

Part A. PERSONAL INFORMATION**CV date**

5/06/2026

First and Family name	Berta Alsina Español		
Social Security, Passport, ID number			
Researcher codes	Open Researcher and Contributor ID (ORCID**)		
	SCOPUS Author ID (*)		
	WoS Researcher ID (*)		

A.1. Current position

Name of University/Institution	Universitat Pompeu Fabra		
Department	Ciències Experimentals i de la Salut		
Address and Country	Dr. Aiguader 88, 08003 Barcelona		
Phone number		E-mail	
Current position	Profesor Catedrático de Universidad	From	20/02/2025
Key words	Neurobiology, Sensory organs, morphogenesis, gene regulation, cell signaling, zebrafish, vertebrates		

A.2. Education

PhD, Licensed, Graduate	University	Year
Bsc in Biology	Universidad Autónoma de Barcelona	1994
PhD in Biology, speciality genetics	Universidad de Barcelona	1999

A.3. General indicators of quality of scientific production (*see instructions*)

- Sexennials ANECA: 4 (1996-2001, 2002-2007, 2008-2013 , 2014-2019)
- Sexennials AQU: 4 (1996-2001, 2002-2007, 2008-2013 , 2014-2019)
- 5-year term teaching AQU-UPF: 5 (1995-2002, 2002-2007, 2007- 2012, 2012-2017, 2018-2022)
- PhD supervised: 12 (8 defended, 4 ongoing)
- Total number publications: 40 (37 manuscripts and 3 book chapters)
- H-index= 22

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

Berta Alsina is a **full professor at Depart Medicine and Life Sciences at Pompeu Fabra University (UPF)** since 2025. PhD from the University of Barcelona in 1999, postdoctoral fellow at UCLA (USA, Dr. Cohen-Cory lab; 1999-2001) and UPF (Dr. Giráldez, 2001-2003). In 2003 she started as an independent principal investigator with a Ramon y Cajal contract. Berta Alsina has had continuous funding since 2005 and has directed 8 doctoral theses and four more are in progress. She combines her research with teaching activities at the degrees of Human Biology, Medicine and Biomedical Engineering (coordinator of 3 courses). She has been Vice-Director of the Department of Medicine and Life Sciences since 2020 and previously has served as Secretary of the Dean's Office and Exchange student Coordinator (2014-2016).

With 40 publications in the field and 3 book chapters, her main areas of expertise are Developmental Biology, Genetics, Molecular Biology, Neurobiology. Her research is of excellence, as shown by publications in high-impact journals in the last years (Cell Reports, Nature Communications, Nature Neurosciences, eLife, Molecular Cell, Development, Journal of Neurosciences), oral presentations at prestigious international meetings or institutions (Gordon Conference, EMBO Conference, FENS, SEBD, King's College, NIH and UCL), evaluations of articles and grant evaluation panels as an international expert, as well as organization of three international congresses.

The main focus of Alsina's group is to understand the molecular and cellular basis of organogenesis in vertebrates, focusing on the organ of the inner ear. Her first period as an independent researcher (2003-2009), the laboratory focused on the study of cell signalling during patterning and the specification of neuronal progenitors in the ear (Neves et al., 2007; Abelló et al., 2009; Abelló et al., 2010; Radosevic et al., 2011). In 2009, the laboratory incorporated the zebrafish as model organism in order to incorporate new genetic manipulation techniques (transgenesis, in vivo single-cell labelling, crispr, study of regulatory genomic elements), in vivo monitoring of cell

behaviour and temporal quantification and tracking of gene expression (Rubбини et al. 2015, J Neuroscience; Robert-Moreno et al., 2011, PloS One; Naranjo et al., 2010, Human Genetics; Hoijman et al. .2015, Nature Commun, Hoijman et al., 2017, eLife, Taberner et al. Cell Reports, 2021 and Journal of Anatomy, 2018, among others). Currently the laboratory has efficiently set up novel gene editing technologies (Cas9 and Cas13, Knock-ins), high-throughput OMIC technologies and human inner ear organoid model to link gene regulation with hearing loss.

Part C. RELEVANT MERITS

C.1. Most important publications in books and journals with "peer review"

1. Rumbo M, Bañón A, Nechiporuk A, **Alsina B** (submitted JCB). The Cxcl14 chemokine defines pioneer axon guidance and early circuit assembly in the inner ear.
BioRxiv:<https://www.biorxiv.org/content/10.64898/2026.05.21.726833v1>
2. Roncero-Carol, J., Olaizola-Muñoz, J., Arán, B., Mularoni, L.S., Miret-Cuesta, M., Blanco-Cabra, N., Casals, M., Rumbo, M., Solé Inarejos, M., Ojosnegros, S., **Alsina, B.**, Torrents, E., Veiga, A., Irimia, M., Hoijman, E. (2025) Epithelial cells provide immunocompetence to the early embryo for bacterial clearance. **Cell Host and Microbe**, 33 (7), pp. 1106 - 1120.e8. doi: 10.1016/j.chom.2025.05.025
3. Rumbo, M., **Alsina, B.** (2024). Cellular diversity of human inner ear organoids revealed by single-cell transcriptomics. **Development**. (Cambridge), 151 (23), art. no. dev202524, doi: 10.1242/dev.202524
4. Bañón A and **Alsina B** (2023). Pioneer statoacoustic neurons guide neuroblast behaviour during otic ganglion assembly. **Development** 150(21):dev201824. doi: 10.1242/dev.201824. A
5. **Alsina B**, Heller S and Varela-Nieto I (2022). Editorial from Research Topic Inner Ear Biology: Development, Physiopathology, Repair and Recovery. **Frontiers in Cell and Developmental Biology**. R
6. Nomdedeu-Sancho G, **Alsina B.** (2022). Wiring the senses: Factors that regulate peripheral axon pathfinding in sensory systems. **Dev Dyn** 252(1):81-103 doi: 10.1002/dvdy.523. R
7. Samper-Martín B, Sarrias A, Lázaro B, Pérez-Montero M, Rodríguez-Rodríguez R, Ribeiro MPC, Bañón A, Wolfgeher D, Jessen HJ, **Alsina B**, Clotet J, Kron SJ, Saiardi A, Jiménez J, Bru S. Polyphosphate degradation by Nudt3-Zn2+ mediates oxidative stress response. (2021). **Cell Reports**. 37(7):110004. doi: 10.1016/j.celrep.2021.110004. A
8. **Alsina B.** (2020). Cell specification in vertebrate sensory organs and cranial ganglia. **Current Opinion Cell Biology**. 67:79-85 A
9. Taberner I. Bañón A, **Alsina B.** (2020). Sensory neuroblast quiescence depends on vascular cytoneme contacts and sensory neuronal differentiation requires initiation of blood flow. **Cell Reports** 32 (2), 107903 5-year A
10. Taberner L, Bañón A, **Alsina B.** (2018). Anatomical Map of the cranial vasculature and sensory ganglia. **Journal of Anatomy**, 232(3):431-439 A
11. Hoijman E, Fargas L, Blader P and **Alsina B** (2017). Pioneer neurog1 expressing cells ingress into the otic epithelium and instruct neuronal specification. **eLife**. 6. pii: e25543. doi: 10.7554/eLife.25545-year A
12. **Alsina B** and Whitfield TT (2016). Sculpting the labyrinth: morphogenesis of the developing inner ear. **Semin Cell Dev Biol**. S1084-9521(16)30311-1 R
13. Streit A and **Alsina B** (2016). Morphogenetic Mechanisms of Inner ear Development. 235- 258. Springer Book. Organogenetic Gene Networks, Editors Bovolenta P and Castelli-Gair J. ISBN 978-3-319-42765-2 CL
14. Pujadas G, Cervantes S, Tutusaus A, Ejarque M, Sanchez L, García A, Esteban Y, Fargas L, **Alsina B**, Hartmann C, Gomis R, Gasa R. (2016). Wnt9a deficiency discloses a repressive role of Tcf7l2 on endocrine differentiation in the embryonic pancreas. **Sci Rep**. 6:19223 A
15. Rubбини D, Robert-Moreno À, Hoijman E, **Alsina B.** (2015). Retinoic acid mediates Hair Cell regeneration by prepressing p27kip and sox2 in supporting cells. **J Neurosc.** 35(47):15752-66. A
16. Hoijman E and **Alsina B** (2015). Cavity morphogenesis: imaging mitotic forces in action. **Cell Cycle**, 14(18):2867-2868 A
17. Hoijman E, Rubбини D, Colombelli J and **Alsina B** (2015). Mitotic cell rounding and epithelial thinning regulate lumen growth and shape. **Nature Commun** 16;6:7355. A
18. Iturbide A, Pascual-Reguant L, Fargas L, Cebrià JP, **Alsina B**, García de Herreros A, Peiró S. (2015). LOXL2 Oxidizes Methylated TAF10 and Controls TFIIID-Dependent Genes during Neural Progenitor Differentiation. **Mol Cell**. 4;58(5):755-66. A
19. Radosevic M, Fargas L and **Alsina B** (2014). The role of her4 in inner ear development and its relationship with proneural genes and Notch signalling. **PLoS One** 9(10):e109860. A
20. Maier EC, Saxena A, **Alsina B**, Bronner ME, Whitfield TT (2014). Sensational placodes: Neurogenesis in the otic and olfactory systems. **Dev Biol** 389(1):50-67. A

21. Mora N, Almudi I, **Alsina B**, Corominas M, Serras F (2012). beta-amyloid protein precursor like (Appl) is a Ras1/MAPK regulated gene required for axonal targeting in Drosophila photoreceptor neurons. **J Cell Sci.** 126(Pt 1):53-9. A
22. Radošević M, Robert-Moreno A, Coolen M, Bally-Cuif L and **Alsina B**. (2011). Her9, a zebrafish Hes1 ortholog, represses neurogenic fate in the inner ear downstream of Tbx1 and RA. **Development** 138(3):397-408. A
23. Robert-Moreno A, Naranjo S, de la Calle-Mustienes E, Gómez-Skarmeta JL, **Alsina B**. (2010). Characterization of new otic enhancers of the pou3f4 gene reveal distinct signaling pathway regulation and spatio-temporal patterns. **PLoS One.** 5(12):e15907. A
24. Naranjo S, Voesenek K., de la Calle-Mustienes E., Robert-Moreno A., Kokotas H., Grigoriadou M., Economides J., Van Camp G., Hilgert N., Moreno F., **Alsina B.**, Petersen M., Kremer H. , Gomez-Skarmeta, JL. (2010). Multiple enhancers located in a 1 Mb region upstream of POU3F4 promote expression during inner ear development and may be required for hearing. **Human Genetics** 128(4):411-9 A
25. Abelló B, Khatri S., Scotting P., Giráldez F., **Alsina B**. (2010). Independent regulation of Sox3 and Lmx1b by FGF and BMP signaling gradients determines the neurogenic and nonneurogenic domains in the otic placode. **Dev Biol.** 339(1):166-78 A
26. **Alsina B.**, Garcia-Lomana, Villà J., Giráldez F. (2009). Developmental Biology and Mathematics: the rules of an embryo. VOLUME AMS-RSME 492:1-12. **Selected Topics in Mathematics, Development and Cancer.** Ed F Giraldez and MAHerrero. CL
27. Alsina B. **Giráldez F.** and Pujades C (2009). Patterning and cell fate in ear development Int. J. **Dev. Biol.** 53(8-10):1503-13. A
28. Bell D, Streit A, Gorospe I, Varela-Nieto I, **Alsina B**, Giraldez F. (2008). Spatial and temporal segregation of auditory and vestibular neurons in the otic placode. **Dev Biol.** 322(1):109-20. A
29. Abelló G., Giráldez F, **Alsina B** (2007). Early regionalization of the otic placode and its regulation by Notch signaling pathway. *Mechanisms of Development*, 124(7-8):631-45. A
30. Abelló G and **Alsina B** (2007). Establishment of a proneural field in the inner ear. **Int. J. Dev. Biol.** 51(6-7):483-93. A
31. Neves J., Kamaid A., **Alsina B.**, Giráldez F. (2007). Sox2 expression in the developing inner ear of the chick embryo. **J. Comp. Neurol** 503(4):487-500. A
32. Pujades C., **Alsina B.**, Giráldez F. (2006). BMP4 regulates the development of hair-cells by modulating progenitor cell survival. **Dev. Biol.** 292(1):55-67. A
33. Aragon F., Vazquez-Echeverria C., Ulloa E., Reber M., Cereghini S., **Alsina B.**, Giraldez F., Pujades C. (2005). vHnf1 regulates specification of caudal rhombomere identity in the chick hindbrain. **Dev Dyn.** 234(3):567-76. A
34. **Alsina B.**, Abelló G., Ulloa E., Pujades C. and Giráldez F. (2004). FGF signaling is required for determination of otic neuroblasts in the chick embryo. **Dev. Biol.** 267(1):119-34. A
35. **Alsina B.**, Giráldez F. and Varela-Nieto I. (2003). Growth factors and early development of otic neurons: interactions between intrinsic and extrinsic signals. **Current Topics in Developmental Biology**, Development of the Auditory and Vestibular Systems. Molecular Development of the Inner Ear. Edited by R. Romand and I. Varela-Nieto. Elsevier Academic Press, San Diego, 57:177- 206. CL
36. Camarero G, Leon Y, Gorospe I, De Pablo F, **Alsina B**, Giraldez F and Varela-Nieto I (2003). Insulin-like growth factor 1 is required for survival of transit-amplifying neuroblasts and differentiation of otic neurons. **Dev. Biol.** 267(1):119-34 A
37. **Alsina B.**, Vu T. y Cohen-Cory S. (2001). Visualizing synapse formation in arborizing optic axons in vivo: dynamics and modulation by BDNF. **Nat Neurosci.**, 4(11):1093- 1101. A
38. Serras F., Morey M., **Alsina B.**, Baguñà J. y Corominas M. (2001). The Drosophila selenophosphate synthetase (selD) gene is required for development and cell proliferation. **Biofactors**, 14(1-4), 143- 149. A
39. **Alsina B.**, Corominas M., Berry M., Baguñà J. y Serras F. (1999) Disruption of selenoprotein biosynthesis affects cell proliferation in the imaginal discs and brain of Drosophila melanogaster. **J Cell Sci.**, 112 (Pt 17):2875-2884 A
40. **Alsina B.**, Serras F., Baguñà J. y Corominas M. (1998). patufet, the gene encoding the Drosophila melanogaster homologue of selenophosphate synthetase, is involved in imaginal disc morphogenesis. **Mol Gen Genet.**, 257(2), 113-123. A
41. Roch F., Serras F., Cifuentes F. J., Corominas M., **Alsina B.**, Amorós M., López-Varea A., Hernández R., Guerra D., Cavicchi S., Baguñà J. y García-Bellido A. (1998). Screening of larval/pupal P-element induced lethals on the second chromosome in Drosophila melanogaster: clonal analysis and morphology of imaginal discs. **Mol Gen Genet.** , 257(2), 103- 112. A

C.2. Congress. (Invited speaker, SS selected speaker)

1. Rumbo M, Bañon A, **Alsina B (SS)**. 7th European Zebrafish PI Meeting, Paris, April 2025
2. **Alsina B (IS)**, Societat Catalana de Biologia, Barcelona, 7th February 2024
3. **Alsina B (IS)**, 18th Meeting Sociedad Biología del Desarrollo, Sant Feliu de Guixols, Oct 2024
4. Organizer and chair Group Session "Developmental Biology and Genomic Modifications", SEBBM meeting Malaga 2022, Zaragoza 2023, A Coruña 2024
5. **Alsina B (IS)**, Oral Communication, SEBBM meeting, A Coruña Sept 2024
6. Bañon A and **Alsina B (SS)**- Oral Communication, 12 European Zebrafish Meeting, Krakow, Poland, July 2023
7. **Alsina B, (IS)**, FENS Symposia "The vestibular system: basic mechanisms, new research tools, and emerging treatments", Paris, July 2022
8. **Alsina B (IS)**, EMBO Workshop "Long Distance cell-cell signalling in development and disease", EXTER, UK April 2022
9. Bañon A and **Alsina B (SS)**- Oral Communication, 3rd Italian Zebrafish Meeting, Napoli, Italy, February 2022
10. **Alsina B, (IS)**. SEBBM -workshop "Developmental Biology and Genomics" group, online 2021
11. Alsina B, invitation, Chair on session of Morphogenesis and Organogenesis, GRC on Neural Crest and Placodes, Luca, Italy, 2019
12. Taberner L, Bañon A, **Alsina B (SS)**, Oral Communication, Joint Meeting SEBD-SEBC and SEG, Gijón, Spain, 2017
13. **Alsina B, (IS)**, International Meeting "Molecular mechanisms of inner ear development" Baeza, Spain 2012
14. **Alsina B, (IS)**, COST Workshop "Contributions of zebrafish to Neuroscience", Salamanca 2012
15. **Alsina B, (IS)** FENS Satellite Symposia "The pathways of sensory repair: hair cell development and regeneration", Barcelona 2012

C.3. Projects or research lines in which you have participated (2017-2025)

- Mecanismos y estrategias para hacer neuronas sensoriales óticas: un camino para restaurar neuropatías auditivas.

PI: Berta Alsina

MCINN, PID2023-146798NB-I00, 243.000 euros

- PROVIDE: Patient-centered care for vestibular disorders

PI coordinator network. Sonja Pyott,

HORIZON-MSCA-2022-DN-01, 2,663,776.8 euros

- From decoding inner ear neuron identities to an organoid model to study hearing loss

PI: Berta Alsina

MCINN, PID2020-117662GB-I00, 217.800.000 euros

- ReDevNeural 3.0: Un enfoque integrador para entender la lógica del desarrollo neural

PI: Paola Bovolenta

MCINN, RED2018-102553-T, 22.000 euros

- Neurovascular Communication in the peripheral nervous system in vertebrates PI: Berta Alsina

MINECO, BFU2017-82723P; 2018- 2020, 210.540.000 euros

- REDEVNEURAL: un enfoque integrador para entender la lógica del desarrollo neural

PI: Paola Bovolenta

MCINN, BFU2016- 81887-REDT, 20.000

- Como se forma el oído interno: genes, neuronas y forma 3D

PI: Berta Alsina

MINECO, BFU2014-53203P; 2015- 2017, 151250 euros

- REDEVNEURAL: generando diversidad neuronal

PI: Paola Bovolenta

MCINN, BFU2014- 55738-REDT, 30.000 euros

- Estudio in vivo y epigenético del papel del ácido retinoico en la regeneración de las células ciliadas
PI: Berta Alsina
Fundación Ramon Areces, 2012-2015, 102700 euros
- Spatiotemporal control of Neurogenesis in the Inner Ear
PI: Berta Alsina
MICINN, BFU2011-27006; 2011- 2014, 147000 euros

C.5: Others

Research Stays

- 2012- T Whitfield Laboratory, University of Sheffield, UK, 3 months. BE-DGR Beca
- 2009- N Ahituv laboratory, UCSF, USA- 2 months. BE-DGR Beca, 2 months
- 2003- A Streit Laboratory, King's College London, UK, 2 months. EMBO short term fellowship
- 1999-2001-S Cohen-Cory Laboratory, UCLA Postdoctoral Fellow- UCLA, 2 years
- 1998- M Berry Laboratory - Harvard Institutes of Health, US, 1 month
- 1995- A Garcia-Bellido Laboratory - CBM, Madrid- 3 months. Beca DGR

Accreditations

- Graduated with High Honors, 1994
- Awarded Ramon y Cajal, 2003-2008
- Positive Evaluation for Stabilization of Professors UPF- 2011
- Accreditation Professor Agregat AQU-2010
- Accreditation Profesor Titular de Universidad- ANECA 2009
- Accreditation Profesor Contratado doctor- ANECA
- Positive Evaluation Program I3 stabilization professors- 2007
- UPF Scientific Board Evaluation - Very Good, 2017
- Accreditation Profesor Catedrático, ANECA 2023

Organization of National and International Meetings

Organizer Committee: 1st and 3rd UPF-RIKEN Collaborative Symposium (2013 and 2024), Organizer Committee: 11th Meeting of Sociedad Española de Biología del Desarrollo, Palau de Congressos, Girona, SEBD, 2016- 400 participants, Organizer Committee: 8th European Zebrafish Meeting, Palau de Congressos de Catalunya, 2013, 900 participants, Organizer Committee: EMBO Workshop: Frontiers in Sensory Development, PRBB 2011, 200 participants

Teaching UPF (2001-2022)

1) Grado en Biología Humana y Medicina, Developmental Biology (90hr since 2001), curso Biomedicina y Bienestar Planetario (60 horas since 2022); 2) Master Informatics for Health Sciences, UPF, Computational Systems Biology (2004-2008)- 10 hr and Principles in Biomedicine (20 hr since 2008-present); 3) Grado en Bioinformática, UPF- Molecular and Cell Biology (35 hr since 2017).

Management Experience

Vice-director Departament Medicine and Life Sciences, Universitat Pompeu Fabra, 2019-present
Secretary Facultat Ciencias de la Salud y de la Vida and Mobility Exchange Coordinator - 2014-2016
Board of Directors of SEBD- 2014-2020

Reviewer for eLife, PLoS Genetics, Development, Developmental Biology, MoD, Developmental Neurobiology, PLoS One, Biology Open, Advance Sciences

Grant Reviewer: ANEP, Wellcome Trust, DFG, CONICYT, Portuguese National Agency of Science, Hong Kong Research Council, Czech Science Foundation, Agir pour l'Audition, , National Natural Science Foundation of China (NSFC) , ERC StG

**Participation in Expert Panels**

Comision Juan de la Cierva ANEP 2023

Comisión Expertos ANEP-AEI, comision BIO-BMC 2022

ERA NET Neuron-2020 on Sensory Disorders

PhD and Master Thesis Supervision

Paula Mayo (in progress), Ricardo Camacho (in progress), Lucas Cunha (in progress), Mireia Rumbo (in progress), Nerea Montedeoca (defended 2025), Aitor Bañón (defended 2023), Laura Taberner (defended 2019), Laura Fargas (defended 2016), Davide Rubbini (defended 2016), Marija Radošević (defended 2011), Safia Khatri (defended 2009), Gina Abelló (defended 2008)

Master: 11 Master Research Projects (BIST, UPF, UB)