

**The CEA Grenoble, SyMMES laboratory (CIBEST team) is currently seeking a post-doctoral research associate**

**Project: development of Adverse Outcome Pathways related to nanomaterial toxicity to humans**

Background

In the frame of the ASINA H2020 project (NMBP-15-2019), an 18 months post-doc position is available at the SyMMES laboratory, CEA Grenoble, France. ASINA has the ambition to promote consistent, applicable and scientifically sound Safe-by-Design nano-practices, considering all the nano-enabled products design dimensions: functionality, production technologies, safety, environmental sustainability, cost effectiveness and regulatory requirements, in line with research responsible innovation policy (<https://www.asina-project.eu/>). It is focused on two value chains in which nano-enabled products are used: anti-microbial/anti-biofilm/depollutant coatings in clean technology (VC1) and nano structured capsules delivering active phases in cosmetics (VC2). In this context, the post-doc will be in charge of evaluating how some modifications of the physico-chemical characteristics of these nano-enabled products would lead to safer processes and products. This evaluation will be based on the Advanced Outcome Pathway methodology.

Responsibilities:

- Literature search and review on the human toxicity of TiO<sub>2</sub>, TiO<sub>2</sub>-N, Ag nanoparticles and lipidic nanocapsules in the context of realistic exposure scenarios in occupational settings defined in the ASINA project
- Search for already existing Adverse Outcome Pathways (AOPs) in AOP wiki and the literature, relevant to the identified toxicity mechanisms
- Structuration of the results as new AOPs or amendment of already-existing AOPs
- Definition of in vitro assays to validate each identified Key Event or Associated Event of the AOP

Profile of the candidate:

PhD in the field of life science, if possible in toxicology

Strong background in cell biology and nanomaterial physico-chemistry

Ideally some experience in in vitro assays and skills in bioinformatics for omics database searches

Fluent communication in English, written and oral

Highly motivated, teamwork, pro-active team player

Please send CV and motivations to: [marie.carriere@cea.fr](mailto:marie.carriere@cea.fr)

