RÉPUBLIQUE FRANÇAISE
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INSTITUT FRANÇAIS

SOPHIE ROME

From France to Sweden

Project: **Exosomal miRNAs: Inter-Organ Cross-Talk in type 2 diabetes**

Research topic: **Medecine & Health**

Swedish Institution: **Karolinska Institutet**

French Institution: **University Claude Bernard Lyon I**

Dates of mobility: **15/03/2015** to **18/03/2015**

Program: **SFVE-A (ex-TOR)**

PRESENTATION

Sophie Rome is a Research Director at the CarMeN laboratory (Cardio-Metabolism, Nutrition and Diabetes) at the Faculty of Medicine of the University Claude Bernard Lyon I and Researcher at the Department of Human Nutrition at the National Research Institute for Agriculture, Food, and Environment (INRAE). She obtained her PhD in Molecular Biology and Bioinformatics in 1996. She is interested in the mechanisms of insulin resistance and the role of miRNAs in metabolic diseases.

ACTIVITIES IN SWEDEN

Sophie Rome travelled to Sweden due to its excellency in the research of the biological properties of exosomes. She spent two days at the Molecular Cell Biology and Gene Therapy Science group at Karolinska Institutet (KI). She met with Dr. Samir El-Andaloussi, who leads a group on exosome research, among others studying exosome applications in drug delivery and for the development of novel oligonucleotide-based drugs to interfere with gene expression. They already started collaborating on biodisponibility of muscle exosomes in 2013, demonstrating in an article that they are able to reach other insulin sensitive tissues *in vivo*. El-Andaloussi's team demonstrated novel methods to preserve the integrity of exosomal structures through exclusion chromatography. The method will be replicated in Lyon.

She also exchanged views with Oscar Wiklander, experienced in injecting intravenously exosomes and accredited to work with animals. They were editing a joint article at the time and complemented the results with experiments at KI. They discussed among others how lipidic composition affects the biodistribution of exosomes and their incorporation into targeted tissue, a hitherto poorly researched area. The two also planned joint funding applications.