



2019-IPR-F-000-012288

**High Content Analysis (HCA) to assess the potential toxicity of micro and nano plastics on *in vitro* models**

**Position for:**

Trainee

As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <http://www.jrc.ec.europa.eu>

**Short description of activity:**

The Consumer Products Safety Unit (F.2), part of Health, Consumers and Reference Materials Directorate-F at the JRC in Ispra (Italy), is looking for a trainee for the Nanobiotechnology laboratory.

In the recently published EU communication "A European Strategy for Plastics in a Circular Economy" the issue of micro and nano plastics has been considered to be a key issue in relation to the sustainable use of plastics. Plastics can be found in different product categories including food and pharmaceutical packaging, medical devices, textiles, toys, cables and wires among many others.

There is concern that micro and nano plastics could harm human health as they move through the marine food web and might cross biological barriers (such as cell membrane).

High Content Analysis (HCA) has already been successfully used in the field of drug discovery and toxicity of nanomaterials for the ability to analyse numerous samples in the same experiment.

Her/his main activity will consist in supporting the work to assess the potential toxicity induced by micro and nano plastics using High Content Analysis (HCA). In particular the work will be based on developing a multi parametric *in vitro* platform looking at changes as nuclear morphology, mitochondrial membrane potential, cytosolic calcium levels, lysosomes acidification or plasma membrane integrity.

	<p>In particular the trainee will contribute to the acquisition and analysis of data by HCA.</p> <p><b><u>Qualifications:</u></b></p> <p><b><u>Essential:</u></b></p> <ul style="list-style-type: none"> <li>•University degree or near completion in in-cell biology, pharmacology, toxicology or related discipline.</li> <li>•Good knowledge of spoken and written English (level B2)</li> <li>•Good knowledge of Excel and other Office tools are required.</li> </ul> <p><b><u>Advantage</u></b></p> <p>Ability to work in a team.</p> <p>Practical experience in cell culturing is an advantage.</p> <p>Experience in acquisition of images and analysis of data by High Content Analysis (HCA) is an asset.</p> <p>Publications in this field in English would be an advantage.</p> <p>knowledge of statistical analysis would be beneficial</p> <p><b><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></b></p> <p><a href="https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees">https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</a></p>
<b>Unit/Directorate</b>	<p>Directorate F - Health, Consumers and Reference Materials</p> <p>Unit F.2 – Consumer Products and Safety</p>
<b>Indicative duration</b>	5 months
<b>Preferred starting date</b>	As soon as possible
<b>JRC Site</b>	Ispra
<b>Country</b>	Italy

**JRC contact details****For any technical problems with your application, please contact:**[HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu](mailto:HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu)