

## Note

## GALENOS Euro-PhD in Advanced Drug Delivery: an innovative European Postgraduate Certificate for young pharmaceutical scientists, funded by the EU Marie Curie EST programme

The European Community has for a considerable time fostered international collaboration in scientific education and training between European Universities. The exchange of undergraduates across member states was promoted for many years by the ERASMUS programme. More recently, the SOCRATES programme has continued and extended the sponsorship of international student exchange with EU financial support directed toward both undergraduate and postgraduate initiatives.

Founded in 1995, with part-funding under ERASMUS and then SOCRATES, the GALENOS Network in Pharmaceutical Sciences was formed to promote and foster the training of young researchers in the scientific area of Advanced Drug Delivery. The network has now grown in size to comprise over 50 European university partners from geographically diverse countries throughout Europe. Each partner is represented by a university department which is involved in education and training within the pharmaceutical sciences and is active in Advanced Drug Delivery research. In addition to the university partners, the GALENOS Network also includes among its members a number of corporate organisations from the pharmaceutical industry with all commercial levels of this sector represented. Membership of the Network is open to all pharmaceutical science departments at European universities, providing they sign a Letter of Intent supporting the aims of the GALENOS Network. Further information can be found at <http://www.galenos.net>

One of the key aspirations of the GALENOS Network is to exploit effectively the substantial breadth and depth of European scientific expertise in Advanced Drug Delivery toward the training of graduate students within this crucial discipline. Toward this goal the partner institutions of the GALENOS Network have implemented many successful Intensive Programmes (IPs), many of them funded by SOCRATES. Each of these pan-European IPs typically represents a 10-day workshop focussing on a theme within Advanced Drug Delivery and involves not only research presentations by the world's leading scientists within the area, but also laboratory instruction to the graduate

students on pertinent experimental techniques. These events have not only been instructive for the attendees but have fostered the exchange of science at the graduate level and strengthened the social and cultural platforms essential for the future vitality of pan-European scientific collaboration.

A recent GALENOS Network initiative toward interdisciplinary and intercultural training is the establishment of a formal European postgraduate certificate to be awarded through the Network and administered through the Network's co-ordinating institute (currently Saarland University, Saarbrücken, Germany). This certificate, entitled GALENOS Euro-PhD in Advanced Drug Delivery (Euro-PhD) is intended to be uniformly recognised as verification of the awardee's knowledge and training within this discipline. It provides an additional qualification to be awarded once a candidate has successfully completed a doctoral (PhD) thesis in a subject relevant to drug delivery.

The criteria that need to be fulfilled for awarding the GALENOS Euro-PhD Certificate are the following:

1. Candidates must have successfully completed a doctoral thesis on a subject relevant to the field of Drug Delivery according to the established local regulations of their home university.
2. Candidates must have published (or have accepted for publication) at least one original research paper relating to a topic in Drug Delivery in an international peer-reviewed scientific journal.
3. Candidates must have worked for at least 12 months at a research facility in a country other than the country where they have obtained their local doctoral degree.
4. In order to demonstrate additional in-depth scientific training and education, the candidates must have attended at least three approved Postgraduate Courses.

Application to enrol for the GALENOS Euro-PhD is open to all graduate students at a European university who are enrolled in doctoral studies in an area relevant to Advanced Drug Delivery at their home university. These home universities have to be members of the GALENOS Network. The Euro-PhD programme became active in October 2004 and the first certificates will be awarded to qualifying candidates in 2005.

The GALENOS Network Euro-PhD initiative is in complete harmony with the aim of the European Council (*EC Meeting Lisbon, March 2002*) to enhance further the already enviable reputation of European scientific and technological research, a major driving force for economic and social development; essential if Europe is to become the most dynamic knowledge-based economy in the world. To achieve this goal highly trained research personnel will be needed that are effective in participating in multidisciplinary and multicultural research teams. The GALENOS Network's Euro-PhD concept seeks to satisfy this demand, not only with the provision of expanded training and career development opportunities within Advanced Drug Delivery, but through the fostering of links for future international co-operation and scientist mobility across Europe. The sharing of knowledge, expertise and experience within this network and the raising of the international profile of the young researchers are highly desirable elements of the initiative.

Facilitating the development of the GALENOS Network's Euro-PhD initiative, the Network has recently been successful in obtaining funding under the EU's Sixth Framework Programme for 40 Marie Curie Early Stage Training (EST) Fellowships. Over the next 4 years these Fellowships will fund research training to support Euro-PhD candidates. Each Marie Curie EST Fellow in Advanced Drug Delivery selected by the GALENOS Network will undertake a 12 month period of research training in a country other than that where they are due to complete their PhD. In addition, these Fellows will attend a co-ordinated programme of international postgraduate courses, including those focused on management training. Marie Curie EST Fellowship training positions, at present, are available at one of the following universities:

Marie Curie EST Fellowship host university	GALENOS Network representative
Saarland University, Germany (Coordinator)	<i>Prof Claus-Michael Lehr</i>
University of Jena, Germany	<i>Prof Alfred Fahr</i>
University of Santiago de Compostela, Spain	<i>Prof Maria Jose Alonso</i>
University of Kuopio, Finland	<i>Prof Arto Urtti</i>
University of Paris-South, France	<i>Prof Elias Fattal</i>
University of Nancy, France	<i>Prof Philippe Maincent</i>
University of Patras, Greece	<i>Prof Sofia Antimisiaris</i>
Trinity College Dublin, Ireland	<i>Dr Majella Lane</i>
Utrecht University, The Netherlands	<i>Prof Daan Crommelin</i>
University of Ljubljana, Slovenia	<i>Prof Julijana Kristl</i>
King's College London, United Kingdom	<i>Dr Ben Forbes</i>
Cardiff University, United Kingdom	<i>Dr Mark Gumbleton</i>

The Marie Curie programme has started with noteworthy speed and success. In the first 6 months, 16 applications of Euro-PhD candidates for a Marie Curie EST Fellowship have been approved and most of these students have already started their 12 month scholarship at their host university. At the first Thematic Workshop at University of Ljubljana, Slovenia, in March 2005, the Marie Curie Fellows presented their PhD theses as well as the first findings resulting from their work in the host laboratory to an international audience. This consisted of their home and host supervisors as well as additional members of the GALENOS Network and—last but not least—PhD students in the field of Advanced Drug Delivery. It goes without saying that this was an outstanding forum for the students to receive valuable scientific feedback and exchange experiences. At the same time, attendees participated in management training courses, thus benefiting from the opportunity to broaden their view beyond the scientific task of their thesis. We are very much looking forward to the next GALENOS Network Meeting and Thematic Workshop at Cardiff University, October 2005!

The application process for the remaining 24 Marie Curie EST Fellowships is currently open and interested and qualified PhD students in the field of Advanced Drug Delivery are invited to apply. From a financial point of view, these Fellowships are based on a full time research activity with additional grants for consumables, mobility and travel. Before applying to the co-ordinator, students are strongly recommended to contact the representative of the GALENOS Network from their preferred Marie Curie EST Fellowship host university first (see table) in order that the suitability of their application can be evaluated by the potential host university.

For further information, visit <http://www.galenos.net> or contact [galenos@mx.uni-saarland.de](mailto:galenos@mx.uni-saarland.de)

On behalf of the GALENOS Network:

Dr. Ben Forbes, King's College London, UK

Prof. Dr. Claus-Michael Lehr, Saarland University, Germany (Co-ordinator)

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