



Job Announcement

EPOS-IASIS, R&D, a Cyprus-based research-oriented SME and the coordinator of the NANORESISTANCE project and The University of Manchester jointly invite qualified young researchers to express their interest for a 14-month Marie-Curie Research Fellowship.

The employer and the Partnership:

EPOS-IASIS is engaged in cutting-edge research in the field of molecular diagnostics and therapeutics (www.epos-iasis.com). The vision of EPOS-IASIS is to become a long standing reliable partner in health care and establish itself as a leading research, development and education enterprise in the European environment. The primary long term business objective of the company is to conduct research in the area of molecular medicine for the purpose of developing novel diagnostic and pharmaceutical products.

The strategy of EPOS-IASIS is to partner with other flexible teams through the research and development phases and with well established pharmaceutical and biomedical engineering firms for the clinical testing and selling of our products.

Nanomedicine Laboratory

The Nanomedicine Laboratory (www.nanomedicinelab.com) is part of the Institute of Inflammation and Repair and the Manchester Cancer Research Centre in The University of Manchester. The Nanomedicine Lab focuses on preclinical development of nanomedicine constructs based on novel nanomaterials of synthetic and biological nature, including:

- development of novel viral and non-viral gene therapy vectors
- engineering and pharmacological development of carbon nanomaterials (fullerenes, nanotubes, graphene)
- delivery & genetic manipulation of embryonic and progenitor stem cells
- advanced delivery systems for radio- and chemo-therapeutic agents against cancer
- descriptive and predictive modeling of delivery systems' pharmacological performance
- descriptive and predictive modelling of the pharmacological and toxicological profile of novel nanomedicines

The Nanomedicine Lab engineers delivery systems for drugs, cells, proteins, radionuclides and genes towards therapeutic and diagnostic clinical applications. Great emphasis is placed at the interface between *in vitro* and *in vivo* studies and

how rationally-designed delivery systems can be translated into clinically-effective therapeutics and diagnostics.

The University of Manchester

The University of Manchester is Britain's largest and most popular university, with a distinguished history of academic achievement and an ambitious agenda for the future. The University, with income in excess of £780 million, has four Nobel Prize winners amongst its current academic staff, and has embarked on an exciting and bold course which aims to make us one of the top 25 universities in the world, as set out in the University's strategic vision for 2020: [Strategic Vision 2020](#).

The University of Manchester was established in 1824, bringing together The Victoria University of Manchester and UMIST to form The University of Manchester. It has an excellent track record in research, as demonstrated by a research power exceeded only by Oxbridge in the RAE 2008 and specifically by the award of two Nobel prizes in physics in 2010. The University's research strategy can be found via the following link: [UoM Research Strategy](#).

The academic structure of The University of Manchester is made up of Faculties and Schools. There are four Faculties and further information about each Faculty and its related Schools can be found at [UoM Faculties and Schools](#).

The Faculty of Medical and Human Sciences (FMHS)

The Faculty of Medical and Human Sciences is a leading international centre for research and education in medicine and a spectrum of health-related professions including nursing, midwifery, social work, pharmacy, dentistry, psychology, audiology and speech and language therapy.

A major review in 2011/12 led to a new strategy and structure intended to enhance our research and teaching performance. A key component of the new approach is the creation of a matrix structure linking five Faculty Schools with six Faculty Institutes. The objective is to ensure that the Faculty achieves a major international academic profile in each priority area within a period of five years.

The new strategy will focus our research effort in six priority areas:

- Human Development including Women's and Children's Health
- Cardiovascular Sciences
- Cancer Science
- Inflammation and Repair
- Brain, Behaviour and Mental Health
- Population and Health Sciences

Details of the structure can be found at: [FMHS Structure](#).

FMHS has a total income of £210 million, around 6,500 undergraduate students and 2,500 post graduate students.

The Faculty has strong relationships with outstanding NHS partners which are critical in achieving our mission.

The Research Project:

Marie-Curie Industry Academia Pathways and Partnerships (IAPP) are international interdisciplinary, intersectoral research and training funding schemes, with major emphasis on technology transfer and training through high caliber research.

Combining complementary emerging supra-disciplinary technologies in nano-biotechnology NANORESISTANCE introduces for the first time (i) receptor independent targeting of Epidermal Growth Factor Receptor-kinase activity (ii) nuclear delivery of anti-Epidermal Growth Factor Receptor therapy and (iii) the deciphering of resistance and lack of responsiveness in the preclinical setting with mathematical models of interstitial biodistribution.

NANORESISTANCE IAPP –“Management of Resistance to Tyrosine Kinase Inhibitors with Advanced Nanosystems” , brings together three academic (UNIMAN-UK, UPMC-FR, DUTH-GR) and two entrepreneurial (EPOS-lasis-CY, co-ordinator and PRO-ACTINA, GR) partners securing a vibrant scientific training program and a dynamic scheme of transferrable skills.

The inter-sectoral mobility between academia and industry will be a priority as a means to improve cooperation between the two sectors and to eliminate cultural and other mobility barriers in the context of the “Innovation Union” flagship initiative. The vibrant inter-sectoral mobility program of NANORESISTANCE will play a structuring role by allowing researchers to acquire key skills which are equally relevant to the public and private sectors.

Requirements:

The candidate is expected to be a highly-motivated individual with proven capability to work in a demanding multidisciplinary environment and eager to be actively engaged in joint training activities.

The work will involve carbon nanomaterial (carbon nanotubes and graphene) surface functionalization to render them water soluble and improve their biocompatibility in collaboration with other laboratories. The functionalisation process will be applied to produce CNTs derivatised with nucleic acids (e.g. siRNA) and/or a probe molecule (for imaging). Systematic physicochemical characterization of the carbon nanomaterial complexes with the nucleic acids will be undertaken. In addition, the newly recruited Fellow is expected to study the biological performance of the vector systems by *in vitro* experiments on cancer cell cultures. Use of optical, fluorescent and confocal microscopy techniques will be important.

Minimal requirements include:

- PhD in chemistry, biology, materials science, chemical engineering, biochemistry or molecular biology;
- Knowledge of non-viral vector design principles, characterisation techniques and understanding of gene expression/transfection is expected;
- Mammalian cell culture experience is essential;
- Experience on microscopic imaging techniques, including optical, confocal and fluorescence microscopy is desirable;
- Experience in basic molecular biology techniques (rt-qPCR, blotting, immunostaining methodologies) is desirable.

In compliance with the project's requirements, the candidate should have more than 4 but less than 10 years of research experience and should not have resided in Cyprus more than 12 months in the 3 years preceding his/her recruitment.

Due to the requirement of specialized equipment, infrastructure and expertise for the synthetic part of the work, the Fellow will be expected to spend a component of their employment hosted in the Nanomedicine Lab at the University of Manchester.

Salaries, living allowances and additional benefits:

The annual compensation for this position is the one specified by the Marie Curie FP 7 program rules. For this position which is specified for a researcher with research experience between 4 and 10 years the total employee cost allowed is the nominal Euro 58.500, adjusted for the Cyprus coefficient. Out of this amount the employers and employees contributions, as well as the income tax applicable to the researcher, will be deducted. The current deduction rates and personal tax brackets can be found in the following links:

Employer and Employee Contributions: http://www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Tax/Taxation%20and%20Investment%20Guides/2012/dttl_tax_highlight_2012_Cyprus.pdf

Personal Income Tax:

http://www.worldwide-tax.com/cyprus/cyprus_tax.asp

Should any of these contributions and/or tax brackets be adjusted by the Cyprus government, the researchers salary will be adjusted accordingly, in order to maintain the above mentioned maximum employee cost set by the Marie Curie FP 7 program rules

Interested candidates should provide a comprehensive Curriculum Vitae, copies of 3 representative publications and contact details of 3 referees by September 15, 2014, end of business day by email to: inf@epos-iasis.com

Contact person:

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