CV date	6/02/2022

Part A. PERSONAL INFORMATION

First name	Alicia Elena		
Family name	Rosales Nieves		
Gender	Female	Date of Birth	19/12/1979
ID number	77941638C		
e-mail	aerosales-ibis@us.es		
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-9119-1604		

A.1. Current position

Position	Postdoctoral Researcher		
Initial date	15/05/2019		
Institution	Instituto de Biomedicina de Sevilla-CSIC		
Country	Spain	Phone number	+34 626631330
Keywords	Neuroscience, Cell Biology, Developmental Biology		

A.2. Previous positions (research activity interruptions)

Period	Position/Institution/Country/Cause of the interruption
2017-2019	Posdoctoral Juan de la Cierva-Formación fellow / Instituto de Biomedicina de Sevilla (CSIC)
2014-2017	Postdoctoral Researcher / Centro Andaluz de Biología del Desarrollo (CSIC)
2014 - 2014	Maternity leave
2008 - 2013	PhD Student / Centro Andaluz de Biología del Desarrollo (CSIC)
2006 - 2007	PhD Student Marie Curie -Research Training Networks- / Centro de Biología Molecular Severo Ochoa (CSIC)
2003 - 2006	Research Technician II / Fred Hutchinson Cancer Research Center / United States of America

A.3. Education

PhD, Graduate Degree	University/Country	Year
PhD Molecular Biology	Universidad Pablo de Olavide	2013
Advanced Studies Diploma	Universidad Autónoma de Madrid	2008
Bachelor's Degree in Biology	Universidad Central de Venezuela	2003

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

I obtained my degree in Biology (UCV-Venezuela) in 2003 and immediately moved to USA and joined the laboratory of Dr. Susan Parkhurst [Fred Hutchinson Cancer Research Center (FHCRC) – Seattle] as a research technician, there I had a great opportunity to work on developmental biology, studying cytoskeleton dynamics. I had my own research project and collaborated in others from the lab. Particularly, I characterized the role of the cytoskeleton effector proteins, Spire and Cappuccino in regulating the onset of ooplasmic streaming during Drosophila oogenesis. This work was published in *Nature Cell Biology* (Rosales-Nieves, A.E., et al., 2006). I participated in two other projects learning about the transcriptional conserved networks that control early embryonic development; 1) looking at targets of transcriptional repressor Hairy (Bianchi-Frias, D., et al., 2004) and 2) elucidating a new mechanism by the dMyc–Groucho complex regulating early neuronal development (Orian, A., et al., 2007). Over the span of three and a half years that I worked at the FHCRC I gave several talks including the Friday night seminar, addressed to all the center's researchers and the Seattle Fly Club, a regular meeting of all Seattle area scientists interested in Drosophila. The Fly Club is hosted by labs from the University of Washington and the Fred Hutchinson. I also attended the GSA Drosophila Conference in 2004 and 2005.

After discovering the wonders and potentials of working with Drosophila as model system to study conserved regulatory pathways, I decided to come to Spain where the school of developmental biology is renowned. Thus, in fall 2006 I joined the Molecular Biology PhD program from the Universidad Autonoma de Madrid. After a year in Madrid, and for personal reasons, I moved to Seville to start my PhD thesis at the Centro Andaluz de Biología del Desarrollo (CABD). I began my thesis project in 2008 under the supervision of Dr. Acaimo González-Reyes and continue working on Drosophila Oogenesis. We studied Germline Stem Cell division and mapped and characterized a new mutation that prevents the germline survival in larval development. We discovered that Pointed, an ETS-transcription factor, controls Germline Stem Cells division and was the gene responsible for the mutation. We did microarray analysis looking for the targets of *Pointed*. I defended my PhD thesis in 2013 and continue dissecting the locus of *pointed* to assess the functions of the different isoforms. We are currently preparing a manuscript to which I'm the corresponding author. After my thesis defense, I stayed in Dr. Gonzalez-Reyes Laboratory for a few more years and collaborated in two different studies describing how laminins control tissue migration during egg formation (Díaz de la Loza, M. C., 2017) and the role of the ECM protein component, Perlecan, in the niche formation (Díaz-Torres, A., 2021).

In 2015 I was awarded with a postdoctoral Juan de la Cierva–formación fellowship to do my postdoctoral training at the Instituto de Biomedicina de Sevilla (IBiS), working in the laboratory of Dr. Alberto Pascual. I started at IBiS in 2017 and focused our research on understanding the cellular dynamics around the Aß extracellular deposits in Alzheimer's disease (AD) brains. We have learned that both patients and mouse models accumulate points of low oxygen around Aß plaques. These hypoxic foci lead to the accumulation of angiogenic markers but paradoxically, the cerebral microvasculature is reduced around Aß. We have recently demonstrated that Aß plaques are hubs of endothelial disassembly that induce non-productive angiogenesis (Alvarez-Vergara, M., I.*, Rosales-Nieves, A. E.*, et al., 2021). A process aided by the microglia and unchained by reduced presenilin function, a trait of the disease, in endothelial cells.

Internationalization: 3.5 years working as a research technician at the FHCRC in Seattle, Washington, USA (2003 – 2006). I went back to the Fred Hutchinson for a short stay during my PhD (3 month funded/7 total) in 2011-2012.

Teaching and supervising: Masters Biomedicine research. Universidad de Sevilla. Course: Introducción a Tecnologías de Tejidos y Células – 51610024. As senior PHD student and postdoc I have years of experience forming and supervising students in the lab.

Outreach activities: While at CABD I belonged to the Junior Committee whose mission was (and still is) to promote participation of the PhD students and postdocs in the scientific life of CABD. We organized "presentation skills workshops", invited international speakers, organized their agendas, meetings, and activities. For the general audience, I have participated in several editions of the Scientific Fairs organized in Seville for school students of all ages and levels. I have also presented and organized "Pint of Science" in Seville. Likewise, I participate in organizing activities and giving talks in "11th day of February", International Day of Women and Girls in Science.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications

AC: corresponding author. (nº x / nº y): position / total authors.

1. **Rosales-Nieves, Alicia E.** (AC); Marin-Menguiano, Miriam; Campoy-Lopez, Alejandro, and Gonzalez-Reyes Acaimo (AC). (1/4). 2022. Visualisation and quantification of *Drosophila* larval ovaries. Methods in Molecular Biology (Springer).

   Book chapter (invited authors): accepted

2. Alvarez-Vergara, Maria, I.*; **Rosales-Nieves, Alicia E.***; March-Diaz, Rosana; et al; Pascual, Alberto (AC). (1/30). 2021. Non-productive angiogenesis disassembles Aß plaque-associated blood vessels. *Nature Communications*. 12-1. ISSN 2041-1723. https://doi.org/10.1038/s41467-021-23337-z

   *Joint first authors. Citations = 4

3. Diaz-Torres, Alfonsa; **Rosales-Nieves, Alicia E.**; Pearson, John R.; Santa-Cruz Mateos, Carmen; Marin-Menguiano, Miriam; Marshall, Owen J.; Brand, Andrea H.; Gonzalez-Reyes, Acaimo (AC). (2/8). 2021. Stem cell niche organization in the Drosophila ovary requires the ECM component

Perlecan. *Current Biology*. 31-8, pp.1744-+. ISSN 1879-0445. https://doi.org/10.1016/j.cub.2021.01.071

Citations = 4

4. March-Díaz, Rosana; Lara-Ureña, Nieves, Romero-Molina, Carmen,... **Rosales-Nieves, Alicia E.**; Vitorica Javier (AC); Pascual, Alberto (AC). (10/20). 2021. Hypoxia compromises the mitochondrial metabolism of Alzheimer's disease microglia via HIF1. *Nature Aging*. 1, pp.385-399. ISSN 2662-8465. https://doi.org/10.1038/s43587-021-00054-2

   Citations = 8

5. Diaz de la Loza, Maria C.; Diaz-Torres, Alfonsa; Zurita, Federico; **Rosales-Nieves, Alicia E.**; Moeendarbary, Emad; Franze, Kristian; Martin-Bermudo, Maria D.; Gonzalez-Reyes, Acaimo (AC). (4/8). 2017. Laminin Levels Regulate Tissue Migration and Anterior-Posterior Polarity during Egg Morphogenesis in Drosophila. *Cell Reports*. 20-1, pp.211-223. ISSN 2211-1247. https://doi.org/10.1016/j.celrep.2017.06.031

   Citations = 33

6. **Rosales-Nieves, Alicia E.**; Gonzalez-Reyes, Acaimo. (1/2). 2014. Genetics and mechanisms of ovarian cancer: Parallels between Drosophila and humans Seminars In Cell & Developmental Biology. 28, pp.104-109. ISSN 1084-9521. https://doi.org/10.1016/j.semcdb.2014.03.031

   Citations = 28

7. Rodriguez-Mesa, Evelyn; Abreu-Blanco, Maria Teresa; **Rosales-Nieves, Alicia E.**; Parkhurst, Susan M. (3/4). 2012. Developmental expression of Drosophila Wiskott-Aldrich Syndrome family proteins. *Developmental Dynamics*. 241-3, pp.608-626. ISSN 1058-8388. https://doi.org/10.1002/dvdy.23742

   Citations = 33

8. Orian, Amir; Delrow, Jeffrey J.; **Rosales-Nieves, Alicia E.**; Abed, Mona; Metzger, David; Paroush, Ze'ev; Eisenman, Robert N.; Parkhurst, Susan M. (3/8). 2007. A Mvc-Groucho complex inteqrates EGF and Notch signaling to regulate neural development *Proceedings of the National Academy of Sciences of the United States of America*. 104-40, pp.15771-15776. ISSN 0027-8424. https://doi.org/10.1073/pnas.0707418104

   Citations = 56

9. **Rosales-Nieves, Alicia E.***; Johndrow, JE*; Keller, LC*; Magie, CR; Pinto-Santini, DM; Parkhurst, SM. (1/6). 2006. Coordination of microtubule and microfilament dynamics by Drosophila Rho1, Spire and Cappuccino. *Nature Cell Biology*.8-4, pp.367-U47. ISSN 1465-7392. https://doi.org/10.1038/ncb1385

   *Joint first authors. Citations = 117

10. Bianchi-Frias, D; Orian, A; Delrow, JJ; Vazquez, J; Rosales-Nieves, Alicia E; Parkhurst, SM. (5/6). 2004. Hairy transcriptional repression targets and cofactor recruitment in Drosophila. Plos Biology. 2-7, pp.975-990. ISSN 1545-7885. https://doi.org/10.1371/journal.pbio.0020178

    Citations = 116

Source for citations: *Google scholar.*

C.2. Congresses

Rosales-Nieves, Alicia E.; González-Reyes, Acaimo. The ETS transcription factor Pointed is essential for germ line survival in *Drosophila melanogaster*. 23rd European Drosophila Research Conference. Barcelona, Spain. 16 – 19 October 2013. Participatory – poster.

Rosales-Nieves, Alicia E.; Craig R. Magie; Parkhurst, Susan. Spire, a WH2-containing protein, works with the Rho1 GTPases to regulate cytoskeletal dynamics. 46th Annual Drosophila Research Conference. San Diego, USA. 30 March – 3 April, 2005. Participatory – poster.

Orian, A., Bianchi-Frias, D., Delrow, J.J., Vazquez, J., **Rosales-Nieves, Alicia E.**, Eisenman, R.N., Parkhurst, S.M. Hairy transcriptional repression; direct targets, and cofactor Recruitment in *Drosophila*. 45th Annual Drosophila Research Conference. Washington, DC, USA. 24 – 28 March 2004. Participatory – poster.

C.3. Research projects

- Microglial and endothelial roles and interactions in Alzheimer's disease (Endoglia). Funding body: European Commission – MSCA Postdoctoral Fellowships - Global Fellowships 2021. PI: Alicia E. Rosales-Nieves (Universidad de Sevilla, Spain – University of Victoria, Canada). 183.530,40 €. Results to be published in March 2022.
- Caracterización de la pérdida progresiva de vasos por angiogénesis no productiva, un nuevo mecanismo patológico en la enfermedad de Alzheimer. Funding body: Ministerio de Ciencia e Innovación. PI: Alberto Pascual Bravo. 01/01/2019 – 31/12/2021. 193.600 € (RTI2018-096629-B-100). Team member: postdoctoral researcher.
- Uso de hiperoxia combinada con agentes normalizadores de la vasculatura para el tratamiento de la enfermedad de Alzheimer, una prueba de concepto. Funding body: Fundacion Domingo Martinez. PI: Alberto Pascual Bravo. 01/01/2018 – 31/12/2019. 150.000 €. Team member: postdoctoral researcher.
- Role of the HIF/PHD signaling pathway in microglia: implications for Alzheimer's disease. Funding body: Ministerio de Ciencia e Innovación. Alberto Pascual Bravo. 01/01/2016 – 31/12/2018. 217.800 € (SAF-2015-64111R). Team member: postdoctoral researcher.
- Mobility fellowship by Spanish National Research Council. Title: “Role of the ECM in ovarian stem cell niche architecture and in embryonic wound healing in Drosophila”. 15/09/2011. 7950 €. 90 days at the Fred Hutchinson Cancer Research Center, Seattle, USA. Grant holder.
- Análisis genético, molecular y celular de las células troncales del ovario de *Drosophila*. Funding body: Ministerio de Educación y Ciencia. PI: Acaimo Gonzalez Reyes. 01/01/2010 – 31/12/2012. 245.630 € (BFU2009-08013). Team member: PhD Student.
- Estudio de las interacciones célula-matriz extracelular en el mantenimiento de las celulas troncales y en el control de la migración e invasión celular. Funding body: Junta de Andalucía – Proyectos de Excelencia. PI: Maria Dolores Martin Bermudo. 01/01/2010 – 31/12/2012. 236.839,68 € (P09-CVI-5058). Team member: PhD Student.
- Consolider project: From Genes to Shape: analysis of morphogenesis in Drosophila and vertebrates. Subproject “Organ size and differentiation”. Funding body: Ministerio de Educación y Ciencia. PI: Gines Morata. 01/10/2007 – 30/09/2012. 135.000 € (CSD-2007-00008). PhD Student.

C.4. Technology/Knowledge transfer

Title registered industrial property: *Non-productive angiogenesis inhibitor for use in the treatment of alzheimer's disease*. Inventors/authors/obtainers: **Alicia Elena Rosales Nieves**; María Isabel Álavarez Vergara; Alberto Pascual Bravo. Nº of application: 20382318.2 – 1112. Country of inscription: Germany. Date registered: 24/04/2020.