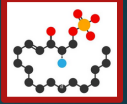




SPHINGOLIPID SIGNALING AND EXTRACELLULAR VESICLES: DECODING SKELETAL MUSCLE INSULIN RESISTANCE

We are seeking an outstanding and highly motivated **postdoctoral researcher** to join our team and **apply for a Marie Skłodowska-Curie Postdoctoral Fellowship (MSCA-PF 2026)**. **Academic Background:** A master's degree in a relevant field such as cell biology & molecular biology, lipidomics.



<https://marie-sklodowska-curie-actions.ec.europa.eu/actions/postdoctoral-fellowships>

Summary: Sphingosine-1-phosphate (S1P) is an emerging bioactive lipid that plays a central role in regulating cell signaling, metabolism, and tissue communication. Growing evidence suggests that S1P contributes to the control of glucose homeostasis and insulin sensitivity, yet its precise functions in skeletal muscle and metabolic disease remain incompletely understood. The proposed project aims to investigate how **S1P metabolism** and signaling contribute to insulin resistance and metabolic dysfunction, with a particular focus on the role of **extracellular vesicles** as mediators of lipid-based communication between tissues. This interdisciplinary project combines metabolism, sphingolipid biology, and intercellular communication to address fundamental questions relevant to obesity and insulin-resistance

Research objectives:

- Investigate the role of sphingosine kinases and S1P signaling in skeletal muscle metabolism.
- Explore how extracellular vesicles contribute to the transport of bioactive lipids and metabolic communication.
- Identify molecular pathways linking S1P signaling in skeletal muscle to insulin sensitivity and metabolic health.
- Develop innovative approaches at the interface of metabolism, lipid biology, and extracellular vesicle research.

Minimum Technical Skills required

°*Cell Biology and Molecular Biology Techniques:* Proficiency in cell culture, transfection, molecular biology; Confocal microscopy

°*Statistical Analysis:* Strong foundation in statistical methods for data analysis and interpretation

Soft Skills:

Problem-Solving: Ability to design experiments, troubleshoot issues, and optimize protocols; *Communication:* Effective written and oral communication skills for presenting research findings in english; *Collaboration:* Ability to work effectively within a multidisciplinary research team.

What we offer

- A competitive and supportive environment at the University of Lyon 1 for preparing the MSCA Postdoctoral Fellowship application in collaboration with the P.I
- Access to state-of-the-art facilities and interdisciplinary collaborations.
- Training in advanced methodologies in metabolism, lipidomics and extracellular vesicle biology.

Send your CV & reference letters by mail only to:

Dr Sophie ROME, Directrice de Recherche INRAe (dept. Human Nutrition), srome@univ-lyon1.fr

<https://carmen.univ-lyon1.fr/annuaire-membres/rome-sophie/>

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