1 PhD FELLOWSHIPs POSITION at Novartis Vaccine and Diagnostics, SIENA, ITALY

European Union - Marie Curie Actions - Initial Training Network (ITN) VACTRAIN

Project: Next generation vaccines applying adjuvants and novel vaccine delivery technologies for multiple combination vaccines and mucosal vaccines.

Supervisor name: Dr. Barbara Baudner
PhD enrolment: University of Siena, Siena, Italy

We are searching for 1 PhD student highly motivated and well-organized to participate in this project. We offer: fully funded placements for PhD training, excellent educational and research facilities, research training in both academic and industrial settings, frequent contacts with fellow researchers through Europe and great opportunities for secondments in other research laboratories.

Vaccines are the most cost-effective health interventions available. The impact of vaccination on the health of the world's population cannot be overstressed. Vaccinology is the multidisciplinary discipline of developing vaccine interventions and combines knowledge from basic sciences, medical sciences, public health and social sciences. Ideally a vaccinologist should have a general overview of all disciplines involved and at the same time be able to zoom in on it's own discipline.

The major aim of this PhD project is to simplify immunization schedules by reducing the number of injections. Therefore this research project will focus on the evaluation of novel adjuvants and new technologies for the delivery of multiple vaccine combinations. Various vaccine antigens will be used as a model system to investigate the suitability of complex vaccine formulations delivered either systemically or mucosally (nasal and sublingual). Vaccine formulations will be optimized by the use of immune-potentiators (or mucosal adjuvants respectively) together with delivery systems (such as various polymers or bioadhesives) and compared to benchmark vaccine candidates delivered by systemic administration. These improved vaccine formulations will be first characterized in depth by applying state of the art analytical tools and subsequently tested in animal models (laboratory mice but also guinea pigs and rabbits) in order to evaluate their efficacy (using in depth serological and immunological analysis). Knowledge of the immunological mechanisms coupled with the required formulation and biophysical characteristics of our novel vaccine formulations will improve the development of more effective and better targeted vaccines.

There is hardly any formal training to become a vaccinologist in the world and none such training exists at the PhD level in Europe. The need for a program to train vaccinologists is apparent and recognised. The vaccine industry is a largely European based industry. Investing in the future of this industry by training the next generation vaccinologists will boost European's economy and will sustain European's competitiveness. Clearly there are public health and economic reasons to invest in a program training the European vaccinologists of the future.

Further information is available at the VACTRAIN website www.vactrain.eu

The deadline for applications is January, 2013. The procedure and criteria for selection are described in a posting about the project, also on Euraxess. http://ec.europa.eu/euraxess/index.cfm/jobs/fgDetails/42741

Applications including detailed CV, motivation letter, and contact details of two referees should be sent also to: barbara.baudner@novartis.com