MSCA AiPBAND ESR grant on microfluidic devices for low concentration bioanalytes integrated with sensor array

Research grant position for 3 years is available in Scriba Nanotecnologie srl, in the framework of Marie Skłodowska-Curie MSCA-ITN-ETN action AiPBAND (An Integrated Platform for Developing Brain CANcer Diagnostic Techniques).

AiPBAND will be the first ETN to train a new generation of early-stage researchers (ESRs) to address the need of early diagnosis for gliomas, a range of devastating and progressive brain tumors, using blood biomarker-based biosensing techniques and big data driven methodologies. It will provide triple-i (interdisciplinary, inter-sectoral and international) research and training platform with multidisciplinary expertise and advanced technologies. The research & training platform will span various scientific themes: it will develop novel plasmonic, graphene and digital ELISA-based multiplexed biosensing techniques; it will discover reliable early gliomas blood biomarkers by employing innovative techniques; it will develop a novel disease prediction model and strategies for intelligent information management; it will develop an integrated prototype cloud-based diagnostic system for gliomas; it will carry out validation for assessment of the biomarkers, biosensors and evaluate the performance of the AiPBAND diagnostic system; it will develop an innovative business model and exploitation strategies for early gliomas diagnosis, and to explore novel commercial applications of the technologies developed in this ETN. The strong interaction across these scientific themes is crucial for (1) the training through research and (2) the development of an integrated cloud-based diagnostic system for early gliomas, which is defined as the central Research & Technology Development (RTD) goal of this ETN.

Scriba Nanotecnologie is a dynamic SME, founded by Fabio Biscarini, which will provide a microfluidic device to be integrated with photonic/plasmonic sensors and graphene-based sensors. Considering fabrication output, a suitable number of integrated prototypes will be prepared using UV photolithography techniques, laser lithography, photopolymerization and replica molding.

The candidate should have a Master degree in chemistry, physics or equivalent. The knowledge of microfabrication techniques (photolithography, laser lithography and soft-lithography) will be a strong factor in assessing priority. Knowledge of programming and finite element modeling are welcome. Candidates of all nationalities may apply, but they must not have lived in Italy for more than 12 months in the 3 years immediately prior to their appointment. Within the framework of AiPBAND, the ESR will work on the design and fabrication of microfluidic devices, also by means of IR laser printer set-up developed by SCRIBA, which can deliver a spatial resolution of 7 μm. The candidate must prepare monthly reports on its activities and present the results in English language in the context of company and project meetings.

All candidates should send their application with curriculum vitae and cover letter to msca@scriba-nanotec.com

Scriba Nanotecnologie S.r.l. Via di Corticella, 183/8, I-40128 Bologna, Italia
Tel.: +39-051-4159501; Fax: +39-051-6311250
info@scriba-nanotec.com; www.scriba-nanotec.com
Partita IVA: 02542781204
Numero R.E.A C.C. Bologna.: 447542