

**ISABEL SALAS, PhD**E-mail: [isalashe@syr.edu](mailto:isalashe@syr.edu)

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## CURRENT POSITION

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Oct 2026- Current      Assistant Professor in Biology Department  
**Syracuse University. New York, USA**

## EDUCATION

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2013- 2017      **Doctor of Philosophy, Biomedical sciences. KU Leuven-VIB, Belgium**  
Mentor: Prof. Bart De Strooper; Co-mentor: Prof. Carlos Dotti.

2012-2013      **Master's Degree in Molecular and Cell Biology**  
Universidad Autónoma de Madrid, Spain

2007-2012      **Bachelor's Degree in Biochemistry**  
Universidad Autónoma de Madrid, Spain

2010-2011      **Erasmus exchange student in Biochemistry**  
University of York, UK

## FELLOWSHIPS & AWARDS

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### FELLOWSHIPS

- Sept 2020- Aug 2024: **Alzheimer's Association Research Fellowship (681410)**.  
Targeting astrocytes to prevent synaptic dysfunction in Alzheimer's disease. Total awarded: \$200,000
- Sept 2020- Aug 2023: **BrightFocus Foundation Postdoctoral Fellowship (A20201645F)**.  
Targeting astrocyte factors to prevent synaptic alterations in Alzheimer's disease. Total awarded: \$200,000

### AWARDS

- August 2025: BrightFocus Alzheimer's Fast Track travel award (\$400)
- October 2024: Woman & Science Salk Institute travel award (\$2,500)
- June 2024: Travel award Keystone Symposia (\$1,200)
- May 2023: Travel award Keystone Symposia (\$1,200)
- August 2022: Travel fellowship Gordon Conference (\$1,200)
- May 2019: Chan Zuckerberg Initiative Community Project to organize a scientific symposium (\$10,000)
- 2012-2013: Master fellowship. Autonomous University of Madrid (3,600€)
- 2010-2011: Erasmus-mundus, Spain (4,000€)

## PUBLICATIONS

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**Salas I.H.**, Paumier A., Tao T., Derevyanko A., (...) Allen NJ. *Astrocyte transcriptomic analysis identifies Glypican 5 downregulation as a contributor to synaptic dysfunction in Alzheimer disease models. In revision in Nature Neuroscience*. Preprint in: *BioRxiv* doi: <https://doi.org/10.1101/2024.10.30.621182> (2024). [Link](#)

**Salas I.H.\***, Alfonso-Triguero M., Díaz-Castro B., Elazar N., Escartin C., Faust Akl C., Hill S.A., Quintana F.J., Arranz A.M.\* *Astrocytes as Therapeutic Targets in Neurodegenerative Disorders. Journal of Neuroscience* 2025 Nov 12;45(46):e1379252025 \* Corresponding author. [Link](#)

Alfonso-Triguero M., Chaudhury D. (...), **Salas IH.**, Alberdi E., Pękowska A., Arranz A.M. *Integrated multi-omics analyses identify ICAM1 as a potential mediator of human astrocyte-driven neurotoxicity in Alzheimer's disease. Submitted.*

Bosworth AP., Contreras M.<sup>#</sup>, Sancho L.<sup>#</sup>, **Salas I.H.**<sup>#</sup>, Weiser Novak S., Manor U., Allen N.J. *Astrocyte glypican 5 regulates synapse maturation and stabilization.* Cell Reports 2025 Mar 25;44(3):115374. <sup>#</sup>These authors contributed equally to this work. [Link](#)

**Salas I.H.**, Burgado J., Allen NJ. *Glia: victims or villains of the aging brain?* Neurobiology of Disease 2020 Sep; 143:105008. [Link](#)

**Salas I.H.\***, De Strooper B. *Diabetes and Alzheimer's disease: A link not as simple as it seems.* Neurochemical Research 2019 Jun;44(6):1271-1278. \*Corresponding author. [Link](#)

**Salas I.H.**, Callaerts-Vegh Z., D'Hooge R., Saido T.C., De Strooper B., Dotti C.G. *Increased insoluble amyloid-beta induces negligible cognitive deficits in old App<sup>NL/NL</sup> knock-in mice.* Journal of Alzheimer's Disease 2018;66(2):801-809. [Link](#)

**Salas I.H.**, Weerasekera A., Ahmed T., Callaerts-Vegh Z., Himmelreich U., D'Hooge R., Balschun D., Saido T.C., De Strooper B., Dotti C.G. *High fat diet treatment impairs hippocampal long-term potentiation without alterations of the core neuropathological features of Alzheimer disease.* Neurobiology of Disease 2018 May; 113:82-96. [Link](#)

**Salas I.H.**, Callaerts-Vegh Z., Arranz A.M., Guix F.X., D'Hooge R., Esteban J.A., De Strooper B., Dotti C.G. *Tetraspanin 6: A novel regulator for hippocampal synaptic transmission and plasticity.* PLoS One 2017 Feb 16;12(2). [Link](#)

Guix FX, Sannerud R, Berditchevski F, Arranz AM, Horr  K, Snellinx A, Thathiah A, Saido T, Saito T, Rajesh S, Overduin M, Kumar-Singh S, Radaelli E, Corthout N, Colombelli J, Tosi S, Munck S, **Salas I.H.**, Annaert W, De Strooper B. *Tetraspanin 6: a pivotal protein of the multiple vesicular body determining exosome release and lysosomal degradation of amyloid precursor protein fragments.* Molecular Neurodegeneration 2017 Mar 10;12(1):25. [Link](#)

Martin MG, Ahmed T, Korovaichuk A, Venero C, Mench n SA, **Salas I.H.**, Munck S, Herreras O, Balschun D, Dotti CG. *Constitutive hippocampal cholesterol loss underlies poor cognition in old rodents.* EMBO Molecular Medicine. 2014 Jul;6(7):902-17. [Link](#)

## MENTORING EXPERIENCE

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- 2024-2025 Mohini Lyer (Research assistant, Salk Institute)  
Chenyu Xu (Undergraduate student, UC San Diego)  
Lily Gano (Undergraduate student, University of Wisconsin-Madison)  
Montserrat Rodriguez (Neuroscience Graduate School, UC San Diego)
- 2023-2024 Melia Movsesian (Undergraduate student, UC San Diego)  
Setareh Metanat (Undergraduate student UC San Diego, StartNeuro Program)  
Fatema Abdurru (MD/PhD student, UC San Diego)
- 2020-2022 Corey Switzler (Research assistant, Salk Institute)
- 2019-2020 Roshan Raj Rajamanickam (Undergraduate student, UC San Diego)
- 2018-2019 Meghan Rossi (Neuroscience graduate school, Laboratory rotation, UC San Diego)
- 2016-2017 Guadalupe Pereira (Undergraduate student, Autonomous University of Madrid, Spain)

## TEACHING & OUTREACH

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- July 2025: **Community and Science Advancements in Spanish** (CaSAS), Guest speaker, UC San Diego.
- July 2025: **External Dissertation Committee Member**, Achucarro Basque Center for Neuroscience, Spain

- August 2022: **Alzheimer's Association** Town Hall meeting Guest speaker, San Diego
- July 2022: **StartNeuro**. Guest speaker summer research program, UC San Diego.
- May 2021: **Alzheimer's Association** talk for **Latino community**, Guest speaker, San Diego (virtual)
- August 2020: **Alzheimer's association** Town Hall meeting Guest speaker, San Diego (virtual)
- March 2019: **Salk Institute**. Guest lecturer for secondary school students visit. La Jolla.
- October 2018: **La Jolla Secondary school**. Guest lecturer. La Jolla.
- 2007-2009: **Save the Children**. Teaching support. Maria de Molina school. Madrid, Spain.

## SCIENTIFIC EVENTS ORGANIZED

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- November 2025: **Society for Neuroscience Annual Meeting proposed and selected Minisymposium** Astrocytes as Therapeutic Targets for Neurodegenerative Disorders. San Diego, USA.
- April 2021: **Challenging Neurodegeneration Symposium**. Salk institute (Virtual). Funding recruitment (Chan Zuckerberg Initiative), organization and moderation.
- July 2020: **Pannel moderator Glia breakout session**. Chan Zuckerberg Initiative meeting (virtual).

## RESEARCH EXPERIENCE

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|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sept 2024-Sept 2026 | <b>Senior Research Associate, Salk Institute, California (USA)</b><br>Targeting astrocyte factors to restore synaptic function in Alzheimer's disease<br>Mentor: Prof. Nicola Allen              |
| Sept 2018- Aug 2024 | <b>Postdoctoral fellow at Allen Lab, Salk Institute, California (USA)</b><br>Role of astrocytes in Alzheimer's disease pathology<br>Mentor: Prof. Nicola Allen                                   |
| Jan – May 2018      | <b>Junior postdoctoral fellow at De Strooper Lab, KU Leuven-VIB (Belgium)</b><br>Aging and Alzheimer's disease<br>Mentor: Prof. Bart De Strooper                                                 |
| Sept 2013- Dec 2017 | <b>Graduate student at De Strooper Lab, KU Leuven-VIB (Belgium)</b><br>Genetic and environmental modifiers in sporadic Alzheimer's disease<br>Mentor: Prof. Carlos Dotti, Prof. Bart De Strooper |
| Feb 2015-2017       | <b>Visiting graduate student at Biological Psychology Lab, KU Leuven (Belgium)</b><br>Assessing memory defects in Alzheimer's mouse models<br>Mentor: Prof. Rudi D'Hooge, Prof. Zsuzsanna Vegh   |
| June- Sept 2014     | <b>Visiting graduate student at the Center for Molecular Biology (Madrid, Spain)</b><br>Electrophysiological studies in <i>Tspan6</i> knockout mice<br>Mentor: Prof. Jose Antonio Esteban        |
| Jan-Sept 2013       | <b>Master thesis at the Center for Molecular Biology (Madrid, Spain)</b><br>Effect of membrane cholesterol loss on synaptic plasticity.<br>Mentor: Prof. Carlos Dotti                            |
| June-Sept 2011      | <b>Summer Undergraduate Research at the University of York (York, UK)</b><br>Cloning techniques: site directed mutagenesis<br>Mentor: Prof. Christoph Baumann                                    |

## INVITED TALKS

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- November 2025: **Society for Neuroscience Annual Meeting**. San Diego, USA
- April 2025: Research seminar in **Center for Molecular Biology “Severo Ochoa”**. Madrid Spain.
- April 2025: Research seminar in **Achucarro Basque center for Neuroscience**. Bilbao, Spain.
- May 2023: **Keystone symposium**. Neurodegeneration. Whistler, CA
- April 2023: **San Diego Glycobiology Symposium**. UC San Diego, USA
- August 2022: **Gordon Research seminar**: Neurobiology of brain disorders. Barcelona, Spain.
- March 2019: **La Jolla aging meeting**. San Diego, USA
- June 2015: **Tetraspanin and other membrane scaffolds**. Nashville, USA.

## POSTER PRESENTATIONS

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- April 2025: **EMBO Astrocyte International meeting**. Venice, Italy.
- June 2024: **Keystone symposium**. Neurodegenerative diseases. Santa Fe, NM, USA.
- July 2023: **Alzheimer’s association international conference**. Virtual and Amsterdam, Netherlands.
- August 2022: **Gordon Research conference**: Neurobiology of brain disorders. Barcelona, Spain.
- October 2021: **New horizons in Alzheimer’s disease**. VIB conference. Leuven, Belgium.
- August 2020: **Neurodegeneration challenging network**. Chan Zuckerberg Initiative meeting. Virtual.
- October 2019: **Salk Science at the seaside**. La Jolla, USA
- April 2018: **Learning and Memory conference**. Irvine, California, USA.
- April 2017: The **FENS Brain conference**: Learning, memory and synaptic plasticity. Copenhagen, Denmark.
- Sept 2016: **The Brain Mosaic: cellular heterogeneity in the CNS**. VIB conference. Leuven, Belgium.
- Aug 2016: **Gordon Research conference**: Neurobiology of brain disorders. Girona, Spain.
- May 2016: **Gordon Research conference**: Myelin. Lucca, Italy.
- Oct 2013: **Membrane Traffic at the synapse**. The Cell Biology of Synaptic Plasticity. Baeza, Spain.

## LANGUAGES

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- Spanish: Native speaker
- English: Fluent
- French: Advanced
- Dutch: Basic (B1)