

Alexander R. van Vliet, PhD , Curriculum Vitae

Mobile number: + (44) 7516 86 39 30
E-mail: avanvliet@mrc-lmb.cam.ac.uk
Birthdate: 02/07/1988
Nationality: Canadian / Belgian (dual citizenship)
Academic ID: [Google Scholar link](#) / ORCID ID: 0000-0003-4729-4379

Research Experience

2022-present **MRC Postdoc**, MRC Laboratory of Molecular Biology, Cambridge (UK), (Dr. Sean Munro)

2019 – 2022 **Crick Postdoctoral training fellow**, The Francis Crick Institute, London (UK), Molecular Cell Biology of Autophagy Laboratory (Dr. Sharon Tooze)

2017-2019 **EMBO Long-Term Fellow**, The Francis Crick Institute (UK), Molecular Cell Biology of Autophagy Laboratory (Dr. Sharon Tooze)

2011-2016 **IWT PhD Fellow**, University of Leuven (Belgium), Laboratory of Cell Death Research and Therapy (Prof. Patrizia Agostinis)
PhD thesis titled: The role of the ER kinase PERK in orchestrating ER - plasma membrane contact sites

Education

2016	Ph.D. (Biomedical Sciences)	University of Leuven, Belgium
2011	M.Sc. (Biomedical Sciences)	University of Leuven, Belgium

Awards and Fellowships

EMBO Long-Term Fellowship, 2017-2019 – Competitive European grant

FWO Long Stay Abroad Grant for the period of 8 months (2016) – Competitive Belgian grant.

FWO PhD scholarship (formerly known as IWT), 2011-2015 – Competitive Belgian grant.

First/Corresponding Author Research articles

ATG9A and ATG2A form a heteromeric complex essential for autophagosome formation

Alexander R. van Vliet*, George N Chiduzza*, Sarah Maslen, Val Pye, Dhira Joshi, Stefano De Tito, Harold BJ Jefferies, Evangelos Christodoulou, Chloë Roustán, Emma Punch, Javier H. Hervás, Nicola O'Reilly, Mark Skehel, Peter Cherepanov, Sharon A. Tooze

Molecular Cell – DOI 10.1016/j.molcel.2022.10.017

*These authors contributed equally to this work.

Exploring the ATG9A interactome uncovers interactions with VPS13A

Alexander R. van Vliet, Harold BJ Jefferies, Fairouz Ibrahim, Mark Skehel, Sharon A. Tooze

Journal of Cell Science, **Manuscript under review.**

Imaging and tracking ATG9A, a multi-spanning membrane protein

Alexander R. van Vliet*, Stefano De Tito*, Eugenia Almacellas*, Sharon A. Tooze

Journal of Visual Experiments, **Manuscript in revision.**

*These authors contributed equally to this work.

Interactome Analysis of the ER Stress Sensor PERK uncovers key components of ER-mitochondria contact sites and Ca²⁺ signaling.

Maria Livia Sassano, Rita Derua, Etienne Waelkens, Patrizia Agostinis[‡], **Alexander R. van Vliet**[‡] (2021)

Contact, Volume 4 – DOI: 10.1177/25152564211052392

[‡]Co-corresponding author

The ER Stress Sensor PERK Coordinates ER-Plasma Membrane Contact Site Formation through Interaction with Filamin-A and F-Actin Remodeling

Alexander R. van Vliet, Francesca Giordano, Sarah Gerlo, Inmaculada Segura, Sofie van Eygen, Geert Molenberghs, Susana Rocha, Audrey Houcine, Rita Derua, Tom Verfaillie, Jeroen Vangindertael, Herlinde De Keersmaecker, Etienne Waelkens, Jan Tavernier, Johan Hofkens, Wim Annaert, Peter Carmeliet, Afshin Samali, Hideaki Mizuno, Patrizia Agostinis (2017)

Molecular Cell - DOI: 10.1016/j.molcel.2017.01.020.

-Selected as a research highlight by Nature Reviews Molecular Cell Biology, 18, 213 (2017)

doi:10.1038/nrm.2017.31

Pro-apoptotic signaling induced by photo-oxidative ER stress is amplified by Noxa, not Bim

Tom Verfaillie*, **Alexander van Vliet***, Abhishek D. Garg, Michael Dewaele, Noemi Rubio, Sanjeev Gupta, Peter de Witte, Afshin Samali, Patrizia Agostinis (2013)

Biochemical and Biophysical Research Communications - DOI:10.1016/j.bbrc.2013.07.107

*These authors contributed equally to this work.

Co-Authored Research articles

PERK recruits E-Syt1 at ER-mitochondria contacts for mitochondrial lipid transport and respiration.

Maria Livia Sassano, **Alexander R. van Vliet**, Ellen Vervoort, Sofie Van Eygen, Chris Van den Haute, Benjamin Pavie, Joris Roels, Johan V. Swinnen, Marco Spinazzi, Leen Moens, Kristina Casteels, Isabelle Meyts, Paolo Pinton, Saverio Marchi, Leila Rochin, Francesca Giordano, Blanca Felipe-Abrio*, Patrizia Agostinis* (2023)

Journal of Cell Biology - DOI: 10.1083/jcb.202206008

*Co-corresponding author

Non-canonical function of IRE1 α determines mitochondria-associated endoplasmic reticulum composition to control calcium transfer and bioenergetics.

Amado Carreras-Sureda, Fabián Jaña, Hery Urra, Sylvere Durand, David E Mortenson, Alfredo Sagredo, Galdo Bustos, Younis Hazari, Eva Ramos-Fernández, Maria L Sassano, Philippe Pihán, **Alexander R. van Vliet**, Matías González-Quiroz, Angie K Torres, Cheril Tapia-Rojas, Martijn Kerkhofs, Rubén Vicente, Randal J Kaufman, Nibaldo C Inestrosa, Christian Gonzalez-Billault, R Luke Wiseman, Patrizia Agostinis, Geert Bultynck, Felipe A Court, Guido Kroemer, J César Cárdenas, Claudio Hetz (2019)

Nature Cell Biology – DOI: 10.1038/s41556-019-0329-y

EV-TRACK: transparent reporting and centralizing knowledge in extracellular vesicle research.

EV-TRACK Consortium, Van Deun J, Hendrix A. (2017) (86th author, of 97 total authors)

Nat Methods. - DOI: 10.1038/nmeth.4185.

ORP5/ORP8 localize to endoplasmic reticulum–mitochondria contacts and are involved in mitochondrial function.

Romain Galmes*, Audrey Houcine*, **Alexander R. van Vliet**, Patrizia Agostinis, Catherine L. Jackson, and Francesca Giordano (2016)

EMBO Reports, - DOI 10.15252/embr.201541108

*These authors contributed equally to this work.

Highly proliferative primitive fetal liver hematopoietic stem cells are fueled by oxidative metabolic pathways.
Javed Manesia, Zhoufei Xu, Dorien Broekaert, Ruben Boon, **Alexander van Vliet**, Thomas Vanwelden, Guy Eelen, Alberto Pascual-Montano, Sarah Maria-Fendt, Geert Carmeliet, Peter Carmeliet, Satish Khurana, Catherine M. Verfaillie (2015)
Stem Cell Research - DOI:10.1016/j.scr.2015.11.001.

The BH4 domain of Bcl-XL, but not that of Bcl-2, limits the voltage-dependent anion channel 1 (VDAC1)-mediated transfer of pro-apoptotic Ca²⁺ to mitochondria.
Giovanni Monaco*, Elke Decrock*, Nir Arbel, **Alexander R. van Vliet**, Rita La Rovere, Humbert De Smedt, Jan B. Parys, Patrizia Agostinis, Luc Leybaert, Varda Shoshan-Barmatz, Geert Bultynck (2014)
Journal of Biological Chemistry, - DOI: 10.1074/jbc.M114.622514
*These authors contributed equally to this work.

Review articles

The Golgi as an assembly line to the autophagosome.
Stefano de Tito*, Javier H. Hervás*, **Alexander R. van Vliet***, Sharon A. Tooze (2020)
Trends in Biochemical Sciences. - DOI: 10.1016/j.tibs.2020.03.010
*These authors contributed equally to this work.

Membrane dynamics and organelle biogenesis-lipid pipelines and vesicular carriers.
Christopher J. Stefan, William S. Trimble, Sergio Grinstein, Guillaume Drin, Karin, Pietro De Camilli, Sarah Cohen, Alex M. Valm, Jennifer Lippincott-Schwartz, Tim P. Levine, David B. Iaea, Frederick R. Maxfield, Clare E. Futter, Emily R. Eden, Delphine Judith, **Alexander R. van Vliet**, Patrizia Agostinis, Sharon A. Tooze, Ayumu Sugiura and Heidi M. McBride (2017)
BMC Biol. - DOI: 10.1186/s12915-017-0432-0.

Mitochondria-Associated Membranes as Networking Platforms and Regulators of Cancer Cell Fate.
Maria Livia Sassano, **Alexander R. van Vliet**, Patrizia Agostinis (2017)
Front Oncol. - DOI: 10.3389/fonc.2017.00174 017.

PERK and filamin A in actin cytoskeleton remodeling at ER-plasma membrane contact site.
Alexander R. van Vliet, Patrizia Agostinis (2017)
Molecular and Cellular Oncology - <http://dx.doi.org/10.1080/23723556.2017.1340105>.

Mitochondria-Associated Membranes and ER Stress.
Alexander R. van Vliet, Patrizia Agostinis (2017)
Curr Top Microbiol Immunol. - DOI: 10.1007/82_2017_2.

When under pressure, get closer: PERK up membrane contact sites during ER stress.
Alexander R. van Vliet, Patrizia Agostinis (2016)
Biochemical Society Transactions - DOI: 10.1042/BST20150272.

Coordination of stress, Ca²⁺ and immunogenic signaling pathways by PERK at the endoplasmic reticulum.
Alexander R. van Vliet, Abhishek D. Garg, Patrizia Agostinis (2016)
Biological Chemistry, DOI: 10.1515/hsz-2016-0108.

The PERKs of damage-associated molecular patterns mediating cancer immunogenicity: From sensor to the plasma membrane and beyond.
Alexander R. van Vliet*, Shaun Martin*, Abhishek D. Garg, Patrizia Agostinis (2015)
Seminars in Cancer Biology, - DOI:10.1016/j.semcancer.2015.03.010 *These authors contributed equally to this work.

New functions of mitochondria associated membranes in cellular signaling

Alexander R. van Vliet, Tom Verfaillie, Patrizia Agostinis (2014)

Biochimica et Biophysica Acta (BBA) - Molecular Cell Research -DOI:10.1016/j.bbamcr.2014.03.009.

Teaching, supervision, and administrative experience

2023	Attended the 3-day EMBO Lab Leadership for Postdocs course
2016-2022	Co-promotor of the doctoral degree of Maria Livia Sassano (Promotor: Patrizia Agostinis) at the University of Leuven
2018	Supervision of M.Sc. student Michael Gruet for 6 months, resulting in a final grade of “distinction” from Imperial College London.
2013-2014	Supervision of M.Sc. student Alice Rossi for 8 months, resulting in a final grade of 95% from the university of Padova.
2012-2013	Supervision of M.Sc. student Giulia Serradura for the period of 8 months, resulting in a final grade of 86% from the university of Padova
2011-2016	Taught practical course “photometric dosage of proteins” to first year students of biomedical sciences and medicine as part of the course cell- and molecular biology.
2015-2016	Served as the representative for PhD students and post-docs in the departmental council and on the departmental board of the department of Cellular and Molecular Medicine (University of Leuven).

Science related activity

2019-2020: Member of the eLife ambassador program (link [here](#)), where I co-led a team of 10 early career researchers in an initiative aimed to get more early-career researchers into peer review. We published two blogposts in 2020, linked here: <https://ecrlife.org/an-ecrs-guide-to-peer-review-2/> and <https://ecrlife.org/include-junior-researchers-in-peer-review-2/>