

CV Alexander WOLF

DR. ALEXANDER WOLF

POSTDOCTORAL RESEARCHER — NEUROSCIENCE & LIPID CELL BIOLOGY

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LANGUAGES: FRENCH & GERMAN (NATIVE), ENGLISH (FLUENT)

SCIENTIFIC PROFILE

I am a cell biologist and neuroscientist with expertise in lipid signaling, membrane trafficking, and optogenetic manipulation of phospholipids. My work focuses on dissecting the spatiotemporal regulation of secretory processes using advanced imaging, biosensors, and custom molecular tools. I aim to bridge different scientific disciplines (molecular biology, cell biology, chemical biology, biophysics...) to dissect how membrane lipids shape dynamic signaling processes.



EDUCATION

INSTITUTION AND LOCATION	DEGREE	COMPLETION DATE	FIELD OF STUDY
Université de Strasbourg – Strasbourg, France	Bachelor	07/2018	Cell biology and physiology (Honours)
Université de Strasbourg – Strasbourg, France	Master	07/2020	Cellular and integrative neurosciences (High honours)
Université de Strasbourg – Strasbourg, France	PhD	09/2024	Neurosciences and membrane trafficking

LABORATORY EXPERIENCES

2018	Internship at (UDEAR, INSERM UMR 1056) under the supervision of N. Gaudenzio on “The role of mastocytes in atopic dermatitis”.
2020	Internship (INCI, CNRS UPR 3212) under the supervision of Nicolas Vitale on the “Development of a molecular toolbox to study phosphatidic acid”.
2020 - 2024	Thesis (INCI, CNRS UPR 3212), under the supervision of Nicolas Vitale on “A molecular toolbox to study the pleiotropic functions of phosphatidic acid in neurosecretion”.
2024 – Current date	Postdoctoral Researcher (INCI, CNRS UPR 3212). Continuing development of optogenetic tools to investigate phosphatidic acid signalling. Deciphering the interaction between synaptotagmin-1 and gangliosides in neurosecretion and exploring fatty acid uptake in hepatic cell lines.

CONFERENCE PRESENTATIONS (POSTER AND ORAL)

- 04/21/2021: Poster presentation at the ED414 Doctoral school days (Online)
- 05/21/2021: Poster presentation at Neurofrance 2021 (Online)
- 06/10/2021: Flash talk at the exo-endo club annual meeting (Online)
- 06/17/2022: Poster presentation at the exo-endo club annual meeting (Munster, France)
- 10/07/2022: Poster presentation at the 17th GERLI Lipidomics meeting (St Jean Cap Ferrat, France)
- 09/25/2023: Poster presentation at the BPS Membrane fusion and budding event (Estes Park, USA)
- 10/17/2023: Talk at the 18th GERLI Lipidomic meeting (Paris, France)
- 11/24/2023: Talk at the exo-endo scientific half day (Paris, France)
- 04/06/2024: Talk at the exo-endo club annual meeting (Sète, France)

MENTORSHIP AND OUTREACH

- Supervised 6 MSc and BSc students in molecular biology, optogenetics, and cell imaging
- Participation in multiple scientific outreach events (CNRS microconference series, “My thesis in 180 seconds”, “MT180 in your high school”, Doctoneuro “back to school”)

AWARDS AND GRANTS

- 06/19/2022: Best poster presentation at the annual meeting of the Exo-endo club
- 10/08/2022: Best poster presentation at the 17th GERLI Lipidomics meeting
- 2023-2024: French medical research foundation FDT grant (FDT202304016618)

MISCELLANEOUS

- 06/2021 - 01/2024: Elected representative for doctoral students and post-docs at the INCI Lab council
- 10/2022: Organization of a meeting between students and post-docs of the INCI and the HCERES comity
- 01/2023: Organization of a meeting between INCI doctoral students and CNRS representatives

List of scientific publications Alexander WOLF

ORIGINAL RESEARCH

1. Tanguy Emeline, **Wolf Alexander**, Wang Qili, Chasserot-Golaz Sylvette, Ory Stéphane, Gasman Stéphane, Vitale Nicolas, 2021. Phospholipase D1-generated phosphatidic acid modulates secretory granule trafficking from biogenesis to compensatory endocytosis in neuroendocrine cells. *Advances in Biological Regulation* 100844. <https://doi.org/10.1016/j.jbior.2021.100844>
2. Wang Qili, **Wolf Alexander**, Ozkan Sebahat, Richert Ludovic, Mely Yves, Chasserot-Golaz Sylvette, Ory Stéphane, Gasman Stéphane, Vitale Nicolas, 2023. V-ATPase modulates exocytosis in neuroendocrine cells through the activation of the ARNO-Arf6-PLD pathway and the synthesis of phosphatidic acid. *Frontiers in Molecular Biosciences* 10, 1163545. <https://doi.org/10.3389/fmolb.2023.1163545>
3. Desmond Owusu Kwarteng[§], **Alexander Wolf**[§], Madisyn Langdon, Nawal Kassas, Nicolas Vitale[#], and Edgar Eduard Kooijman[#], 2025. Cholesterol affects the binding of proteins to phosphatidic acid without influencing its ionization properties. *Journal of lipid research*. <https://doi.org/10.1016/j.jlr.2025.100749>
[§] and [#]: Equal contribution
4. **Alexander Wolf**, Sebahat Ozkan, Emeline Tanguy, Sylvette Chasserot-Golaz, Stéphane Gasman and Nicolas Vitale. Assay for primary culture and electroporation of bovine chromaffin cells. *Methods in molecular biology*, in press
5. **Alexander Wolf**, Emeline Tanguy, Stéphane Ory, Pierre-Yves Renard, Maité Montero-Hadjadje, Stéphane Gasman and Nicolas Vitale. Use of novel synthetic analogues to decipher the interactome of phosphatidic acids species. *Methods in enzymology*, in press
6. Antoine Schlichter[§], **Alexander Wolf**[§], Thomas Ferrand[§], Aurelien Cocq[§], Lina Riachy, Steven Vertueux, Marine Courvalet, Paul-Joël Henry, Emeline Tanguy, Brice Beauvais, Louis Gonzales, Rémy Ferlet, Fanny Laguerre, Charles Decraene, Alexia Pellissier, Muriel Sebban, Lydie Jeandel, Sarah Cianférani, Jean-Marc Strub, Magalie Bénard, Victor Flon, Valérie Peulon Agasse, Pascal Cardinael, Stéphane Ory, Stéphane Gasman, Pierre-Yves Renard[#], Maité Montero-Hadjadje[#], Nicolas Vitale[#] & Sébastien Balieu[#]. An innovative and versatile synthetic approach in the design of glycerophospholipid tools. Application to phosphatidic acids. *BioRxiv* 2025.02.20.639292; <https://doi.org/10.1101/2025.02.20.639292>
[§] and [#]: Equal contribution

REVIEWS

1. Tanguy Emeline, **Wolf Alexander**, Montero-Hadjadje Maité, Gasman Stéphane, Bader Marie-France, Vitale Nicolas, 2020. Phosphatidic acid: Mono- and poly-unsaturated forms regulate distinct stages of neuroendocrine exocytosis. *Advances in Biological Regulation* 100772. <https://doi.org/10.1016/j.jbior.2020.100772>
2. **Wolf Alexander**, Tanguy Emeline, Wang Qili, Gasman Stéphane, Vitale Nicolas, 2022. Phospholipase D and cancer metastasis: A focus on exosomes. *Advances in Biological Regulation* 100924. <https://doi.org/10.1016/j.jbior.2022.100924>

PATENTS

1. Balieu Sébastien, Renard Pierre-Yves, Montero-Hadjadje Maité, Vitale Nicolas, Cocq Aurélien, Schlichter Antoine, Ferlet Rémy, Haefele Alexandre, Riachy Lina, **Wolf Alexander**. (2023). Glycérophospholipides synthétiques comprenant au moins une fonction réactive, leur procédé de préparation et leurs utilisations dans différentes applications (France, Patent No. FR3133855). INPI. <https://data.inpi.fr/brevets/FR3133855?q=#FR3133855>

UNDER EVALUATION

1. Antoine Schlichter[§], **Alexander Wolf**[§], Thomas Ferrand[§], Aurelien Cocq[§], Lina Riachy, Steven Vertueux, Marine Courvalet, Paul-Joël Henry, Emeline Tanguy, Brice Beauvais, Louis Gonzales, Rémy Ferlet, Fanny Laguerre, Charles Decraene, Alexia Pellissier, Muriel Sebban, Lydie Jeandel, Sarah Cianférani, Jean-Marc Strub, Magalie Bénard, Victor Flon, Valérie Peulon Agasse, Pascal Cardinael, Stéphane Ory, Stéphane Gasman, Pierre-Yves Renard[§], Maïté Montero-Hadjadje[§], Nicolas Vitale[§] & Sébastien Balieu[§]. An innovative and versatile synthetic approach in the design of glycerophospholipid tools. Application to phosphatidic acids.

Angewante Chemie, under evaluation.

[§]: Equal contribution

IN PREPARATION

1. **Alexander Wolf**, Sebahat Ozkan, Micol Vicari, Stéphane Ory, Sylvette Chasserot-Golaz, Stéphane Gasman, Emeline Tanguy and Nicolas Vitale. Optogenetic control of signaling lipid levels revealed essential and specific roles for phosphatidic acid pools in secretory granules and plasma membranes during regulated exocytosis. In preparation for *The Journal of Cell Biology*.