



CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION		CV date	12/09/2022
First name	Acaimo		
Family name	GONZALEZ REYES		
Gender (*)	Male	Birth date (dd/mm/yyyy)	
ID number			
e-mail			
Open Researcher and Contributor ID (ORCID) (*)			

(*) Mandatory

A.1. Current position

Position	Research Professor, CSIC		
Starting date	14/09/2018		
Institution	Spanish National Research Council (CSIC)		
Department/Center	Centro Andaluz de Biología del Desarrollo (CABD)		
Country	Spain	Phone	
Key words	<i>Drosophila</i> , Developmental Biology, Genetics, Cell Biology, Stem cells		

A.2. Previous positions (research activity interruptions, art. 14.2.b))

A.3. Education

BSc in Biochem. + Mol. Biol.	Universidad Autónoma de Madrid	1987
PhD in Biology	Universidad Autónoma de Madrid	1991

Part B. CV SUMMARY (max. 5000 characters, including spaces)

During my professional life, I have followed a number of objectives always related to the field of Developmental Biology using *Drosophila melanogaster* as a model system. The experimental strategies and the biological questions at stake have been varied and they encompass traditional genetic approaches to proteomic, transcriptomic, biophysical techniques and advanced live imaging, in an attempt to address questions related to the biology of stem cells, morphogenesis or axis determination. To follow is a brief synopsis of my professional path so far.

I did a PhD thesis and a short post-doc in Prof. Ginés Morata's laboratory in Madrid (1988-1992; CBM, Centre for Molecular Biology). I studied the role of homeotic genes in embryonic patterning. We defined the phenomenon of "phenotypic suppression" (later termed "posterior prevalence" in vertebrates) by which posteriorly expressed homeotic genes suppressed the phenotypic consequences of anterior ones. We also demonstrated the existence of transvection in the promoter of the Ubx gene.

In my postdoctoral period in the laboratory of Professor Daniel St Johnston (1993-1998; Wellcome/ CR-UK Institute, Univ. of Cambridge, UK) I started using the ovary to study oocyte determination, the origin of anterior-posterior and dorsal-ventral polarity in *Drosophila* and epithelial patterning utilising the follicular epithelium.

I started running my own laboratory in Cambridge, at the LMB-MRC (1998-2000, Laboratory of Molecular Biology-Medical Research Council). After obtaining a permanent position in the Spanish National Research Council (CSIC), I joined the Institute of Parasitology and Biomedicine (2000-2004, Granada). My interests during these years were placed in the molecular characterisation of two genes involved in oocyte determination, which turned out to be required for DNA repair in meiosis, thus linking oocyte determination and progression through meiosis. We also studied several aspects essential for oocyte determination at the cell



biological level. Finally, we started the analyses of the biology of germline stem cells present in the ovary, a theme that we are still pursuing.

After moving to the then newly created CABD in 2004, we focussed our efforts on a number of aspects related (1) to stem cell behaviour and their interaction with the surrounding microenvironment and (2) to epithelial morphogenesis from a cell biological point of view. As such, we have utilised genomic, proteomic and biophysical techniques to try and understand different aspects of niche cell-stem cell communication, the role of the extra cellular matrix in niche activity and tissue homeostasis, and the genetic logic behind stem cell maintenance. As for epithelial morphogenesis, we have dissected the role of integrins in preventing the hyperplastic growth of the follicular epithelium and have determined a critical role for the extra cellular matrix in the regulation of epithelial migration during egg formation. We are applying modelling and mathematical analysis to our research on epithelial morphogenesis.

Publication record: <https://www.ncbi.nlm.nih.gov/pubmed/?term=gonzalez-reyes+a+AND+drosophila>

Number of research “sexenios” (date of last one granted): 5 (31/12/2017)

Supervised PhD Thesis since 2011: 5. 3 more in progress.

Total citations (WOS): 2314

Average no. of citations/year in the last 5 years (not including the current year; WOS): 73

Number of publications in the 75% (or above) percentile (Q1): 36

H index (WOS): 22

Part C. RELEVANT MERITS (sorted by typology)

From January 1st 2011 (max. 10 contributions)

C.1. Publications (see instructions) A: Original Article R: Review.

1 Rojas-Ríos, P., Guerrero, I. and González-Reyes, A. (2012) Cytoneme-mediated delivery of Hh in the *Drosophila* ovarian stem cell niche. ***PLOS Biology***, 10(4): e1001298. doi: 10.1371/journal.pbio.1001298 (IF 12.7) CLAVE: A

2 Rojas-Ríos, P. and González-Reyes, A. (2014) The plasticity of stem cell niches: a general property behind tissue homeostasis and repair. ***Stem Cells***, 32, 852–859. DOI: 10.1002/stem.1621 (IF 6.5) CLAVE: R

3 Rosales-Nieves, Alicia E. and González-Reyes, A. (2014) Genetics and mechanisms of ovarian cancer: parallels between *Drosophila* and humans. ***Seminars in Cell & Developmental Biology***, 28, 104-109. DOI: 10.1016/j.semcd.2014.03.031 (IF 6.3). CLAVE: R

4 Pearson, J., Zurita, F., Tomás-Gallardo, L., Díaz-Torres, A., Díaz de la Loza, M. C., Franze, K., Martín-Bermudo, M. D. and González-Reyes, A. (2016) ECM-regulator timp is required for stem cell niche organization and cyst production in the *Drosophila* ovary. ***PLOS Genet.*** 12(1): e1005763. doi:10.1371/journal.pgen.1005763. (IF 7.5) CLAVE: A

5 Valencia-Expósito, A., Grosheva, I., Míguez, D. G., González-Reyes, A.* and Martín-Bermudo, M. D.* (2016) Myosin Light Chain Phosphatase regulates basal actomyosin oscillations during morphogenesis. ***Nat. Comms.*** doi: 10.1038/ncomms10746 (* authors for correspondence and equal contribution). (IF 11.5) CLAVE: A

6 Castelli-Gair Hombría, J. and González-Reyes, A. (2016) Cell signalling: combining pathways for diversification and reproducibility. ***Current Biology***, 26, R1153-R1155. (IF 9) CLAVE: R

7 Díaz de la Loza, M. C., Díaz-Torres, A., Zurita, F., Rosales-Nieves, A. E., Moeendarbary, E., Franze, K., Martín-Bermudo, M. D. * and González-Reyes, A.* (2017) Laminin levels regulate tissue migration and Anterior-Posterior polarity during egg morphogenesis in *Drosophila*. ***Cell Reports***, 20, 211-223. doi: 10.1016/j.celrep.2017.06.031 (* authors for correspondence and equal contribution). (IF 8.9) CLAVE: A

8 Lobo-Pecellín, M., Marín-Menguiano, M. and González-Reyes, A. (2019) *mastermind* regulates niche ageing independently of the *Notch* pathway in the *Drosophila* ovary. ***Open Biology***, 9, 190127. (IF 4.9). CLAVE: A

9 Díaz-Torres, A., Rosales-Nieves, A. E., Pearson, J. R., Santa-Cruz Mateos, C., Marín-Menguiano, M., Marshall, O. J., Brand, A. H. and González-Reyes, A. (2021) Stem cell niche organisation in the *Drosophila* ovary requires the ECM component Perlecan. ***Current Biology***, 31, 1744-1753. doi: /10.1016/j.cub.2021.01.071. (IF 9.6) CLAVE: A

10 Villa-Fombuena, G., Lobo-Pecellín, M., Marín-Menguiano, M., Rojas-Ríos, P. and González-Reyes, A. (2021) Live imaging of the *Drosophila* ovarian niche shows spectroscopy



and centrosome dynamics during asymmetric germline stem cell division. *Development*, 148, dev199716. <https://doi.org/10.1242/dev.199716>. (IF 6.6) CLAVE: A

C.2. Meetings

C.3. Research projects (last 10 years)

1- Project title: Análisis Genético, Molecular y Celular de las células troncales del ovario de *Drosophila*

Funding Agency: Ministerio de Innovación, Ciencia y Empresa. Dirección General de Investigación. PN-Biología Fundamental (área de Biología Molecular y Celular). Proyecto BFU2009-08013

Participant organisation: CSIC

From: 01.01.2010 To: 31.12.2012 Amount granted: 245,630 EUR

Principal Investigator: Acaimo González Reyes

Number researchers participating in the project: 3

2- Project title: Estudio de las interacciones célula-matriz extracelular en el mantenimiento de células troncales y en el control de la migración e invasión celular

Funding Agency: Junta de Andalucía. Proyecto P09-CVI-5058

Participant organisations: Univ. Pablo de Olavide/Centro Andaluz de Biología del Desarrollo.

From: Enero 2010 To: Diciembre 2013 Amount granted: 236,839.68 EUR

Principal Investigator: M. Dolores Martín Bermudo (AGR Co-PI)

Number researchers participating in the project: 12

3- Project title: Análisis Genético, Molecular y Celular de las células troncales y del epitelio follicular del ovario de *Drosophila*

Funding Agency: Ministerio de Economía y Competitividad. PN-Biología Fundamental y de sistemas (area de Biología Molecular y Celular). Proyecto BFU2012-35446

Participant organisation: CSIC

From: 01.01.2013 To: 31.12.2015 Amount granted: 230,000 EUR (including overheads)

Principal Investigator: Acaimo González Reyes

Number researchers participating in the project: 4

4- Project title: Análisis Genético, Molecular y Celular de las células troncales del ovario de *Drosophila*

Funding Agency: Ministerio de Economía y Competitividad. Dirección General de Investigación Científica y Técnica. PN-Biología Fundamental y de Sistemas (área de Biología Molecular y Celular).

Proyecto BFU2015-65372

Participant organisation: CSIC

From: 01.01.2016 To: 31.12.2018 Amount granted: 248,000 EUR

Principal Investigator: Acaimo Gonzalez Reyes

Number researchers participating in the project: 3

5- Project title: Decision making in Cell Collectives (DMC2).

Funding Agency: MINECO. María de Maeztu Programme.

Proyecto: MdM-2016-0687

Participant organisations: CSIC

From: July 2016-June 2020

Amount granted: 2,000,000 EUR

Principal Investigator: J. Luis Gómez-Skarmeta (AGR as participating PI)

Number researchers participating in the project: 10

6- Project title: Análisis genético, molecular y celular del nicho de células troncales del ovario y de la morfogénesis epitelial de *Drosophila*.

Funding Agency: Ministerio de Univ., Ciencia e Investigación. Agencia Estatal de Investigación. Programa Estatal de Generación del Conocimiento. Área de Biociencias y Biotecnología (subárea de Biología Molecular y Celular).

Proyecto: PGC2018-097115-B-I00

Participant organisation: CSIC

From: 01.01.2019 To: 31.12.2021

Amount granted: 190,500 EUR

Principal Investigator: Acaimo Gonzalez Reyes

Number of researchers participating in the project: 3

7- Project title: Adquisición de un sistema de microscopia de altas prestaciones para análisis de muestra fijada.



Funding Agency: Ministerio de Ciencia, Innovación y Universidades. Ayudas a la adquisición de equipamiento científico-técnico. Subprograma estatal de infraestructuras de investigación científicas y técnicas y equipamiento (Plan estatal de Investigación científica y técnica y de innovación 2017-2020).

Proyecto: EQC2019-005689-P

Participant organisations: Univ. Pablo de Olavide

From: 2019

Amount granted: 241,266 EUR

Principal Investigator: Acaimo González Reyes

Number of researchers participating in the project: 17

8- Project title: A cellular and biophysical approach to epithelial morphogenesis and tissue homeostasis.

Funding Agency: Junta de Andalucía. Proyecto P20_00888

Participant organisations: Univ. Pablo de Olavide/Centro Andaluz de Biología del Desarrollo.

From: 23.06.2021 To: 31.12.2022 Amount granted: 95,000 EUR

Principal Investigator: M. Dolores Martín Bermudo (AGR as participating PI)

Number of researchers participating in the project: 10

9- Project title: Decision making in Cell Collectives across scales (DMC3).

Funding Agency: Agencia Estatal de Investigación. MINECO. "Ma. de Maeztu" programme.

Proyecto: CEX2020-001088

Participant organisations: CSIC

From: January 2022-December 2025

Amount granted: 1,800,000 EUR

Principal Investigator: J. P. COUSA TAPIA (AGR as participating PI)

Number of researchers participating in the project: 25

10- Project title: Formación, mantenimiento y envejecimiento del nicho de células troncales del ovario de Drosophila.

Funding Agency: Ministerio de Ciencia e Investigación. Agencia Estatal de Investigación. Programa Estatal de Generación del Conocimiento. Área de Biociencias y Biotecnología (subárea de Biología Molecular y Celular). Proyecto: PID2021-125480NB-I00

Participant organisation: CSIC

From: 01.09.2022 To: 31.08.2025

Amount granted: 254,100 EUR

Principal Investigator: Acaimo Gonzalez Reyes

Number of researchers participating in the project: 6

C.4. Contracts, technological or transfer merits

C.5. Major committee assignments

2000-Present Grant reviewer for the Spanish Ministry of Science, the Biotechnology and Biological Sciences Research Council (BBSRC; UK), the National Science Foundation (NSF; USA), the Foundation for Science and Technology (Portugal), Agencia Nacional de Promoción Científica y Tecnológica (Argentina), la Agence Nationale de la Recherche (ANR; Francia).

2000-Present *Ad hoc* reviewer for Development, Journal of Cell Science, Nature Cell Biology, Current Biology, Developmental Biology, Developmental Dynamics, Mechanisms of Development, Experimental Cell Research, Genetics, EMBO Reports, International Journal of Developmental Biology, Molecular and Cellular Biology, PLoS Genet., PLoS One, Cells.

2012 External expert. Evaluation Committee of the Jacques Monod Institute (Paris).

2014-2018 Co-manager (with two other colleagues). Agencia Estatal de Investigación (National Research Agency). Programme of Fundamental Biology (BFU), Sub-programme of Molecular and Cellular Biology (BMC).

C.6. Otros

2001 Elected **EMBO YIP** (Young Investigator Programme)

2004-2007 **Vice-Director** Andalusian Centre for Developmental Biology (CABD).

2007-2011 **Director** Andalusian Centre for Developmental Biology (CABD).

2021- **Member** of the editorial board, GENES journal.