Contact details

+33 637 067 036
melissa.gentreau@uu.se

SKILLS

Epidemiology – Biostatistics

- Linear regression and extensions (mixed, logistic, multinomial, …)
- Survival analyses (Kaplan-Meier, Cox proportional hazard regression)
- Mediation analysis
- Data analysis (PCA, Random Forest)
- RNA-seq analysis
- Metabolomic analysis

Molecular and cellular biology

- Primary cell culture
- siRNA transfection
- Immunofluorescence
- Protein assays
- Western blot analysis
- Enzymatic activity

Computer software

- Word, PowerPoint, Excel
- Statistics: R, SAS, GraphPad, ImageJ

Languages

- French (mother tongue)
- English (scientific, fluent)

ACTIVITIES AND INTERESTS

Community involvement

- Scientific advisor and communication manager of *La Semaine du* Cerveau (Montpellier, France)
- *Femmes & Sciences* Mentoring (2019)

Science popularization:

PhD Pub (2019), Science Fika (2022)

Hobbies

Horse-riding, yoga, reading

Mélissa Gentreau, Post-doctoral Researcher

Functional Pharmacology and Neuroscience,
Surgical Sciences Department, University of Uppsala

Statins, Skeletal muscle, Pathophysiology, Metabolism, Epidemiology

RESEARCH EXPERIENCE

PhD – "Environment, biomarkers, Neuropsychiatry" team

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

- Impact of a refined carbohydrate-rich diet on Alzheimer's disease and cognitive decline: a cohort study

Intern – "Age-related cognitive impairment" team

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

- Statistical evaluation of several measurement methods of the hippocampal volumes from MRI images

Intern – "Pathophysiology of pancreatic β-cell" team

October 2016 (6 months) – *Institute of Functional Genomics (IGF) – Montpellier, France*

- New therapeutic strategy for type 2 diabetes by dealing with the inactivation of MAP3 kinase Tpl2 to protect the function and survival of pancreatic β-cells.

Intern – "Muscle Dynamic and Metabolism" team

March 2016 (2 months) – *National Institute for Agriculture, Food and Environment (INRAe) – Montpellier, France*

- Research for new mechanisms regulating post-mortem maturation of muscle into meat (see publication)

EDUCATION

PhD in Epidemiology and Medical Sciences

2018-2021– Montpellier University – Montpellier, France

Master's degree in Mathematics specialized in statistics for biology

2017-2018 – Montpellier University – Montpellier, France

Master's degree in Medical Sciences specialized in the Experimental and Regenerative Medicine

2015-2017 – Montpellier University – Montpellier, France

Bachelor of Medical Sciences

2014-2015 – Paris Saclay University – Orsay, France

Undergraduate courses to prepare for nationwide competitive exams in sciences

2012-2014 – Michel de Montaigne High School – Bordeaux, France
(Biology, Mathematics, Chemistry, Physics, Geology, Informatic, English)

PUBLICATIONS

Original articles

1. 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

2. 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

3. 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

4. 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

5. 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

6. 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

7. 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

8. 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

9. 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

10. 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

11. Gentreau M, Raymond M, Chuy V, Samieri C, Féart C, Berticat C, Artero S. High glycemic load is associated with cognitive decline in *Apolipoprotein E ε4* allele carriers. ***Nutrients***. 2020; 12(12):3619. 10.3390/nu12123619

12. 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

Review articles

13. 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

Conferences articles

14. Gentreau M, Raymond M, Féart C, Samieri, Chuy V, Berticat C, Artero S. Afternoon-snack glycemic 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

15. Gentreau M, Chuy V, Féart C, Samieri C, Raymond M, Berticat C, Artero S. Short-and long-term effects of glycemic load on cognition, dementia risk and plasma amyloid-β levels. *Alzheimer's & Dementia*. 2020;16(S10): e042546. 10.1002/alz.042546

16. 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

RESEARCH FUNDING

Scholarships

Years	Foundation	Project number	Amount	Main Applicant
2024	Lars Hiertas Minne	FO2024-0387	40,000 SEK	Yes
2024	E och R Börjesons Stiftelse	-	360,000 SEK	Yes
2024	Åke Wibergs Stiftelse	M24-0108	500,000 SEK	Yes
2024	Tore Nilsons Stiftelse för Medicinsk Forskning	2024-190	100,000 SEK	Yes
2023	Tore Nilsons Stiftelse för Medicinsk Forskning	2023-097	100,000 SEK	Yes
2022	Tore Nilsons Stiftelse för Medicinsk Forskning	2022-018	100,000 SEK	Yes
2022	Lars Hiertas Minne	FO2022-0157	50,000 SEK	Yes
2022	E och R Börjesons Stiftelse	-	320,000 SEK	Yes

TEACHING & MENTORING EXPERIENCE

Teaching

Years	Teaching	University	Level	Type	Time volume (hours ETD/year)
2020-2021	Biochemistry basics	Montpellier	License 1	TD	22,5h
2020-2021	Research seminars	Montpellier	Master 2	CM	4,5h
2018-2021	Generalized Linear and Mixed Models	Montpellier	Master 2	TD	6h
2018-2021	Diet and local adaptation	Montpellier	License 3	CM	6.75h

Mentoring

- 2023-2024: Day-to-day supervisors, Uppsala University
  Mahitab Sakr, MSc. Students in Pharmaceutical Modeling