Fecha del CVA	11/03/2022

Parte A. DATOS PERSONALES

Nombre *	Jose Carlos		
Apellidos *	García-Borrón Martínez		
Sexo *	Hombre	Fecha de Nacimiento *	25/09/1957
DNI/NIE/Pasaporte *	37683687G	Teléfono *	(34) 86888 - 4676
URL Web			
Dirección Email	gborron@um.es		
Identificador científico	Open Researcher and Contributor ID (ORCID) *	0000-0002-9192-588X	
	Researcher ID	H-2247-2015	
	Scopus Author ID		

* Obligatorio

A.1. Situación profesional actual

Puesto	Catedrático de Universidad		
Fecha inicio	2002		
Organismo / Institución	Universidad de Murcia		
Departamento / Centro	Bioquímica y Bilogía Molecular B e Inmunología / Facultad de Medicina		
País		Teléfono	
Palabras clave	Biomedicina		

A.3. Formación académica

Grado/Master/Tesis	Universidad / País	Año
Doctor en Farmacia	Universidad de Granada	1984
Licenciado en Farmacia	Universitat de Barcelona / España	1980

A.4. Indicadores generales de calidad de la producción científica

Total indexed articles (Google Scholar): 116
Journals within Q1 of its area: 68 (59%)
Citations: 7206
Average Citations per year (last five years): 360
Average Citations per Article: 65,6
h-index: 46

Six-year research modules ("sexenios"): 6 (Corresponding to all possible 6-year periods from the start of my carrier to date, without loss of a single year).
1: 1980-85 // 2: 1986-91 // 3: 1992-97 // 4: 1998-2003 // 5: 2004-09// 6: 2010-16

16 Doctoral Thesis supervised:
Pilar Aroca Tejedor, 1991
Paloma Valverde Hernández, 1994
Celia Jiménez-Cervantes Frigols, 1994 - Extraordinary Award
María Martínez Esparza-Alvargonzález, 1999 - Extraordinary Award
Dionisio Pérez Mestre, 1999
Conchi Olivares Sánchez, 2003 - Extraordinary Award
Jesús Sánchez Más, 2005
Petra González Pérez, 2007
Berta López Sánchez-Laorden, 2008 - Extraordinary Award
Mª Carmen Turpín Sevilla, 2009

Cecilia Herráiz Serrano, 2011- Extraordinary Award
Ana Belén Pérez Oliva, 2012
Marta Abrisqueta González, 2016
Julia Sirés Campos, 2018
María Castejón Griñán, 2019 - Extraordinary Award
Idoya Martínez Vicente, 2021

International awards:
- The HS Raper Medal for outstanding contributions to the biochemistry and molecular biology of melanocytes (Sapporo, Japan 2008).
- Clinuvel Lectureship (Hinxton, UK 2010)

Membership of Scientific Boards and Committees;
- European Society for Pigment Cell Research: Member of the Executive Council (1995-2007); Secretary (2000-2003); President (2003-2006)
- International Federation of Pigment Cell Societies: Member of the Executive Council (2001-2006); Secretary-Treasurer (2005-2008)

Membership of International Editorial Boards:
- Member of the Editorial Board of Melanoma Research (1994-1998).
- Member of the Editorial Board of Pigment Cell Research (1995-2000).
- Member of the Editorial Board of Pigment Cell and Melanoma Research (2005-to date).
- Member of the Editorial Board of Experimental Dermatology (2013-to date).
- Member of the Advisory panel of Biochemical Journal (2005-to date).
- Member of the Editorial Board of International Journal of Molecular Sciences, Section Molecular Oncology (2018- 2021).

Other responsabilities:
- Member of the panel for evaluation of the Ramón y Cajal (2015) and Juan De la Cierva (2004, 2011) Programs.
- Member of the panel “Cancer” from “FIS” (2005, 2006).
- Reviewer for the fellowhips program “FPU” (2006-2009).
- Temporary Assistant (“Adjunto temporal”), ANEP (junio 2015).
- Member of the BMED panel (2009-2015).
- Member of the “Technical Committee of the State Plan”, 2013 calls “Excellence” and “Challenges”.
- Reviewer for autonomic agencies (Andalucía, Islas Baleares).
- Reviewer for international agencies (National Science Foundation, USA, and Wellcome Trust, UK).
- Coordinator of the “BMED” Commission, ANEP (july 2015-18).
- Co-coordinator of the Cancer Subprogram, AEI (starting july 2018).
- Coordinator of the 501, 502 and 511 CTEs, ISCIII (february 2020 to date).

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

I earned a degree in Pharmacy (University os Barcelon, 1080) and a PhD in the University of Granada (1984). I performed post-doctoral stays at the Commonwealth University of Virginia (2 years) and the University of Missouri at Kansas City (1 year) working on nicotinic acetylcholine receptor structure-function relationships, and a 1 year sabbatical stay at (Free University of Brussels, 1992) working on homology cloning of new GPCRs. I became tenured assistant professor (1987) and full professor (2002) at the UM, where I served as Director of Dept. of Biochemistry, Molecular Biology and Immunology (2006-2010). I have obtained and led 7 consecutive national competitive research projects, published 116 papers (h index 46) and mentored 13 PhD students. My research focuses on the molecular biology of melanocytes and

melanoma cells. My early work made substantial contributions to the knowledge of enzymatic regulation of mammalian pigmentation, leading to the currently accepted melanogenic pathway found in textbooks. More recently, I focused on molecular mechanisms of regulation of melanocyte growth and differentiation.

My main interest is now on the relationship of melanocortin 1 receptor (MC1R) variants and and the MC1R-interacting protein MGRN1 with melanoma. My team identified the consensus MC1R sequence, and new hypomorphic variants in individuals of skin phototypes I and II and in melanoma patients. We provided the first reports of MC1R constitutive activity, its alteration in allelic variants associated with melanoma, and MC1R dimerization with formation of functionally altered heterodimers. These findings allowed for a better understanding of the functional characteristics of melanoma-associated MC1R variants. Other major findings are the identification of the molecular machinery of MC1R homologous desensitization, novel mechanisms of functional regulation, the description of cAMP-independent transactivation of cKIT by WT and variant MC1R, and the activation of AKT-dependent DNA repair downstream of variant MC1R. Concerning MGRN1 we described the molecular basis of its inhibtory effect on MC1R signalling and its role on genomic stability in melanocytic cells.

I was awarded the HS Raper Medal for outstanding contributions to the molecular biology of melanocytes by the International Federation of Pigment Cell Societies (IFPCS) in 2008 and The Clinuvel Lectureship in 2010. I have participated in the Editorial Advisory Boards of Melanoma Research (1994-1998), Pigment Cell Research (1995-2000), Experimental Dermatology (from 2014) and Pigment Cell and Melanoma Research (from 2005). I belong to the Editorial Advisory Panel of the Biochemical Journal since 2005. In the European Society of Pigment Cell Research, I served as Executive Council member (1995-2007), Secretary (2000-2003), and President (2003-2006). I have been member of the Executive Council of the IFPCS (2001-2006) and its Secretary-Treasurer (2005-2008). Starting from 2004, I have been involved in management of scientific programs. I served as panel member for the J De la Cierva (2004, 2011) and Ramón y Cajal (2015) programs, the panel “Cancer” from the FIS (2005, 2006, 2015), and as referee of the FPU fellowship program (2006-2009) and the “Comisión de Evaluación de Proyectos de Investigación de Biomedicina” (MICINN-MINECO, 2009-2014). I was the coordinator of the “Área de Biomedicina, ANEP” from july 2015 to july 2018 and thereafter co-coordinator of the CAN subprogam in 2019 (AEI). From february 2020 until now, I am the coordinator of the "Comisión Técnica de Evaluación (CTE)" 501, 502 and 511 in the Subdirección General de Evaluación y Fomento de la Investigación (ISCIII).

Parte C. MÉRITOS MÁS RELEVANTES

C.1. Publicaciones

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

1 **Artículo científico**. Sirés-Campos J; Lambertos A; Delevoye C; et al; García-Borrón JC (AC). (9/9). 2021. Mahogunin Ring Finger 1 regulates pigmentation by controlling the pH of melanosomes in melanocytes and melanoma cells.Cellular and molecular life sciences : CMLS. 79, pp.1-21. ISSN 1420-682X. Google Scholar (1) https://doi.org/10.1007/s00018-021-04053-9

2 **Artículo científico**. Martínez-Morcillo FJ; Cantón-Sandoval J; Martínez-Navarro FJ; et al; García-Borrón JC; Mulero V. (13/18). 2021. NAMPT-derived NAD+ fuels PARP1 to promote skin inflammation through parthanatos cell death.PLoS biology. 19, pp.e3001455. ISSN 1544-9173. Google Scholar (1) https://doi.org/10.1371/journal.pbio.3001455

3 **Artículo científico**. Martínez-Vicente I; Abrisqueta M; Herraiz C; Jiménez-Cervantes C; García-Borrón JC; Olivares C. 2020. Functional characterization of a C-terminal splice variant of the human melanocortin 1 receptor.Experimental dermatology. 29, pp.610-615. ISSN 0906-6705. Google Scholar (4) https://doi.org/10.1111/exd.14118

4 **Artículo científico**. Caini S; Gandini S; Botta F; et al; García-Borrón JC; M-SKIP study group.(22/27). 2020. MC1R variants and cutaneous melanoma risk according to histological type, body site, and Breslow thickness: a pooled analysis from the M-SKIP project.Melanoma research. 30, pp.500-510. ISSN 0960-8931. Google Scholar (3) https://doi.org/10.1097/CMR.0000000000000668

5 **Artículo científico**. Stefanaki I; Stratigos AJ; Kypreou KP; et al; Garcia-Borron JC; M-SKIP Study Group.(18/24). 2020. MC1R variants in relation to naevi in melanoma cases and controls: a pooled analysis from the M-SKIP project.Journal of the European Academy of Dermatology and Venereology : JEADV. 35, pp.e135-e138. ISSN 0926-9959. Google Scholar (1) https://doi.org/10.1111/jdv.16869

6 **Artículo científico**. Martínez-Vicente I; Abrisqueta M; Herraiz C; et al; García-Borrón JC; Jiménez-Cervantes C. (8/9). 2020. Mahogunin Ring Finger 1 Is Required for Genomic Stability and Modulates the Malignant Phenotype of Melanoma Cells.Cancers. 12. Google Scholar (1) https://doi.org/10.3390/cancers12102840

7 **Artículo científico**. Pellegrini C; Botta F; Massi D; et al; Nan H; M-SKIP Study Group.(46/53). 2019. MC1R variants in childhood and adolescent melanoma: a retrospective pooled analysis of a multicentre cohort.The Lancet. Child & adolescent health. 3, pp.332-342. ISSN 2352-4642. Google Scholar (12) https://doi.org/10.1016/S2352-4642(19)30005-7

8 **Artículo científico**. Tagliabue E; Gandini S; Bellocco R; et al; García-Borrón JC; Raimondi S. (14/18). 2018. MC1R variants as melanoma risk factors independent of at-risk phenotypic characteristics: a pooled analysis from the M-SKIP project.Cancer management and research. 10, pp.1143-1154. Pubmed (22) https://doi.org/10.2147/CMAR.S155283

9 **Artículo científico**. Micillo R; Sirés-Campos J; García-Borrón JC; Panzella L; Napolitano A; Olivares C. (3/6). 2018. Conjugation with Dihydrolipoic Acid Imparts Caffeic Acid Ester Potent Inhibitory Effect on Dopa Oxidase Activity of Human Tyrosinase.International journal of molecular sciences. 19. Google Scholar (13) https://doi.org/10.3390/ijms19082156

10 **Artículo científico**. Castejón-Griñán M; Herraiz C; Olivares C; Jiménez-Cervantes C; García-Borrón JC (AC). (5/5). 2018. cAMP-independent non-pigmentary actions of variant melanocortin 1 receptor: AKT-mediated activation of protective responses to oxidative DNA damage.Oncogene. 37, pp.3631-3646. ISSN 0950-9232. Google Scholar (20) https://doi.org/10.1038/s41388-018-0216-1

11 **Artículo científico**. Abrisqueta M; Olivares C; Herraiz C; Castejón-Griñán M; Sirés-Campos J; García-Borrón JC; Jiménez-Cervantes C. (6/7). 2017. Human melanocortin 1 receptor-mediated ubiquitination of nonvisual arrestins. Role of Mahogunin Ring Finger 1 E3 ligase.Biochimica et biophysica acta. Molecular cell research. 1865, pp.76-94. ISSN 0167-4889. Google Scholar (6) https://doi.org/10.1016/j.bbamcr.2017.09.013

12 **Artículo científico**. Tagliabue E; Gandini S; García-Borrón JC; et al; M-SKIP Study group.(3/26). 2016. Association of Melanocortin-1 Receptor Variants with Pigmentary Traits in Humans: A Pooled Analysis from the M-Skip Project.The Journal of investigative dermatology. 136, pp.1914-1917. ISSN 0022-202X. Google Scholar (6) https://doi.org/10.1016/j.jid.2016.05.099

13 **Artículo científico**. Herraiz C; Olivares C; Castejón-Griñán M; Abrisqueta M; Jiménez-Cervantes C; García-Borrón JC (AC). (6/6). 2015. Functional Characterization of MC1R-TUBB3 Intergenic Splice Variants of the Human Melanocortin 1 Receptor.PloS one. 10, pp.e0144757. Google Scholar (14) https://doi.org/10.1371/journal.pone.0144757

14 **Artículo científico**. Shahzad M; Sires Campos J; Tariq N; et al; Shaikh RS (AC); Ahmed ZM. (18/19). 2015. Identification and functional characterization of natural human melanocortin 1 receptor mutant alleles in Pakistani population.Pigment cell & melanoma research. 28, pp.730-5. ISSN 1755-1471. Google Scholar (5) https://doi.org/10.1111/pcmr.12400

15 **Artículo científico**. Tagliabue E; Fargnoli MC; Gandini S; et al; García-Borrón JC; M-SKIP Study Group.(17/23). 2015. MC1R gene variants and non-melanoma skin cancer: a pooled-analysis from the M-SKIP project.British journal of cancer. 113, pp.354-63. ISSN 0007-0920. Google Scholar (14) https://doi.org/10.1038/bjc.2015.231

16 **Reseña**. Garcia-Borron JC; Jimenez-Cervantes C. (1/2). 2017. Sticky fingers at work: Palmitoylation-dependent MC1R activation.Pigment cell & melanoma research. 31, pp.238-240. ISSN 1755-1471. Google Scholar (4) https://doi.org/10.1111/pcmr.12659

17 **Revisión bibliográfica**. Herraiz C; Jiménez-Cervantes C; Sánchez-Laorden B; García-Borrón JC (AC). (4/4). 2017. Functional interplay between secreted ligands and receptors in melanoma.Seminars in cell & developmental biology. 78, pp.73-84. ISSN 1084-9521. Google Scholar (21) https://doi.org/10.1016/j.semcdb.2017.06.021

18 **Revisión bibliográfica**. Herraiz C; Garcia-Borron JC; Jiménez-Cervantes C; Olivares C. (3/4). 2017. MC1R signaling. Intracellular partners and pathophysiological implications.Biochimica et biophysica acta. Molecular basis of disease. 1863, pp.2448-2461. ISSN 0925-4439. Google Scholar (67) https://doi.org/10.1016/j.bbadis.2017.02.027

19 **Revisión bibliográfica**. d'Ischia M; Wakamatsu K; Cicoira F; et al; Garcia-Borron JC; Ito S. (5/18). 2015. Melanins and melanogenesis: from pigment cells to human health and technological applications.Pigment cell & melanoma research. 28, pp.520-44. ISSN 1755-1471. Google Scholar (336) https://doi.org/10.1111/pcmr.12393

C.2. Congresos

1 García-Borrón, JC; Martínez Vicente, I; Abrisqueta, M; Egea, S; Cerdido, S; Olivares, C; Jiménez-Cervantes, C. Increased genomic instability in melanocytes lacking Mgrn1. 24th IPCC Meeting. IFPCS. 2020. Japón.

2 Herraiz, C; Martínez Vicente, I; Abrisqueta, M; Sevilla, A; Boyano, MD; Alonso, S; Olivares, C; García-Borrón, JC; Jiménez-Cervantes, C. Mahogunin Ring Finger-1 expression as a determinant of the phenotype and aggressiveness of human melanoma cells. 24th IPCC Meeting. IFPCS. 2020. Japón.

3 Castejón, M; Herraiz, C; Jiménez-Cervantes, C; García-Borrón, JC. MSH activates BER pathway downstream of both WT-MC1R and MC1R-variants to decrease oxidative DNA damage. 22th ESPCR Meeting. ESPCR. 2019. Bélgica.

4 Martínez Vicente, I; Abrisqueta, M; Lambertos, A; Castejón, M; Olivares, C; Herraiz, C; García-Borrón, JC; Jiménez-Cervantes, C. Mgrn1 is a regulator of melanoma cells progression through S phase and interacts with Cdk2. 22th ESPCR Meeting. ESPCR. 2019. Bélgica.

5 Herraiz, C; Martínez-Vicente, I; Castejón, M; Olivares, C; Abrisqueta, M; Jiménez-Cervantes, C; García-Borrón, JC. Downregulation of MGRN1 expression decreases the metastatic potential of melanoma cells in vitro and in vivo. 21th ESPCR Meeting. ESPCR. 2018. Francia.

6 Martínez-Vicente, I; Abrisqueta, M; Castejón, M; Olivares, C; Herraiz, C; García-Borrón, JC; Jiménez-Cervantes, C. Induction of a senescent-like phenotype by loss of Mgrn1 expression in mouse melanocytes. 21th ESPCR Meeting. ESPCR. 2018. Francia.

7 Sirés, J; Abrisqueta, M; Bennett, D; Sviderskaya, E; Herraiz, C; Jiménez-Cervantes, C; García-Borrón, JC; Olivares, C. MGRN1 regulates melanosome biogenesis and pigment production by expression of melanosomal pH regulatory genes. 21th ESPCR Meeting. ESPCR. 2018. Francia.

8 Castejón, M; Herraiz, C; Jiménez-Cervantes, C; García-Borrón, JC. MSH activates BER pathway through a Nox/Akt-mediated mechanism in human melanoma cells harboring MC1R-variants to decrease oxidative DNA damage. 21th ESPCR Meeting. ESPCR. 2018. Francia.

9 Martínez-Vicente,, I; Herraiz, C; Abrisqueta, M; Sirés, J; Sviderskaya, E; Bennett, D; Olivares, C; Jiménez-Cervantes, C; García-Borrón, JC. Genome instability and aberrant cell cycle progression in Mahogunin ring finger-1 null mouse melanocytes. 23th IFPCS Meeting. IFPCS. 2017. Estados Unidos de América.

10 Herraiz, C; Castejón, M; Martínez-Vicente,, I; Abrisqueta, M; Sirés, J; Sviderskaya, E; Bennett, D; Olivares, C; Jiménez-Cervantes, C; García-Borrón, JC. Mahogunin Ring Finger 1 as a novel regulator of cell shape, motility and differentiation in melanocytes. 23th IFPCS Meeting. IFPCS. 2017. Estados Unidos de América.

11 Sirés, J; Olivares, C; Lambertos, A; Abrisqueta, M; Castejón, M; Martínez-Vicente,, I; Bennett, D; Sviderskaya, E; Herraiz, C; Peñafiel, R; Jiménez-Cervantes, C; García-Borrón, JC. Mahogunin Ring Finger-1 controls tyrosinase activity and melanin synthesis by regulation of melanosomal pH. 23th IFPCS Meeting. IFPCS. 2017. Estados Unidos de América.

12 Abrisqueta, M; Olivares, C; Castejón, M; Herraiz, C; García-Borrón, JC; Jiménez-Cervantes, C. Human Melanocortin 1 Receptor (MC1R)-dependent post-translational modification of b-arrestins (ARRBs). 20th ESPCR Meeting. ESPCR. 2016. Italia.

13 Sirés, J; Abrisqueta, M; Bennett, D; Sviderskaya, E; Herraiz, C; Jiménez-Cervantes, C; García-Borrón, JC; Olivares, C. Mahogunin Ring Finger 1 regulates the melanosomal pH and decreases pigmentation by acidification of the melanosome. 20th ESPCR Meeting. ESPCR. 2016. Italia.

14 Castejón, M; Abrisqueta, M; Olivares, C; Jiménez-Cervantes, C; García-Borrón, JC; Herraiz, C. cAMP-Independent, non-pigmentary actions of melanocortin 1 receptor signaling in melanocytes: regulation of defensive responses to oxidative damage. 20th ESPCR Meeting. ESPCR. 2016. Italia.

C.3. Proyectos y Contratos

1 **Proyecto**. SAF2018_RTI2018-094929-B-I00, Functional interplay of the melanocortin 1 receptor and Mahogunin Ring Finger 1 in melanoma susceptibility and progression. Ministerio de Economía y Competitividad. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2019-30/09/2022. 230.000 €.

2 **Proyecto**. 19875/GERM/15, Melanocortin 1 Receptor and Polyamines as Phenotypic Determinants of Melanocytes and Melanoma Cells. Fundación Séneca de Ciencia y Tecnología. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2016-30/12/2019. 250.000 €.

3 **Proyecto**. SAF2015-67092-R, El Receptor de Melanocortinas 1 y Mahogunina como determinantes del fenotipo de los melanocitos y las células de melanoma. Ministerio de Economía y Competitividad. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2016-30/12/2018. 240.400 €.

4 **Proyecto**. SAF2012-32134, Regulación de la señalización por el Receptor de Melanocortinas 1 humano y sus alteraciones en las variantes genéticas asociadas a cáncer de piel. Ministerio de Economía y Competitividad. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2013-30/12/2015. 140.400 €.

5 **Proyecto**. SAF2009-10942, El Melanocortinas 1 humano como modelo del acoplamiento funcional de la familia de los receptores de melanocortinas. MINECO. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2010-30/12/2012. 145.200 €.

6 **Proyecto**. SAF2006-11206, Receptores acoplados a proteínas G y regulación de la melanogénesis. Implicación en albinismo ocular y melanoma. MINECO. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2007-30/12/2010. 145.000 €.

7 **Proyecto**. SAF2003-03411, Melanogénesis y Melanoma: el gen MC1R como modelo de gen modulador de riesgo. MINECO. Jose Carlos García-Borrón Martínez. (Universidad de Murcia). 01/01/2004-30/12/2006. 150.000 €.

8 **Contrato**. Exploration of the effect of selected agents on the melanogenesis in cultured human epidermal cells Wacker Chemie AG. Francisco Solano Muñoz. 01/10/2014-01/10/2016.