

“Expert University” Course in Nanomedicine

CIBER-BBN Centro de Investigación Biomédica en Red de Bioingeniería, Biomateriales y Nanomedicina

www.ciber-bbn.es/

UNED Universidad Nacional de Educación a Distancia

www.uned.es

ENS Escuela Nacional de Sanidad - Instituto de Salud Carlos III

www.isciii.es

More information www.ciber-bbn.es/curso-nano



“Expert University” Course in Nanomedicine

In collaboration with:



"EXPERT UNIVERSITY" COURSE IN NANOMEDICINE

Entry requirements

Graduate studies or equivalent in Engineering, Science or Life Science

Methodology

Presential classes, seminars and lab practices plus a final course project

Schedule

Presential classes: 1 - 29 July 2013

Course project: 1 August – 30 November 2013

Site

→ UNED, Travesera de les Corts, 131-159, Barcelona

→ Course project: to be developed in one of the CIBER-BBN research groups

20 ECTS credits

Presential course: 12 ECTS

Course project: 8 ECTS

Registration fee 1.600 €

Courses Direction

UNED Director: Dr. Sebastián Dormido

CIBER-BBN Deputy Directors: Dr. M. Pilar Marco and Dr. Javier Pavía

ENS Deputy Director: Dr. Jose Ramón Mora

Registration

Fundación UNED

Francisco de Rojas, 2-2º Dcha - 28010 Madrid

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<http://www.fundacion.uned.es>



Course contents

1. Introductory Sessions / Coordinator: Dr. Jesús Santamaría (CIBER-BBN, UZ)

2. Molecular Diagnostics

- *In vitro*-Diagnostics / Coordinator: Dr. Laura M. Lechuga (CIBER-BBN, ICN2)
- Imaging Diagnostics / Coordinator: Dr. Javier Pavía (CIBER-BBN, UB)

3. Nanopharmaceuticals / Coordinator: Dr. Jaume Veciana (CIBER-BBN, ICMA-B-CSIC)

- Nanobiotechnology-based drugs: general overview, drug-nanoparticle bioconjugates, encapsulated drugs, nanoparticle as carriers, etc.
- Nanobiotechnology approaches to improve drug delivery specificity, pharmacodynamic and pharmacokinetics features
- Strategies for targeting, improving solubility, etc.
- Nanobiotechnology approaches to improve membrane penetration: cell membrane, organelle membranes, blood-brain barrier, transdermal delivery, etc.
- Nanobiotechnology approaches for pulmonary & nasal drug-delivery by nanoparticles
- Triggered drug delivery
- Biological Therapies

4. Specific Examples on Nanomedicine Approaches for Different Applications

- Nano-oncology / Coordinator: Dr. Simó Schwartz (CIBER-BBN, HUVH)
- Nano-cardiorespiratory diseases/ Coordinator: Dr. Daniel Navajas (CIBER-BBN and CIBERES, UB)
- Nano-neurology / Coordinator: Dr. Conxita Solans (CIBER-BBN, IQAC-CSIC)
- Infectious Diseases / Coordinator: Dr. M^a Luisa González (CIBER-BBN, UEX)

5. Ethical, Safety and Regulatory Issues / Coordinator: Dr. Simó Schwartz (CIBER-BBN, HUVH)