

## Post-doctoral position at INRA (France) Cellular & Molecular Biology

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A **12-month post-doctoral position** is available at **INRA Clermont-Ferrand-Theix** (France).

**Phytosteranes** are omega-3 fatty acid derived **phytochemicals** generated through the **free-radical mediated peroxidation of linolenic acid** (18:3  $\omega$ 3). These compounds belong to the class of **oxylipins** and substantial amounts are found in linolenic acid-rich **oilseeds and vegetable oils**. However, the factors influencing their formation and their biological effects in humans remain poorly described. The general aims of the project are:

1. to evaluate the impact of culture and oilseed processing on the formation of phytosteranes
2. to investigate the biological activities and the mechanisms of action of phytosteranes in immune and endothelial cells.

The post-doctoral fellow will have to **investigate the *in vitro* biological effects of phytosteranes on the endothelial dysfunction and the resolution of inflammation** in relation with the preservation of the vascular function and the prevention of atherosclerosis. He/She will use **cell biology** (cell culture, FACS analysis, gene transfer) and **molecular biology** (qRT-PCR, WB, ELISA) techniques to determine the ability of phytosteranes to modulate **gene and protein expression** in different cell types (HUVEC, M1/M2 human primary macrophages) and to decipher the **molecular mechanisms of action**.

The work will be carried out at INRA, which is a public French research institute, in the **Human Nutrition Unit** (UMR1019 INRA/Auvergne University, Clermont-Ferrand/Theix INRA center), gathering over 150 persons studying the effects of the diet on health and disease prevention. The post-doctoral fellow will work with researchers from the **Micronutrients and Cardiovascular health team (MicroCard)** having expertise in phytochemicals, lipids and fatty acid metabolism as well as in the nutritional modulation of the vascular function.

### Candidate profile:

A thorough knowledge in cell and molecular biology is required. The candidate should have practical experience in the following techniques: cell culture, FACS, qRT-PCR, ELISA, Western blot, siRNA. Knowledge in immunology and innate immunity would be an asset. Interest for human nutrition, especially for lipids, will be appreciated.

The qualified candidate will have proven ability to develop and validate new methods/protocols, to work independently as well as to bring new ideas and good communication skills.

Public short-term contract (12 months).

Start date: May 2015.

Annual gross salary: ~27 k€

Send applications, including CV, publication list, research interests, technical skills, and at least two references to C. GLADINE: UMR 1019 INRA/Université d'Auvergne, INRA Centre de Recherche de Clermont-Ferrand / Theix, 63122 St Genes Champanelle, France; [cecile.gladine@clermont.inra.fr](mailto:cecile.gladine@clermont.inra.fr)