



Elettra Sincrotrone Trieste

Post-Doctoral Research Associate position at the XRD2 (X-Ray Diffraction 2) beamline for structural biology research at Elettra

Deadline: 14 May 2020

Ref: DA/20/20

Company description

Elettra Sincrotrone Trieste is an international multidisciplinary research center operated as a user facility, featuring a 2.0/2.4 GeV, third-generation synchrotron light source (Elettra), a new free-electron laser light source (FERMI) and a variety of support laboratories. The extremely high quality of the machines and beamlines has set new performance records and has been producing results of great scientific and technological interest. See <http://www.elettra.eu> for more information.

Beamline/Activity/Project description

The XRD2 beamline is dedicated to macromolecular crystallography (MX) measurements using x-ray diffraction. The beamline is operated in the framework of a scientific partnership between Elettra-Sincrotrone Trieste and the Indian Institute of Science and Technology. The photon beam is produced by a superconducting wiggler and a double crystal monochromator provides photons in the 8-20 keV range for MX experiments. A focusing system allows production of a beam 20 to 100 μm in size at the sample position. The endstation is equipped with a MD2S diffractometer and a Pilatus 6M detector. The automated sample changer consists of a Staubli arm coupled with a dewar holding up to 196 samples in different types of containers (unipuck, ESRF, plates). Data acquisition software and other web portals are integrated at the beamline enabling remote data collection and easy access to experimental set-ups before and after data collections. More information can be found at: <https://www.elettra.trieste.it/elettra-beamlines/xrd2.html>

The in-house XRD2 beamline research program relies on a close collaboration with the Structural Biology Laboratory (SBL) at Elettra. The laboratory focus is on proteins that are potential drug targets for therapeutic treatments leading to structural based drug discoveries. Within the SBL, the Protein Facility is specialized in recombinant protein expression, purification, and characterization, supporting internal research in tight collaboration with the Elettra beamlines, and external researchers from public or private laboratories. More information can be found at: <https://www.elettra.trieste.it/labs/structural-biology>

Job description

As part of the XRD2 beamline staff the successful candidate will be involved in the scientific activities required to meet the needs of the user community in the MX field. He/she is expected to provide high-quality support to the beamline users and be actively involved in the in-house collaborative research projects with the Protein Facility, to obtain recombinant proteins and protein crystals and provide structural biology information by means of single crystal x-ray diffraction at the XRD2 beamline. Presently, several joint projects at different stage of maturity are ongoing, all related to protein targets for drug discovery (i.e., kinases, proteases and deubiquitinases). The successful candidate will be involved in all of the steps of the workflow for protein production, starting from the initial construct cloning design, the expression in bacteria, insect or mammalian cell systems and the consequent protein purification to the final biochemical and biophysical analysis including crystallization and MX experiments.

Qualifications

A PhD in structural biology, biochemistry or related Life Science disciplines is required. In the case the PhD has not yet been awarded, the candidate must prove that he/she has completed the course of studies and the defense has already been scheduled. In any case, the PhD must be awarded by the end of June 2020.

Demonstrated experience in protein crystallization, biochemical assays and biophysical characterization, as well as in MX data acquisition is required. Hands-on experience in protein expression (in bacterial and/or eukaryotic systems), purification and structural biology would be an important advantage. Experience in protein crystallization using automated systems will be considered an additional asset, as would be previous experience in the pharma or biotech industry.

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L. 19 ottobre 1999 n. 370





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The candidate should possess strong personal skills to pursue collaborative research programs in a team-oriented environment: he/she will plan project activities, manage required resources and intergroup relationships. In externally collaborative projects he/she will be involved in management of direct relations with external partners.

Good time management skills, work autonomy together with the ability to interact with staff and facility users and to work as part of a multi-disciplinary team is expected.

Good oral and written communication skills in English are essential. A working knowledge of Italian would be desirable, but is not required.

The appointment envisioned is a fixed term contract of an initial duration of 12 months, renewable upon agreement by the parties.

The salary will be commensurate with the previous experience and qualifications of the candidate.

Applications should include full curriculum vitae, contact information (including electronic mail) of at least two references.

Due to the situation related to the Covid-19 virus, the interviews will be organized by video conference call.

The deadline for the submission of the application is May 14, 2020.

In accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection 16ter) of Italian legislative decree no. 165/2001, employees or former employees of any Italian Public Entity who have exercised authority over Elettra Sincrotrone Trieste S.C.p.A. or have negotiated with Elettra - Sincrotrone Trieste S.C.p.A. within the last three years will be excluded from the present selection procedure.

We thank all applicants in advance.

For more information, please contact Annie Heroux (email: annie.heroux@elettra.eu).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?ref=DA%2F20%2F20>

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