| Fecha del CVA | 02/08/2025 |
|---|---|

## Parte A. DATOS PERSONALES

| | | | |
|---|---|---|---|
| Nombre * | Florencio | | |
| Apellidos * | Serras Rigalt | | |
| Sexo * | Hombre | Fecha de Nacimiento * | [redacted] |
| DNI/NIE/Pasaporte * | [redacted] | Teléfono * | [redacted] |
| URL Web | | | |
| Dirección Email | [redacted] | | |
| Identificador científico | Open Researcher and Contributor ID (ORCID) * | [redacted] | |
| | Researcher ID | [redacted] | |
| | Scopus Author ID | | |

* Obligatorio

### A.1. Situación profesional actual

| | | | |
|---|---|---|---|
| Puesto | Catedrático de Universidad | | |
| Fecha inicio | 2019 | | |
| Organismo / Institución | Universitat de Barcelona | | |
| Departamento / Centro | Departamento de Genética, Microbiología y Estadística / Facultad de Biología | | |
| País | España | Teléfono | [redacted] |
| Palabras clave | | | |

### A.2. Situación profesional anterior

| Periodo | Puesto / Institución / País |
|---|---|
| 1993 - 2019 | Profesor Titular de Universidad (Associate Professor) / Universidad de Barcelona |
| 1990 - 1993 | Postdoc / University of California Irvine (USA, 1990-1991) and Utrecht University (The Netherlands, 1992-1993) |
| 1986 - 1989 | PhD student / Utrecht University |
| 1984 - 1986 | Research assistant / Utrecht University |

### A.3. Formación académica

| Grado/Master/Tesis | Universidad / País | Año |
|---|---|---|
| Biologie (Ciencias Biológicas) | University of Utrecht / Holanda | 1989 |
| Biología | Universidad de Barcelona | 1982 |

## Parte B. RESUMEN LIBRE DEL CURRÍCULUM

Resumen del CV -

I graduated in Biology in 1982 by the University of Barcelona. I moved to the Utrecht University in 1984, where I started as research assistant and later on as PhD student. I defended the PhD Thesis in 1989 at the University of Utrecht (The Netherlands) under the supervision of Prof. J.A.M. van den Biggelaar. After the Thesis, I moved to the University of California at Irvine (UCI) at the laboratory of Prof. Scott E. Fraser (1990, 1991) where I was introduced to the techniques of cell labeling and confocal imaging in living embryos and embryonic tissues. The main topic throughout these initial steps, was the understanding of the control of cell communication in embryonic development of different animal models. During a second postdoc in Utrecht (1992-1993) with Prof. Van den Biggelaar, I developed skills on the analysis of early developmental events that organize embryonic epithelia. All these early experiences focused on cell signaling and will influence my entire career. During the pre- and postdoctoral experiences I also mastered bioimaging technology applied to gene expression in embryos. In 1993, I moved to the University of Barcelona where I joined Dr. Montserrat Corominas and Dr.

Jaume Baguña in the endeavor to start a new research team on Drosophila genetics . To this aim, from late 1993 to 1995 I moved to the laboratory of Prof. Antonio García Bellido (Centro de Biología Molecular, Madrid). From 1995-1997, I worked between Barcelona and Madrid in close collaboration with Prof. García Bellido. After a sabbatical leave at the laboratory of Prof. Ernst Hafen (University of Zurich, 2001), I started a research line on signaling mechanisms during cell specification. From 2002 onwards, I introduced to my group the technology to explore imaginal disc regeneration as model for epithelial regeneration. A visit to Prof. Janos Szabad (University of Szeged, 2008) was a turning point to incorporate the classical techniques of regeneration studies in Drosophila. After that, Dr. M. Corominas and myself developed a pioneer technique for genetically remove tissues for regeneration studies, an initiative that represented the kick off of multiple studies on the genetics of regeneration. The core of my current research pursues to understant (1) the early events that drive epithelial regeneration, homeostasis and repair and (2) the transcriptional control of growth and regeneration.

I published 82 international publications, from which 77 are indexed, most in Q1. The impact of my recent work can be summarized in five main discoveries. First, JNK signaling is key in wound healing and regeneration Drosophila imaginal disc epithelium. Second, the development of a technique for regeneration studies based on genetic ablation. Third, the discovery that MAPK Ask1 acts a molecular hub that integrates signaling from reactive oxygen species, TNFR and the insulin pathway. Fourth, damaged cells act as sources of oxidative stress, a signal for the onset of regeneration. Fifth, phosphorylated p38 responds to ROS and is pivotal for triggering undamaged cells to replace the lost parts. During the entire period of my scientific life, I have had financial support. Since I started in Barcelona (1993), the main source of grants has been generated by Spanish government calls in addition to two EU grants.

I have been appointed as secretary of the Institute of Biomedicine of the University of Barcelona (2007-2016) and currently in the board of this institute. My recent contribution to the technological development and innovation has been to develop nano-devices for measuring cell properties in human tissues and biopsies. This has been intensified after being awarded in 2021 with a EU grant in which I am the co-PI, and that gathered engineers, cancer researchers, physicists and two companies of the private sector (8P1FET - HORIZON 2020. PILLAR 1-EXCELLENT SCIENCE. FET. Future and Emerging Technologies. Ref. 964808).

I combine research with teaching at the UB. I am the coordinator of the Master in Genetics and Genomics, an international master in which I also teach genetic analysis and bioimaging. I have supervised 11 PhD thesis and numerous graduate and master students. Most of the PhD students are now working either in science or innovation. Also I have participated to the Institutional Teaching Innovation Project of the Faculty of Biology: how to encourage the use of active learning methodologies in theory sessions through the temporary compaction of subjects (2020RIMDA-BIO/016, UB). I am reviewer for numerous journals and grant agencies (ANEP, MRC, FWO, ANR, SNF). I have been awarded 6 times for the 'Period' of research activity (6 Tramos de investigación) and also six times for the 'Period' of teaching activity (6 Tramos de docencia).

## 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**. Esteban-Collado, J.; Fernández-Mañas, M.; Fernández-Moreno, M.; Maeso, I.; Corominas, M.; Serras, F.(/6). 2024. Reactive oxygen species activate the Drosophila TNF receptor Wengen for damage-induced regeneration. The EMBO Journal. 43-17, pp.3604-3626. https://doi.org/10.1038/s44318-024-00155-9

2 **Artículo científico**. Serras, F. (/1). 2022. The sooner, the better: ROS, kinases and nutrients at the onset of the damage response in Drosophila. Frontiers in Cell and Developmental Biology. https://doi.org/10.3389/fcell.2022.1047823

3 **Artículo científico**. Esteban-Collado, J..; Corominas, M.; Serras, F.(/3). 2021. Nutrition and PI3K/Akt signaling are required for p38-dependent regeneration. Development. 148-8, pp.1-7. https://doi.org/10.1242/dev.197087

4 **Artículo científico**. Vizcaya-Molina, E.; Klein, C.C.; Serras, F.; Corominas, M.(3/4). 2020. Chromatin dynamics in regeneration epithelia: Lessons from Drosophila imaginal discs. Seminars in Cell & Developmental Biology. https://doi.org/10.1016/j.semcdb.2019.04.017

5 **Artículo científico**. Santabárbara-Ruiz, P.; Esteban-Collado, J.; Pérez, L.; Viola, G.; Abril, J.F.; Milán, M.; Corominas, M.; Serras, F.(/8). 2019. Ask1 and Akt act synergistically to promote ROS-dependent regeneration in Drosophila. PLoS Genetics. https://doi.org/10.1371/journal.pgen.1007926

6 **Artículo científico**. Vizcaya-Molina, E.; Klein, C.C.; Serras, F.; Mishra, R.; Guigo, R.; Corominas, M.(/6). 2018. Damage- responsive elements in Drosophila regeneration. Genome Research. 28-12, pp.1852-1866. https://doi.org/10.1101/gr.233098.117

7 **Artículo científico**. Mercader, N.; Serras, F.(/2). 2018. Elly Tanaka's passion for exploring animal regeneration. International Journal of Developmental Biology. https://doi.org/10.1387/ijdb.180049fs

8 **Artículo científico**. Hariharan, I.K.; Serras, F. (/2). 2017. Imaginal disc regeneration takes flight.Current Opinion in Cell Biology. https://doi.org/10.1016/j.ceb.2017.03.005

9 **Artículo científico**. Serras, F. (/1). 2016. The benefits of oxidative stress for tissue repair and regeneration.Fly. 10-3, pp.128-133.

10 **Artículo científico**. Santabárbara-Ruiz, P.; López-Santillán, M.; Martínez-Rodríguez, I.; Binagui-Casas, A.; Pérez, L.; Milán, M.; Corominas, M.; Serras, F.(/8). 2015. ROS-Induced JNK and p38 Signaling Is Required for Unpaired Cytokine Activation during Drosophila Regeneration. PLoS Genetics. https://doi.org/10.1371/journal.pgen.1005595

11 **Artículo científico**. Repiso, A.; Bergantiños, C.; Serras, F.(/3). 2013. Cell fate respecification and cell division orientation drive intercalary regeneration in Drosophila wing discs. Development. 140-17, pp.3541-3551.

12 **Artículo científico**. Bergantiños, C.; Corominas, M.; Serras, F.(3/3). 2010. Cell death-induced regeneration in wing imaginal discs requires JNK signalling.Development. 137-7, pp.1169-1179.

13 **Capítulo de libro**. Serras, F.(/1). 2018. Engineered flies for regeneration studies. Regenerative Engineering and Developmental Biology. CRC Press. ISBN 978-1498723312.

14 **Revisión**. Repiso, A.; Bergantiños, C.; Corominas, M.; Serras, F.(4/4). 2011. Tissue repair and regeneration in Drosophila imaginal discs. Development, Growth & Differentiation. 53-2, pp.177-185.

**C.2. Congresos**

1 Serras, F.. Oxidative Stress and Regeneration. Seminar of CBIO, University of Trento. 2020. Italia. Participativo - Ponencia invitada/ Keynote. Congreso.

2 Serras, F.. ROS, Stress and Regeneration. 17th Spanish Society for Developmental Biology Meeting, 18-20 November 2020. 2020. España. Participativo - Ponencia invitada/ Keynote. Congreso.

3 Esteban- Collado, J., Corominas, M,, Serras, F.. Nutrition and PI3K/AKT signaling are required for p38- dependent regeneration. 17th Spanish Society for Developmental Biology Meeting. 2020. España. Participativo - Póster. Congreso.

4 Esteban-Collado, J.; Santabárbara-Ruiz, P.; Corominas, M.; Serras, F.. Ask1 and Akt act synergistically to promote ROS-dependent regeneration in Drosophila.. 26th European Drosophila Reasearch Conference (EDRC, EPFL, Lausanne, Switzerland. 5th-8th September, 2019).. 2019. Suiza. Participativo - Póster. Congreso.
5 Esteban-Collado, J.; Viola, G.; Vizcaya-Molina, E.; Santa Bárbara Ruiz, P.; Corominas, M.; Serras, F.. Sensing tissue damage by oxidative stress in Drosophila. EMBO The Molecular and Cellular Basis of Regeneration and Tissue Repair. 2018. Malta. Participativo - Póster. Congreso.
6 Serras, F.. Tissue Repair in Drosophila Imaginal Discs: From Oxidative Stress to Cytokines. Labex SIGNALIFE Symposium Genetics of Growth and Regeneration. 2015. Francia. Participativo - Ponencia invitada/ Keynote. Congreso.
7 Santabárbara-Ruiz, P.; Corominas, M.; Serras, F. ROS- induced JNK and p38 signaling is required for Unpaired cytokine activation during Drosophila regeneration. EDRC 24th European Drosophila Research Conference. 2015. Alemania. Participativo - Póster. Congreso.
8 Serras, F.. Cell Death and Cell Survival in Epithelial Regeneration of Drosophila Imaginal Discs. EMBO Conference on The Molecular and Cellular Basis of Regeneration and Tissue Repair. 2014. España. Participativo - Ponencia invitada/ Keynote. Congreso.
9 Bergantiños, C.; Repiso, A.; Santa Bárbara, P.; Serras, F.. Intercalary regeneration in wing imaginal discs. 2013 Drosophila Research Conference, Washington, DC. 2013. Estados Unidos de América. Participativo - Ponencia oral (comunicación oral). Congreso.
10 Bergantiños, C.; Serras, F.. Parameters of Drosophila wing imaginal disc regeneration. EMBO Conference on The molecular and cellular basis of regeneration and tissue repair. 2012. Reino Unido. Participativo - Ponencia oral (comunicación oral). Congreso.

**C.3. Proyectos y Contratos**

1 **Proyecto**. 964808, Continuous two-dimensional Stretch monitoring of fresh tissue Biopsies (StretchBio). Unió Europea. Romano Rodriguez, Albert. 01/09/2021-31/05/2026. 1.418.750 €.
2 **Proyecto**. EIN2020-112250, Monitorización continua bidimensional de tensiones en biopsias frescas de tejido. Ministerio de Ciencia e Innovación (MICINN). Romano Rodriguez, Albert. 01/11/2020-31/10/2023. 15.000 €.
3 **Proyecto**. PGC2018-099763-B-I00, Del estrés a la transcripción: Un análisis sistemático de la regeneración. Ministerio de Ciencia, Innovación y Universidades. Corominas Guiu, Montserrat; Serras Rigalt, Florencio. 01/01/2019-30/06/2022. 190.575 €.
4 **Proyecto**. 2017SGR1455, REGnetREG. Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR). Corominas Guiu, Montserrat. 01/01/2017-30/09/2021. 41.937 €.
5 **Proyecto**. FJCI-2017-32443, Contracte del Programa Juan de la Cierva-Formació 2017. Ministerio de Ciencia e Innovación (MICINN); Ministerio de Economía y Competitividad. Ricolo, Delia. 01/04/2019-31/08/2021.
6 **Proyecto**. BFU2015-67623-P, SEÑALES EPITELIALES TEMPRANAS Y LA RED REGULADORA TRANSCRIPCIONAL EN EL CONTROL DE LA REGENERACION. Ministerio de Economía y Competitividad. Florenci Serras Rigalt. 01/01/2016-30/12/2018. 235.200 €.
7 **Proyecto**. TEC2014-62144-EXP, Monitorización bidimensional de tensiones mecánicas en tejidos biológicos. Ministerio de Economía y Competitividad. Romano Rodriguez, Albert. 01/09/2015-31/08/2018. 66.550 €.
8 **Proyecto**. 2014SGR687, Biologia i Genètica del Desenvolupament. Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR). Salo Boix, Emilio. 01/01/2014-30/04/2017.
9 **Proyecto**. Ajuts per impulsar la participació en projectes internacionals de recerca (2016) en el marc del programa Horizon 2020 i altres programes europeus. Modalitat C.. Universitat de Barcelona. Serras Rigalt, Florencio. 01/01/2016-31/12/2016. 8.000 €.
10 **Proyecto**. BFU2012-36888, Regeneración en Drosophila: De la señalización a la cromatina y el control transcripcional. Ministerio de Economía y Competitividad. Corominas Guiu, Montserrat. 01/01/2013-31/12/2015. 138.060 €.