción oncogenica de WIP (WASP interacting protein): regulacion de la generación y mantenimiento de las células iniciadoras de tumores (TICs) y del proceso metastático
Ministerio de Educación y Ciencia; **PI: Inés M. Antón Gutiérrez** 2014- 2015; 72.600 €

5- G1100041: Regulators of WIP function and podosome activity
Medical Research Council (MRC); PI: Gareth E. Jones and **Inés M. Antón Gutiérrez**
2011- 2014; 306.000 £

6- **BFU2010-21374/BMC**: Proteínas de unión a actina en neuroinmunología: paralelismos en desarrollo, señalización y migración
Ministerio de Educación y Ciencia; **PI: Inés M. Antón Gutiérrez** 2010- 2013; 145.200 €

7- Función de WIP en adhesión y migración, etapas del proceso inflamatorio
Fundación Ramón Areces; **PI: Inés M. Antón Gutiérrez** 2004- 2007; 120.000 €

C.3. Contracts

1. Estudio del efecto de compuestos de Noscira sobre metaloproteasas y sobre la degradación del péptido amieloide
NOSCIRA S.A. PI: **Inés M. Antón CSIC/CIBERNED**
From: 15 April 2010 to: 30 September 2010

2. Administracion de compuestos de interés en ratones transgénicos
NOSCIRA S.A. PI: **Inés M. Antón CSIC/CIBERNED**
From: 1 October 2008 to: 31 December 2009

C.4 Patents

1.Inventors (in order): N. Ramesh, M. A. De la Fuente, **I. M. Anton** and R.S. Geha
Title: WIP, a WASP associated protein
Application number: 10/078,547 Country of priority: USA
Date of priority: 19/2/2002
Company: The Childrens Medical Center Corporation
Extended countries: Europa, Asia (WO 03/070893)
2. RAMESH N; DE LA FUENTE M A; **ANTON I M**; et ál.
New transgenic non-human mammal, useful for enhancing or inhibiting T cell receptor-mediated T cell activation or B cell proliferation in a mammal for treating or preventing diseases, e.g., leukemia.
WO2003070893-A2 AU2003219774-A1 US6927318-B2 AU2003219774-A8 WO2003070893-A3 US2002199211-A1
The Childrens Medical Center Corporation

C.5 Awards and fellowships

1. Prize Paul Dobuler “Excellence in Immunedeficiencies” 1998, Boston, USA.
2. Postdoctoral felowship Lady Tata 1997-1999
3. Beca postdoc F. Ramón Areces, Children´s Hospital/Harvard Medical School 1995-1997

4. Becaria FPU, CNB 1990-1994
5. Becaria de colaboración Caja Madrid 1989-1990

C.6 Rewiever activities

1. Member “Comisión de Selección de Proyectos de Investigación BFU del área de Biología Molecular y Celular” (I+D de la convocatoria de Retos y Excelencia)
MINECO, DTCV Madrid February 2015 and 2016
2. Committee members of the IPBS lab , Toulouse, France AERES (Agence dévaluation de la recherche et de lénseignement supérieur)
14-17 Noviembre 2014, Toulouse, Francia
3. Independent expert for evaluation of H2020-PHC14-2015 proposals (Rare disesases Committee) European Commission Nov 2014- May 2015
4. Independent expert for evaluation of proposals: H2020, Marie Curie Actions
European Commission 2014, 2015, 2016, 2017
5. Independent expert for evaluation of proposals: Marie Curie Actions Hub Talentia Programme DEVA June 2014, November 2014 and June 2015
6. Independent expert for evaluation of proposals: FP7-PEOPLE, Marie Curie Actions (IEF, IOF, IIF and CIG) European Commission Brussels 2010, 2011, 2012, 2013
7. Editor European Journal of Cell Biology from 2011.
8. Reviewer for Blood, JCS, J Immunol, MCB, JBC, IJBCB, BBA and others.

C.7 Invited oral communications and talks

1. Invited speaker FEBS3+ XL SEBBM Congress, Barcelona October 2017
2. King´s College, London, March 2017
3. Karolinska Institutet, Stocholm, Sept 2016
4. Centro de Investigación y de Estudios Avanzados del IPN, Méjico DF, 2015
5. Centro Nacional de Microbiología, Instituto de Salud Carlos III, Majadahonda, Spain 2015
6. Invited speaker Actin Dynamics Meeting, Regensburg, Germany May 2015
7. EMBO Workshop Cellular synapsis for cell signalling, San Lorenzo de El Escorial, Spain May 2015
8. Centro de Biología Molecular "Severo Ochoa", Madrid, Spain, March 2012
9. Instituto Cajal, Madrid, Spain, Nov 2009
10. Fundación Caubet-Cimera, Centro Internacional de Medicina Respiratoria Avanzada, Islas Baleares, Spain, Nov 2009
11. Instituto de Parasitología y Biomedicina "López-Neyra", Granada, Spain, Abril 2008
12. Centro de Investigaciones Biológicas, Madrid, Spain, Oct 2007
13. Invited speaker Congreso de la SEBC, Cádiz, Spain, Nov 2005

C.8 Teaching

1. Coordinator module "Migración y motilidad celular. Polaridad y diferenciación neuronal" from Master de Biología Molecular y Celular del Programa Oficial de Postgrado de Biociencias Moleculares de la Universidad Autónoma de Madrid, from 2008 to 2015.
2. Biochemistry teacher for grades of Chemistry and Biology at Universidad Autónoma de Madrid (2003-2007).

C.9 Meeting organization

1. XVI Congreso SEBC (Sociedad Española de Biología Celular) Sevilla 29 June-1 July 2015
2. XV Congreso SEBC (Sociedad Española de Biología Celular) Madrid 17-19 Nov 2013
3. XXXVI Congreso SEBBM (Sociedad Española de Bioquímica y Biología Molecular) Madrid 3-6 Sept 2013. Miembro junta directiva y organizadora de actividad satélite
4. Podosomes, Invadopodia and Focal Adhesions in Physiology and Pathology Madrid 18-21 Sept 2011.