DOC-FAM is an excellence DOCtoral training programme in Functional Advanced Materials awarded to the Spanish National Research Council (CSIC) in the H2020-MSCA-COFUND-2016 Call and coordinated through the Institute of Materials Science of Barcelona (ICMAB) in collaboration with several partner research Institutions from the area, four of them contributing to the co-funding of the programme.

Job description:

Candidate for doctoral thesis is sought, within the project:

Applications of Synchrotron to Health. Development and Characterization of Functional foods and anticarcinogenics by synchrotron emission and absorption spectroscopy

The project will include the elaboration of functional foods through plant enrichment processes and development of anticarcinogenic systems. The enrichment in edible plants has been proposed as a solution for specific elements deficiency and related health impact in several countries. The fellow will study the effects of plant nutrient enrichment both in presence and absence of antistressor products by means of X-ray absorption (XAS) and X-ray emission (XES) spectroscopies. He/she will investigate the evolution of related chemical species through the soil-plant-food cycle. On the other hand, the candidate will study the behaviour of some anticarcinogenic systems in close cooperation with clinical researchers. In this concern, emphasis will be paid to transport of carrier molècules and to characterize the anticarcinogenic mechanism. In both cases, the investigation will start from Selenium containing products. Spite of the project is focused to use synchrotron techniques to characterize the diferent Systems, standard laboratories techniques (e.g, HPLC-ICPMS) will complement the needed information on the studied Systems. The fellow will be co-supervised by Prof. Manuel Valiente and Dr. Roberto Boada from the Department of Chemistry (Centre GTS) at Universitat Autònoma de Barcelona (UAB, Barcelona), and Dr. Laura Simonelli from CLÆSS beamline at ALBA Synchrotron (Barcelona).

Candidate requirements:

- Must have completed master's degrees in Chemistry, Biochemistry or Chemical Engineering or equivalent between January 1st, 2015 and December 31st, 2017.
- The candidate must not have resided or carried out his/her main activity (work, studies, etc.) in the country of the beneficiary for more than 12 months in the 3 years immediately before the call deadline.
- In the case of access to the doctorate only with a bachelor's degree, engineering degree and architecture and without the need to accredit master's studies, these studies must be completed between January 1st, 2015 and the deadline for the submission of applications . Individuals in possession of a bachelor's degree, engineering or higher architecture who have obtained the Research Enhancement (DEA) after January 1st, 2015 may also be applicants.
- Academic Degree score: 2.8 or higher (8.6 out of 10).
- Essential English spoken and written. Level C1
- Very dynamic person, wanting to grow and own initiative.

Contract Characteristics:

Duration: 60 months.

Start: 2018

Hours: 9: 00-18: 00

Gross annual salary: 33,600 €/year including living + mobility allowances. PhD tuition fees covered + research, training and networking costs

Application:

Those interested can send their full CV, specifying clearly academic Degree Score and completion of an official Master's Degree to: **mariajesus.sanchez@uab.cat** and **manuel.valiente@uab.cat** with the Candidate PhD subject before **October 10th, 2017.**