

Mélissa Gentreau, Postdoctoral Researcher

Functional Pharmacology and Neuroscience, Surgical Sciences Department, Uppsala University

Current situation: Visiting researcher

Physiology and Experimental Medicine of the Heart and Muscles (PhyMedExp), Univ Montpellier, Inserm, CNRS Group 2 "Acquired Myopathies in Patients with Organ Failure" led by Pr. Stefan Matecki

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ORCID: 0000-0002-4070-1229

Keywords: Metabolism, Age-related diseases, Skeletal muscle, Translational research, Omics data analysis

RESEARCH EXPERIENCE

Postdoctorate | H. Schiöth's Group

Since 2022 – Uppsala University – Uppsala, Sweden

- Topic: Adverse effects of statins on cognitive aging and skeletal muscle
- Keywords: Metabolism, Cholesterol, Cognition, Muscle physiology, Aging

PhD | Supervisor: S. Artero et C. Berticat

2018-2021 – Institute of Functional Genomics (IGF) – Montpellier, France

- Topic: Impact of a refined carbohydrate-rich diet on Alzheimer's disease and cognitive decline: a cohort study
- Keywords: Nutrition, Cognition, Aging, Insulin Resistance

Research Intern | Supervisor: S. Artero

2018 (6 months) – Inserm U1061 – Montpellier, France

- Topic: Statistical evaluation of several measurement methods of the hippocampal volumes from MRI images
- Keywords: Brain imaging, Aging, Statistics

Research Intern | Supervisor: S. Dalle

2017 (6 months) – Institute of Functional Genomics (IGF) – Montpellier, France

- Topic: Protect β -pancreatic cell function and survival by inactivating MAP3 kinase Tpl2
- Keywords: Type 2 Diabetes, Insulin Resistance, Cell Signaling

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Research Intern | Supervisors: A. Bonnieu, B. Chabi, and B. Vernus

2016 (2 months) – INRAe – Montpellier

- Topic: Research into new mechanisms regulating post-mortem maturation of muscle into meat (see [publication](#))
- Keywords: Skeletal muscle, Cell Signaling, Apoptosis, Autophagy

EDUCATION

PhD in Biomedical Sciences

2021 – Montpellier University – Montpellier, France

Master's degree in Mathematics specialized in statistics for biology

2018 – Montpellier University – Montpellier, France

Master's degree in Biomedical Sciences, specialized in Experimental and Regenerative Medicine

2017 – Montpellier University – Montpellier, France

Bachelor of Biomedical Sciences

2015 – Paris Saclay University – Orsay, France

PUBLICATIONS

Total number of publications: 14 peer-reviewed articles

First author: 9 | Second author: 2 | Second-Last author: 1

h-index:7

Citations: 218 ([Google Scholar](#), February 2026)

Original articles

1. [Gentreau M](#), Sakr M, Mohammed S, Alsehli AM, Titova OE, Rukh G, Schiöth HB. Statin use is associated with a decline in muscle function and mass over time, irrespective of statin pharmacogenomic score. *The Journal of Cachexia, Sarcopenia and Muscle*. 2025;16(6): e70132. [10.1002/jcsm.70132](https://doi.org/10.1002/jcsm.70132)
2. [Gentreau M](#), Miguet M, Affatato O, Rukh G, Schiöth HB. Statin use is associated with higher white matter hyperintensity volumes and lower grey matter volumes. *Brain Communications*. 2024; 6(6):fcae417. [10.1093/braincomms/fcae417](https://doi.org/10.1093/braincomms/fcae417)
3. Mohammad S, [Gentreau M](#), Dubol M, Rukh G, Mwinyi J, Schiöth HB. Association of Polygenic Scores for Autism with volumetric MRI phenotypes in cerebellum and brainstem in adults. *Molecular Autism*. 2024; 15(1):34. [10.1186/s13229-024-00611-7](https://doi.org/10.1186/s13229-024-00611-7)
4. Andreoli MF*, [Gentreau M*](#), Rukh G*, Perello M, Schiöth HB. Genetic variants of LEAP2 are associated with anthropometric traits and circulating IGF-1 concentration: a UK Biobank study. *Diabetes, Obesity and Metabolism*. 2024; 26(9):3565-3575. [10.1111/dom.15695](https://doi.org/10.1111/dom.15695)
5. Liepinsh E, Liga Zvejniece L, Clemensson LE, Ozola M, Vavers E, Cirule H, Korzh S, Skuja S, Groma V, Briviba M, Grinberga S, Liu W, Olszewski P, [Gentreau M](#), Fredriksson R, Dambrova M, Schiöth HB. Hydroxymethylglutaryl-CoA reductase activity is essential for mitochondrial β -oxidation of fatty acids to prevent lethal accumulation of long-chain acylcarnitines in the mouse liver. *The British Journal of Pharmacology*. 2024; 181(16):2750-2773. [10.1111/bph.16363](https://doi.org/10.1111/bph.16363)
6. [Gentreau M](#), Rukh G, Miguet M, Clemensson LE, Alsehli AM, Titova OE, Schiöth HB. The effects of statins on cognitive performance are mediated by low-density lipoprotein, C-reactive protein and blood glucose concentrations. *The Journals of Gerontology: Series A, Biological Sciences and Medical Sciences*. 2023; 78(11):1964-1972. [10.1093/gerona/glad163](https://doi.org/10.1093/gerona/glad163)
7. [Gentreau M](#), Maller JJ, Meslin C, Cyprien F, Castroman JL, Artero S. Is hippocampal volume a relevant early marker of dementia? *The American Journal of Geriatric Psychiatry*. 2023; 31(11):932-942. [10.1016/j.jagp.2023.05.015](https://doi.org/10.1016/j.jagp.2023.05.015)
8. [Gentreau M](#), Reynes C, Sabatier R, Maller JJ, Meslin C, Deverdun J, Le Bars Emmanuelle, Raymond M, Berticat C, Artero S. Glucometabolic changes are associated with structural gray matter alterations in prodromal dementia. *The Journal of Alzheimer's Disease*. 2022; 89(4): 1293-1302. [10.3233/JAD-220490](https://doi.org/10.3233/JAD-220490)
9. [Gentreau M](#), Raymond M, Samieri C, Chuy V, Féart C, Berticat C, Artero S. Dietary glycemic load and plasma amyloid- β biomarkers of Alzheimer's disease. *Nutrients*. 2022; 15;14(12):2485. [10.3390/nu14122485](https://doi.org/10.3390/nu14122485)
10. Chuy V, [Gentreau M](#), Artero S, Berticat C, Rigalleau V, Pérès K, Helmer C, Samieri C, Féart C. Simple carbohydrate intake and higher risk for physical frailty over 15 years in community-dwelling older adults. *The Journals of Gerontology: Series A, Biological Sciences and Medical Sciences*. 2021; 77(1):10-8. [10.1093/gerona/glab243](https://doi.org/10.1093/gerona/glab243)
11. Cyprien F, Berr C, Maller JJ, Meslin C, [Gentreau M](#), Mura T, Gabelle A, Courtet P, Ritchie K, Ancelin ML, Artero S. Late-life cynical hostility is associated with white matter alterations and the risk of Alzheimer's disease. *Psychological Medicine*. 2021; 52(15): 3636-3645. [10.1017/S0033291721000416](https://doi.org/10.1017/S0033291721000416)

12. Gentreau M, Raymond M, Chuy V, Samieri C, Féart C, Berticat C, Artero S. High glyceic load is associated with cognitive decline in *Apolipoprotein E ε4* allele carriers. *Nutrients*. 2020; 12(12):3619. [10.3390/nu12123619](https://doi.org/10.3390/nu12123619)
13. Gentreau M, Chuy V, Féart C, Samieri C, Ritchie K, Raymond M, Berticat C, Artero S. Refined carbohydrate-rich diet is associated with long-term risk of dementia and Alzheimer's disease in apolipoprotein E ε4 carriers. *Alzheimer's & Dementia*. 2020; 16(7):1043-1053. [10.1002/alz.12114](https://doi.org/10.1002/alz.12114)

Review articles

14. Jamshidnejad-Tosaramandani T, Kashanian S, Al-Sabri MH, Kročianova D, Clemensson LE, Gentreau M, Schiöth HB. Statins and cognition: Modifying factors and possible underlying mechanisms. *Frontiers in Aging Neuroscience*. 2022; 14. [10.3389/fnagi.2022.968039](https://doi.org/10.3389/fnagi.2022.968039)

Conferences articles

15. Gentreau M, Raymond M, Féart C, Samieri, Chuy V, Berticat C, Artero S. Afternoon-snack glyceic load is associated with plasma amyloid-β peptides in APOE4 carriers at risk of dementia. *Alzheimer's & Dementia*. 2021;17(S5):e050832. [10.1002/alz.050832](https://doi.org/10.1002/alz.050832)
16. Gentreau M, Chuy V, Féart C, Samieri C, Raymond M, Berticat C, Artero S. Short-and long-term effects of glyceic load on cognition, dementia risk and plasma amyloid-β levels. *Alzheimer's & Dementia*. 2020;16(S10): e042546. [10.1002/alz.042546](https://doi.org/10.1002/alz.042546)
17. Gentreau M, Maller JJ, Meslin C, Cyprien F, Ritchie K, Artero S. Is hippocampal volume an accurate and reliable early marker of dementia? *Alzheimer's & Dementia*. 2020;16(S5): e042742. [10.1002/alz.042742](https://doi.org/10.1002/alz.042742)

Articles under review or in preparation

Gentreau M, Lagunas-Rangel FA, Liepinsh E, Zvejniece L, Clemensson L, Alsehli AM, Fredriksson R, Dambrova M, Schiöth HB. Hmgcr knock-out triggers the expression of muscle atrophy-related genes in response to acute liver failure.

de Ruijter MJT, Gentreau M, Kraković K, Rafeletou A, Moulin TC, Amorim FE, Rukh G, Williams MJ, Schiöth HB. Pipeline for automated assessment of intra- and inter-individual locomotive behavior in *Drosophila melanogaster*. [diva2:1753137](https://doi.org/10.1101/2023.03.13.531137)

SUBVENTION DE RECHERCHE

Grants from several Swedish foundations

- Scholarships from 4,400 to 31,500 € to support my postdoctorate
- Grant of 44,000 € for operating expenses (materials, publication costs...)

Years	Foundation	Amount (SEK)	Equivalent (€)	Role
2024	Åke Wibergs Stiftelse	500,000	44,000	PI
2022, 2023, 2024	Tore Nilsons Stiftelse för Medicinsk Forskning	100,000	8,800	PI
2024, 2022	Lars Hiertas Minne	50,000	4,400	PI
2022, 2024	E och R Börjesons Stiftelse	360,000	31,500	PI

Marie Skłodowska-Curie European Postdoctoral Fellowship (MSCA-PF)

High-scoring application (**93.2%**), below funding cut-off (February 2026)

SKILLS

Biostatistics

Omics data analysis (RNA-seq, proteomic, metabolomic); dimensional analysis (PCA, clustering) and machine learning (Random Forest); statistical modeling (regression models, survival analysis); mediation analysis.

Cellular and molecular biology

Primary cell culture and siRNA transfection; immunofluorescence and image quantification; Western blot and enzymatic activity

Data analysis software and tools

R, SAS, GraphPad Prism, Python (beginner); ImageJ/Fiji

Languages

French (native), English (scientific, fluent), Swedish (beginner)

TEACHING AND MENTORING EXPERIENCE

Teaching from Bachelor's to Master's levels

- 2018-2021: Biostatistics (Tutorials) – 6h ETD
- 2018-2021: Diet and local adaptation locale (Lecture) – 6,75h ETD
- 2020-2021: Research seminar (Lecture) – 4,5h ETD
- 2020-2021: Biochemistry basics (Tutorials) – 22,5h ETD

Student mentoring

- 04/2025 - 06/2025: Mathilda Arnal, Biomedical Sciences Master's (University of Limoges, France)
Topic: Role of the HMG-CoA reductase in skeletal muscle differentiation
Level of involvement: Principal supervisor (10h/week)
- 01/2023 - 02/2024: Mahitab Sakr, Pharmaceutical Modeling Master's (Uppsala University, Suède)
Topic: Association of statin use with grip strength and appendicular muscle mass
Level of involvement: Principal supervisor (7h/week)
- 01/2022 - 06/2022: Tahereh Jamshidnejad-Tosaramandani, PhD Student (Razi Univesity, Iran)
Topic: Literature review on the effects of statins on cognition
Level of involvement: Assistance with proofreading and editing the journal (2h/week)

OTHER ACTIVITIES

Science popularization

- *La Semaine du Cerveau* in Montpellier (France) – Workshop on nutrition and the brain (2024)
- [Science Fika](#) – Conference on nutrition and brain aging (2022)
- [PhD Pub](#) – My PhD in 10 minutes (2019)

Scientific activities

- Scientific advisor and communications manager for [La Comédie des Neurones](#), the association that organizes *La Semaine du Cerveau* in Montpellier, France (since 2024)
- *Femmes & Sciences* Mentoring as mentoree (2019)

Scientific activity evaluation

Regular reviewer for *The Journal of Cachexia Sarcopenia and Muscle*, *Alzheimer's & Dementia*, *The Journal of Gerontology Series A*, *The Journal of Alzheimer's Disease*, *BMC Nutrition*, and *Diabetes, Obesity & Metabolism*