



RESEARCH CONFERENCES

ESF-UB Conference in Biomedicine

Nanomedicine 2008

Hotel Eden Roc, Sant Feliu de Guixols • Spain
19-24 September 2008

Chair: **Rogério Gaspar**, University of Lisbon, PT

Co-Chairs:

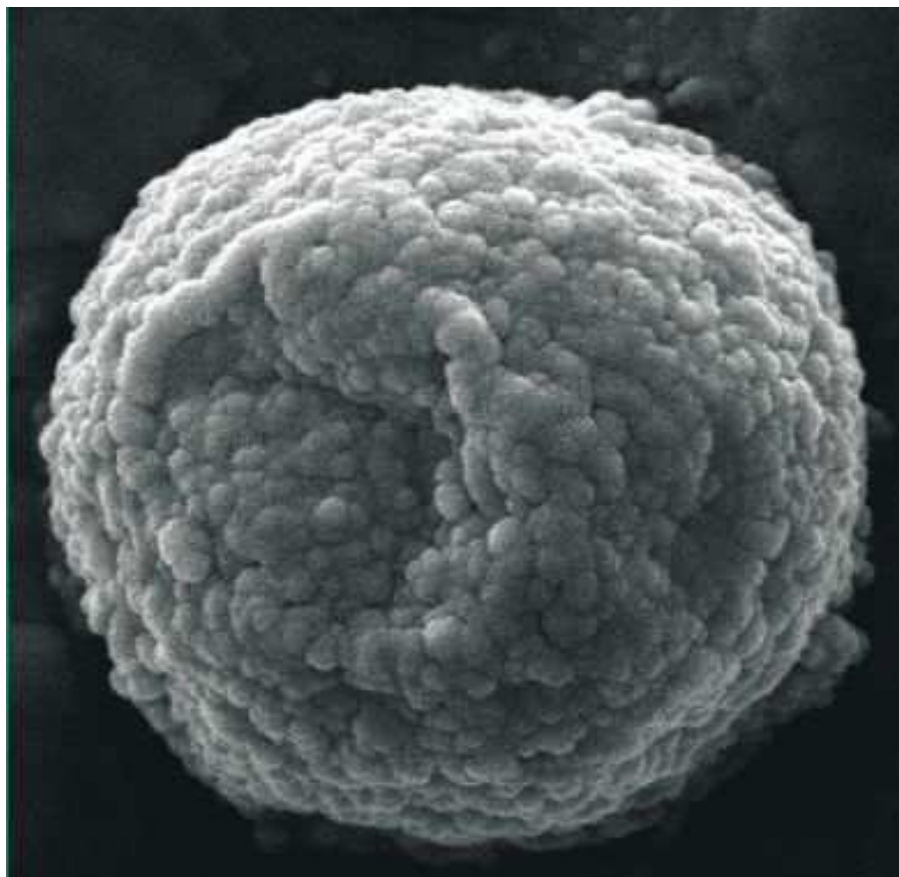
- **Hans Oberleithner**, Muenster University, DE
- **Mauro Giacca**, ICGEB, Trieste, IT
- **Thomas Kissel**, Marburg University, DE
- **Vicki Stone**, Napier University, UK

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i Recerca**



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Final Programme

Day 1 Friday, September 19th

16.00-19.00

Registration at the ESF-RC desk

19.00-20.00

Dinner

Setting the scene

20.00-20.40

Rogério Gaspar (Chair) (Univ. Lisbon)-Opening remarks and short ESF presentation by **Katarina Polakova**

20.40-20.50

Michaela Spencer (Univ.Lancaster)- Mapping Nanomedicine-The Aims

Opening Plenary Lectures:

Nanopharmaceuticals and the Search for Improved Medicines

Discussion Leaders: Rogério Gaspar

20.50-21.35

Alberto Gabizon (Univ. Jerusalem, Israel) - Clinical pharmacokinetics and pharmacology of nanomedicines as anticancer agents

21.35-22.20

Ferran Sanz (Univ. Pompeu Fabra, Barcelona, Spain) - Looking for new approaches in drug discovery: potential impact in Nanomedicine

Poster Mounting and Welcome Drinks

Day 2 Saturday, September 20th

Nanomaterials and Complex Biosystems: Understanding and Design

Discussion Leaders: Nick Quirke & Jørgen Kjems

08.30-09.15

Reinhard Lipowsky (Max-Planck Institute, Germany) - Defining the interactions of nanostructures in complex biological systems

09.15-10.00

Alan E. Rowan (Radboud Univ. Nijmegen, The Netherlands) - Nanoassemblies

10.00-10.45

Fernando Palacio (Univ. Zaragoza, Spain) - Magnetic Nanoparticles - current status and future opportunities in biomedical applications

10.45-11.30

Coffee break

Understanding Cell Physiology

Discussion Leaders: Hans Oberleithner & Tore-Grier Iverson

11.30-12.15

Robert Henderson (Univ.Cambridge, UK) - Cell membrane and receptor dynamics

12.15-13.00

Boris Mizaikoff (Univ. Ulm, Germany) - Nanophysiology of living respiratory epithelium

13.00

Lunch

Free afternoon for networking

16.00-16.30

Coffee break and Poster Viewing

16.30-17.30 Poster Communications I

Chair: Rogerio Gaspar & Maria J. Vicent

- 16.30 **Leo Baldwin** (ElectroScientific Industries Inc.) Formation of nanostructures on metals by non-ablative ultrafast laser processing.
- 16.35 **D. Pozo**, P. Castillo, R. Fernandez-Montesinos, P. Zaderenko, JA. Mejías (Univ. Seville, Spain) Functional characterisation of VIP-based nanoparticles: direct and indirect mechanisms of control cancer progression
- 16.40 **C. de Lange Davies**, Li. Eikenes, A. Erikson, I. Tufto (Norwegian Univ.Science and Technology, Norway) Enzymatic degradation of the extracellular matrix increases uptake and improves transport processes of nanomedicine in tumour tissue
- 16.45 **L. Lacerda**, M. Prato, A. Bianco, K. Kostarelos (London School of Pharmacy, UK) Development of drug delivery systems based on carbon nanotubes
- 16.50 **F. A. Carvalho**, S. Connell, R.A.S. Ariëns, N. C. Santos (Univ. Lisboa, Portugal) Atomic force microscopy and force spectroscopy of fibrinogen-erythrocyte and fibrinogen-platelet interactions
- 16.55 **M. Moisei**, L.Moldovan, O. Craciunescu, A. Roseanu, O. Zarnescu, M. Trif (Inst. Biochem. Romania) Characterization of liposome encapsulated chondroitin sulphate and in vitro evaluation of the anti-inflammatory activity
- 17.00 L. Cascales, À. Messeguer, E. Pérez Paya, **M. J. Vicent** (Centro de Investigacion Principe Felipe, Valencia, Spain) Novel polymer conjugates for the treatment of sepsis
- 17.05 **P. Behr**, M. Gabi, A. Meister, M. Liley, J. Przybylska, H. Heinzelmann, J. Vörös, T. Zambelli (ETH, Switzerland) AFM-controlled injection of labeled molecules into single living cells
- 17.10 **N. Quirke** (Univ College Dublin, Ireland) Simulation and experimental studies of nanomaterials at biological interfaces
- 17.15 **O. Saxl** (Inst. Nanotechnology, UK) Training in Nanomedicine for clinicians - objectives and outcomes

Proteins, Membranes and Pathogens

Discussion Leaders: Reihnhard Lipowsky & Viola Vogel

18.00-18.45

Peter Hinterdorfer (Johannes Kepler Universität, Linz, Austria) - Protein recognition on cell surfaces

19.00-20.30

Dinner

20.30-21.15

Simon Scheuring (Institut Curie, UMR168-CNRS, Paris, France) - Imaging proteins in native membranes

21.00-21.45

Yves Dufrene (Universite Catholique de Louvain, Louvain-la-Neuve, Belgium) - Nanoscale analysis of microbial pathogens

Poster Viewing

Day 3 Sunday, September 21st

Imaging and Analytical Tools

Discussion Leaders: Mauro Giacca & Paulo Freitas

- 08.30-09.15 **Hans Hofstraat** (Philips) - Imaging tools in clinical practice: nanotechnology at the clinical front (Philips perspective)
- 09.15-10.00 **Jørgen Kjems** (iNano, Aarhus, Denmark) - Self-assembled nanoparticles for biosensing and in vivo drug delivery
- 10.00-10.45 **Israel Rubinstein** (Weizmann Institute, Israel) - Localized surface plasmon resonance (LSPR) biosensing
- 10.45-11.30 **Coffee break**

Using Nanotechnology to Promote Tissue Repair

Discussion Leader: Dave Thomas

- 11.30-12.15 **Molly Stevens** (Imperial College, London, UK) - Novel bioactive scaffolds to promote tissue regeneration
- 12.15-13.00 **Mário Barbosa** (INEB, Oporto, Portugal) - Biological interactions onto nanostructured biomaterials
- 13.00 **Lunch**
- 15.30-16.30 Discussion Leaders: **R Gaspar, G. Storm, A. McCaskie, M. Giacca**
- 16.00-16.30 **Optional Workshop**
Enabling Nanomedicine Europe: Clinical Needs and Advanced Training
- 16.00-16.30 **Coffee break and Poster Viewing**

16.30-18.00 Poster Communications II

Chair: Hans Oberleithner & Maria J. Vicent

- 16.30 **G. Calderó**, R. Montes, MJ García-Celma, and C. Solans (Institut D'investigacions Químiques I Ambientals De Barcelona, CSIC, Spain) Influence of composition and process variables on the features of polymeric biocompatible nanoparticles obtained by the nano-emulsion template approach
- 16.35 **T. Etrych**, P. Chytil, T. Mrkvan, Blanka Rhová, Karel Ulbrich (Int Macro Chem, Prague, Czech Republic) Targetable HPMA-based polymer conjugates
- 16.40 **P. Urbán**, A. Cortés, J. Estelrich, and X. Fernández-Busquets, (Institute for Bioengineering of Catalonia, Spain) Development of nanovectors for the targeted drug delivery of antimalarials
- 16.45 **F. Gaboriaud**, J. F.L. Duval (Lab. Phys. Chem. and Microbiol. for the Environment CNRS, France) Molecular and macromolecular physico-chemical determinants underlying microbial Reactivity

- 16.50 N. Frerker, C.Tekle, K. Sandvig and **T.G. Iversen** (The Norwegian Radium Hospital, Norway) Entry of nanoparticles into cells: Characterization of the endocytic pathways and their induction of changes in normal cellular transport
- 16.55 **R. Moseley**, J. Hardwicke, E. Ferguson, P. Stephens, D.W. Thomas & R. Duncan (Cardiff Univ., UK) Dextrin-rhEGF conjugates as bioresponsive nanomedicines for wound repair
- 17.00 **P. Domnanich**, U. Sauer, J. Pultar, C. Preininger (Austrian Research Centers GmbH, Austria) Development of a Protein Chip for the Analysis of Human Melanoma Biomarkers
- 17.05 **R. Frost**, B. Cerda, C. Grandfils, S. Fredriksson, B. Kasemo, and S. Svedhem (Chalmers Univ. of Technology, Sweden) The interaction of nanoparticles for drug delivery with biomimetic model membranes
- 17.10 **V. Giménez**, I. Abasolo, S. Schwartz Jr, M. J. Vicent (Centro de Investigacion Principe Felipe, Valencia, Spain) Novel des-polyacetal block copolymers for the treatment of prostate and breast cancer.
- 17.15 **M. Halama**, O. Milkovic, S. Niznik, S. Longauer (Technical Univ. Kosice, Slovakia) Degradation properties of superparamagnetic Fe nanoparticles in biomedical environments
- 17.20 **S. Horie**, Y. Watanabe, R. Chen, N. Tomita, F. Oosawa, S. Fujisawa, M. Ono, M. Fukumoto, S. Mori, Y. Matsumura, T. Kodama (Tohoku Univ., Japan) Bladder cancer therapy using nanobubbles and two different intensities of ultrasound
- 17.25 **H. Jans**, K. Bonroy, K. Jans, B. Van de Broek, J.Trekker, K.a Verhaegen, G. Borghs, G.Maes (Catholic Univ. Leuven, Brussels) Metal nanoparticles with potential towards clinical diagnostics
- 17.30 **B. Naeye**, K. Raemdonck, S.C. De Smedt (Univ. Ghent, Belgium) Development of degrading nanogel particles for the intracellular release of siRNA.
- 17.35 **I. Ofer**, H. Shmeeda, A. Gabizon (hebrew Univ., Israel) Engineering a liposome-based delivery system for statins for cancer therapy
- 17.40 **P. Scopelliti**, L. Giorgetti, G. Bongiorno, R. Carbone, P. Milani (Univ. Milan, Italy) protein-surface interaction microarrays: quantitative high-content technique for the characterization of protein nanostructured materials interaction

19.00-20.30

Dinner

Nanotoxicology

Discussion Leaders: Alexander Kabanov

20.30-21.15

Peter Hoet (KUL, Leuven, Belgium) - Prothrombotic effects of nanomaterials (particles): role of surface charge

21.15-22.00

Wolfgang Kreyling (GSF, Munich, Germany) - Designing methods for proactive risk assessment of nanomaterials: Lessons learnt from inhalation toxicology

22.00

Poster Viewing

Nanopharmaceuticals & Drug Delivery Systems:

Discussion Leaders: Gert Storm & Molly Stevens

08.30-09.15

Ernst Wagner (Univ. Munich, Germany) - Therapeutic research strategies using polymer-based vectors designed to promote cytosolic delivery

09.15-10.00

Mauro Giacca (ICGEB, Trieste, Italy)- In vivo gene transfer and gene therapy: viral and non-viral gene delivery

10.00-10.45

Ruth Duncan (Cardiff Univ., UK) - Bioresponsive polymer therapeutics for treatment of cancer, infectious diseases and promotion of tissue repair

10.45-11.30

Coffee break

New insights in Nanomedicine and Nanobiophysics

Discussion Leaders: Janos Voros & M. Pilar Marco

11.30-12.15

Alexander Kabanov (Univ. Nebraska Medical Center, USA) - Looking at new approaches in drug delivery using nanomedicines: from proteomics to polymeromics

12.15-13.00

Viola Vogel (ETH, Zurich, Switzerland) - Molecular forces in nanobiophysics

13.00

Lunch

Free afternoon for networking

16.00-16.30

Coffee break and Poster Viewing

16.30-17.30 Poster Communications III

Chair: **Mauro Giacca & Maria J. Vicent**

16.30 **M. Miu** (Natl. Inst. Microtechnology, Romania) Study of nanoporous silicon composite layers / microparticles for biomedical applications

16.35 **M.Trif**, A. Macovei, C. Lazar, M. Moisei, N. Nichita (Inst. Biochem., Romania) Lipid nanostructures-mediated delivery of antiviral agents to human hepatitis B infected cells

16.40 **M. Estévez**, E. Martínez, J.Samitier (Institut for Bioengineering of Catalonia, Spain) Topographic features at the micrometric scale induce changes in cell morphology

16.45 **F.Canal**, G. Vilar, J. Tulla, F. Albericio, M.J.Vicent (Centro de Investigacion Principe Felipe, Valencia, Spain) Development of new cross-linked PEG conjugates as novel multifunctional nanocarriers

16.50 **S.A. Costa Lima**, P.Kong Thoo-Lin, A. Cordeiro-da-Silva (IBMC, Univ. Porto, Portugal) Encapsulation of bis-naphthalimidopropyl derivatives, two novel anti-Leishmania drugs, in biodegradable PLA and PLGA nanoparticles

16.55 **M. Creus**, T. Wohlschlager, J.M. Zimbron, A. Sardo A., T.R. Ward (University of Neuchatel, Switzerland) Selective DNA-binding of metal complexes embedded within a protein host: a novel technology for improved anticancer therapy

- 17.00 **Manuel G. Fuentes** (Harvard Inst. Proteomics, US) Label-free biomolecular interaction analysis using self-assembled protein microarrays and Surface Plasmon Resonance Imaging
- 17.05 **P. Gorelkin**, G. Kiselev, Al. Filonov, I. V. Yaminsky (Moscow State Univ., Russia) Microcantilever systems in medical applications
- 17.10 **D.V. Pelegov**, A. V. Veretennikov (Ural State University, Ural Center of Popular Science and Educational Films "Hyperborele", Russia) Nanomedicine popularization
- 17.15 **B. Trajkovski**, (Bulgarian Academy of Sciences) Fibrous Textiles are Alternative ECM Mimicking Scaffold

19.00-20.30

Dinner

Clinical Applications of Nanomedicine I

Discussion Leaders: Dave Thomas & Mike Eaton

20.30-21.15

Hans Oberleithner (Muenster Univ., Germany) - Nanotechnology impact in Clinical practice

21.15-22.00

Andrew McCaskie (Newcastle Univ., UK) - Clinical opportunities for surgical application of nanotechnology

Poster Viewing

Day 5 Tuesday, September 23rd

Ethical, Societal and Regulatory Implications:

Discussion Leaders: Ruth Duncan & Rogerio Gaspar

08.30-09.15

Goran Hermerén (Univ. Lund, Sweden) - Ethics and Nanomedicine

09.15-10.00

TBA

10.00-10.45

Nakissa Sadrieh (FDA) - Current challenges in moving nanomedicines to clinic: a US/FDA regulatory perspective

10.45-11.30

Coffee break

Clinical Applications II:

Discussion Leaders: Catherina De Lange Davies

11.30-12.15

Lawrence Tamarkin (Cytimmune, USA) - Development of nanopharmaceuticals from bench to clinic: the case for pegylated nanoparticles (CYT-6091, Aurimmune)

12.15-13.00

Mike Eaton (UCB) - Development of nanopharmaceuticals from bench to clinic: the case for pegylated polymeric conjugate (Cimzia)

13.00

Lunch

16.30-17.30

Discussion Leaders: Wolfgang Kreyling, R. Duncan, Gert Storm

17.00-17.30

17.30-17.45

Plenary Lecture

Discussion Leader: Rogerio Gaspar

17:45-18:30

20.00

Optional Workshop

Enabling Nanomedicine Europe: Developing An Integrated Approach to Proactive Risk Assessment

Coffee break and Poster Viewing

Michaela Spencer (Univ.Lancaster, UK) - Mapping Nanomedicine-The Results

Tony Huang (ALZA Corporation) - Development of nanopharmaceuticals from bench to clinic: the case for pegylated liposomes and beyond

Get-together & Conference Dinner

Day 6 Wednesday, September 24th

Nanobiosensors

Discussion Leaders: Josep Samitier & Rogerio Gaspar

8.30-9.15

M. Pilar Marco (CSIC, Barcelona, Spain) - Use of antibodies as biosensors in nanomedicine

9.15-10.00

Janos Vörös (ETH, Switzerland) - Optical nanobiosensors and potential in Nanomedicine

10.00-10.45

Paulo Freitas (INESC-MN, Portugal) - Biomedical and nano-bio applications: Nanotechnology and DNA-biosensors

10.45-11.30

Coffee Break and Elections for next Chairs (European Research Conference in Nanomedicine, ESF/UB, St. Feliu 2010)

Concluding Plenary Lecture and Final Remarks

Discussion Leaders: Josep Samitier & Rogerio Gaspar

11.30-12.15

Chiming Wei (Johns Hopkins University School of Medicine, USA) - Clinical approaches of Nanomedicine

12.15 -12.45

Rogério Gaspar-Introduction to incoming chairs and organising committee for 2010

Josep Samitier- Concluding Remarks

13.00

Lunch and Departure (Bus departing at 14.30)

List of Poster Presentations

1. **R.Vasilco** (Natl. Inst. Microtechnology, Romania - Microfabricated substrates for therapeutical applications)
2. Meister, J. Polésel-Maris, **M. Liley**, (CSEM, Switzerland)- An approach to liquid nanodispensing in and on cells
3. **A. Skepu** (Univ. The Western Cape, South Africa) - Identification of protein involved in obesity from rat urine for the development of obesity/diabetes
4. **A. Durdureanu-Angheluta**, M. Pinteala, L. Pricop, I. Stoica, V. Harabagiu, B.C. Simionescu B.C. (Petru Poni Inst. Macromolecular Chem., Romania) Magnetite particles functionalized with an COOH-siloxane,
5. **Leo Baldwin** (ElectroScientific Industries Inc.) Formation of nanostructures on metals by non-ablative ultrafast laser processing.
6. **Ingrid Cabrera-Puig** (Universidad Autónoma De Barcelona, Spain) Preparation of uniform unilamellar rich cholesterol nanovesicles using CO₂-expanded acetone
7. **G. Calderó**, R. Montes, MJ García-Celma, C. Solans (Insititut D'investigacions Químiques I Ambientals De Barcelona, CSIC, Spain) Influence of composition and process variables on the features of polymeric biocompatible nanoparticles obtained by the nano-emulsion template approach
8. **C.C. Brugha**, T. Mullen, M. Ardhaoui, A. Keenan and D.P. Dowling (Univ. College Dublin, Ireland) THP-1 cell adhesion to atmospheric plasma-modified polystyrene surfaces
9. **D. Pozo**, P. Castillo, R. Fernandez-Montesinos, P. Zaderenko, JA. Mejías (Univ. Seville, Spain) Functional characterisation of VIP-based nanoparticles: direct and indirect mechanisms of control cancer progression
10. **C. de Lange Davies**, Li. Eikenes, A. Erikson, I. Tufto (Norwegian Univ. Science and Technology, Norway) Enzymatic degradation of the extracellular matrix increases uptake and improves transport processes of nanomedicine in tumour tissue
11. **M. Miu** (Natl. Inst. Microtechnology, Romania) Study of nanoporous silicon composite layers/ microparticles for biomedical applications
12. **T. Etrych**, P. Chytil, T. Mrkvan, Blanka Rhová, Karel Ulbrich (Int Macro Chem, Czech Republic) Targetable HPMA-based polymer conjugates
13. **L. Lacerda**, M. Prato, A. Bianco, K. Kostarelos (London School of Pharmacy, UK) Development of drug delivery systems based on carbon nanotubes
14. **F. Canal**, G. Vilar, J. Tulla, F. Albericio, M.J. Vicent (Centro de Investigacion Principe Felipe, Valencia, Spain) Development of new cross-linked PEG conjugates as novel multifunctional nanocarriers
15. **N. L. Marangoci** (Petru Poni Inst. Maromol. Chem., Romania) Study of the inclusion processes for cyclodextrin with drug
16. **P. Domnanich**, U. Sauer, J. Pultar, C. Preininger (Austrian Research Centers GmbH, Austria) Development of a Protein Chip for the Analysis of Human Melanoma Biomarkers
17. **C. Mihailescu**, M. Bercea, F. Doroftei A. Ioanid (Gh. Asachi Technical Univ., Romania) Multicomponent gels with antimicotyc activity
18. **L. Miron**, V. Nsatasu, M. Mares (Univ. Agricultural Sci. and Veterinary Medicine, Romania) Cyclodextrin nanoconjugates with controlled release by antimicotical
19. **M. Moisei**, L. Moldovan, O. Craciunescu, A. Roseanu, O. Zarnescu, M. Trif (Inst. Biochem. Romania) Characterization of liposome encapsulated chondroitin sulphate and in vitro evaluation of the anti-inflammatory activity
20. H. Shmeeda, J. Gorin, L. Mak, D. Tzemach, J. Okorka, S. Kumar, A. Zhang, **A. A. Gabizon**. (Shaare Zedek Medical Center, Israel) Intracellular delivery of liposome-encapsulated zoledronic acid via folate receptor results in significant inhibition of tumor cell growth
21. **M. Trif**, A. Macovei, C. Lazar, M. Moisei, N. Nichita (RInst. Biochem., Romania) Lipid

- nanostructures-mediated delivery of antiviral agents to human hepatitis B infected cells
22. L. Cascales, À. Messeguer, E. Pérez Paya, **M. J. Vicent** (Centro de Investigación Príncipe Felipe, Valencia, Spain) Novel polymer conjugates for the treatment of sepsis
 23. **P. Urbán**, A. Cortés, J. Estelrich, and X. Fernández-Busquets, (Institute for Bioengineering of Catalonia, Spain) Development of nanovectors for the targeted drug delivery of antimalarials
 24. **P. Behr**, M. Gabi, A. Meister, M. Liley, J. Przybylska, H. Heinzelmann, J. Vörös, T. Zambelli (ETH, Switzerland) AFM-controlled injection of labeled molecules into single living cells
 25. **D. Navajas**, I. Almendros, F. Gomez, R. Rodriguez-Roisin, A. Roman and R. Farré (Univ. Barcelona, Spain) Peripheral neutrophil stiffening in COPD patients probed by atomic force microscopy
 26. **N. Quirke** (Univ College Dublin, Ireland) Simulation and experimental studies of nanomaterials at biological interfaces
 27. **F. Gaboriaud**, J. F.L. Duval (Lab. Phys. Chem. and Microbiol. for the Environment CNRS, France) Molecular and macromolecular physico-chemical determinants underlying microbial reactivity
 28. **O. Saxl** (Institute of Nanotechnology, UK) Training in Nanomedicine for clinicians - objectives and outcomes
 29. **M. Spencer** (Univ. Lancaster, UK) Mapping Nanomedicine
 30. **M. Estévez**, E. Martínez, J. Samitier (Institut for Bioengineering of Catalonia, Spain) Topographic features at the micrometric scale induce changes in cell morphology
 31. **M. Moldovan**, D. Ducea, C. Tamas, D. Prodan, G. Furtos, L. Silaghi-Dumitrescu, O. Musat, I. Baldea, C. Alb (Babes Bolyai Univ., Romania) Cytotoxicity and physical-chemical properties of the adhesives materials used in dentistry
 32. N. Frerker, C. Tekle, K. Sandvig and **T.G. Iversen** (The Norwegian Radium Hospital, Norway) Entry of nanoparticles into cells: Characterization of the endocytic pathways and their induction of changes in normal cellular transport
 33. **R. Moseley**, J. Hardwicke, E. Ferguson, P. Stephens, D.W. Thomas & R. Duncan (Cardiff Univ., UK) Dextrin-rhEGF conjugates as bioresponsive nanomedicines for wound repair
 34. **P. Pereira**, R. Moseley, J. Hardwicke, R. Duncan., R. Gaspar & D.W. Thomas (Cardiff Univ., UK) Challenges for HGF evaluation: in vitro assays and growth factor source
 35. **C. Canal**, R. Aparicio, A. Vílchez, J. Esquena, R. Molina, P. Erra, M.J. Garcia-Celma (Univ. Barcelona, Spain) Meso/macroporous solid foams prepared from highly concentrated emulsions: Preliminary studies of drug delivery
 36. **F. A. Carvalho**, S. Connell, R.A.S. Ariëns, N. C. Santos (Univ. Lisboa, Portugal) Atomic force microscopy and force spectroscopy of fibrinogen-erythrocyte and fibrinogen-platelet interactions
 37. **S.A. Costa Lima**, P. Kong Thoo-Lin, A. Cordeiro-da-Silva (IBMC, Univ. Porto, Portugal) Encapsulation of bisnaphthalimidopropyl derivatives, two novel anti-Leishmania drugs, in biodegradable PLA and PLGA nanoparticles
 38. **M. Creus**, T. Wohlschlager, J.M. Zimbron, A. Sardo A., T.R. Ward (University of Neuchatel, Switzerland) Selective DNA-binding of metal complexes embedded within a protein host: a novel technology for improved anticancer therapy
 39. **E. Elizondo**, N. Ventosa, S. Sala, D. González, M.J. Blanco-Príeto, J. Veciana (ICMAB-CSIC/CIBER-BBN, Spain) Preparation of highly antibiotic loaded polymeric particles by compressed fluid based technologies
 40. **M. Estévez**, E. Martínez, J. Samitier (Institut for Bioengineering of Catalonia, Spain) Topographic features at the micrometric scale induce changes in cell morphology
 41. **R. Frost**, B. Cerda, C. Grandfils, S. Fredriksson, B. Kasemo, and S. Svedhem (Chalmers Univ. of Technology, Sweden) The interaction of nanoparticles for drug delivery with biomimetic model membranes
 42. **M. G. Fuentes** (Harvard Inst Proteomics, US) Label-free biomolecular interaction analysis using self-assembled protein microarrays and Surface Plasmon Resonance Imaging

43. **V. Giménez**, I. Abasolo, S. Schwartz Jr., M. J. Vicent (Centro de Investigación Príncipe Felipe, Valencia, Spain) Novel des-polyacetal block copolymers for the treatment of prostate and breast cancer.
44. **P. Gorelkin**, G. Kiselev, Al. Filonov, I. V. Yaminsky (Moscow State Univ., Russia) Microcantilever systems in medical applications
45. **M. Halama**, O. Milkovic, S. Niznik, S. Longauer (Technical Univ. Kosice, Slovakia) Degradation properties of superparamagnetic Fe nanoparticles in biomedical environments
46. **S. Horie**, Y. Watanabe, R. Chen, N. Tomita, F. Oosawa, S. Fujisawa, M. Ono, M. Fukumoto, S. Mori, Y. Matsumura, T. Kodama (Tohoku Univ., Japan) Bladder cancer therapy using nanobubbles and two different intensities of ultrasound
47. **H. Jans**, K. Bonroy, K. Jans, B. Van de Broek, J. Trekker, K. Verhaegen, G. Borghs, G. Maes (Catholic Univ. Leuven, Brussels) Metal nanoparticles with potential towards clinical diagnostics
48. **G. Morral-Ruiz**, C. Solans, M.L. García, M.J. García-Celma (Univ. Barcelona, Spain) Ketoprofen loaded poly (ether urethane) nanoparticles obtained from O/W nano-emulsions
49. **B. Naeye**, K. Raemdonck, S.C. De Smedt (Univ. Ghent, Belgium) Development of degrading nanogel particles for the intracellular release of siRNA.
50. **I. Ofer**, H. Shmeeda, A. Gabizon (Hebrew Univ., Israel) Engineering a liposome-based delivery system for statins for cancer therapy
51. **P. Scopelliti**, L. Giorgetti, G. Bongiorno, R. Carbone, P. Milani (Univ. Milan, Italy) Protein-surface interaction microarrays: quantitative high-content technique for the characterization of protein nanostructured materials interaction
52. **B. Van de Broek**, J. Trekker, K. Bonroy, H. Jans, K. Verhaegen, G. Borghs, G. Maes (Catholic Univ. Leuven, Brussels) Metal and magnetic nanoparticles for treatment and diagnosis of cancer
53. **P. Kara**, C. Cavusoglu, M. Ozsoy (Ege University, Turkey) Electrochemical genosensor design for clinical analysis based on DNA hybridization detection
54. **D.V. Pelegov**, A. V. Veretennikov (Ural State University, Ural Center of Popular Science and Educational Films "Hyperborele", Russia) Nanomedicine popularization
55. **A. Kramer**, I. Liashkovich, S. Ludwig, H. Oberleithner and V. Shahin: Nano-structural and mechanical changes of the nuclear envelope during apoptosis revealed by AFM
56. **B. Trajkovski**, (Bulgarian Academy of Sciences) Fibrous Textiles are Alternative ECM Mimicking Scaffold
57. B. Díaz^a, C. Sánchez^a, M. Arruebo^b, J. Faro^{a,c}, E. de Miguel^d, S. Magadán^e, C. Yagüe^b, R. Fernández-Pacheco^b, R. Ibarra^b, J. Santamaría^b, **Á. González-Fernández^a** Cytotoxicity of inorganic nanoparticles on human cells
^aImmunology Section, Biology Faculty, Experimental Sciences Centre, University of Vigo., Spain. ^bAragon Nanoscience Institute (INA), University of Zaragoza, Spain, ^cEstudos Avançados de Oeiras, Instituto Gulbenkian de Ciência, Portugal
^dCellular Biology Section, Biology Faculty, Experimental Sciences Centre, University of Vigo., Spain, ^eInstituto Superior de Saude do Alto Ave (ISAVE), Portugal
58. **J. Trekker**(1,2), D. Balaji Thimiri G. Raj(1,3), B. Van de Broek(1,4), K. Jans(1,4), H. Jans(1,4), W. Annaert(3), T. Dresselaers(2), K. Bonroy(1), K. Verhaegen(1), C. Bartic(1), U. Himmelreich(2) Synthesis of Superparamagnetic Nanoparticles for Biological Applications
1. Interuniversity Microelectronics Center (IMEC), Heverlee, Belgium, 2. Department of Medical Diagnostic Sciences, Biomedical NMR-unit, K.U.Leuven, Belgium, 3. Department of Human Genetics, K.U.Leuven and VIB, Department of Molecular and Developmental Genetics, Belgium, 4. Department of Chemistry, K.U.Leuven, Belgium
59. **H. Silva Costa** (IBMC), A. Olsson (IBMC), A. Paula Pêgo (INEB) Perceptions of scientists about ethical issues in Nanomedicine: A case study
60. **S. Svedhem**, A. Kunze, H. Ekstrand, P. Sjövall, R. Frost, M. Edvardsson, and B. Kasemo: Supported lipid membrane model systems for surface-based studies of biointeractions

Instructions

POSTERS: Your Poster Number is given in this list.

All posters will be presented throughout the conference

SHORT TALKS: All talks will be a 5 min summary. Maximum 5 ppt slides.

The aim will be to give this interdisciplinary audience and introduction to the aims of your work, outline the main techniques used and show **SOME** of the key data. Present the main conclusions, and outline any requests for collaboration. The full details can be discussed at the poster. There will be no questions and Chairing will be very strict to keep to time.

Dr Maria Vicent will co-chair these sessions and she will co-ordinate the ppt presentations. To ensure smooth running and confirm your slot for the talk please send her the ppt presentation **IN ADVANCE** of the meeting and at the latest by **FRIDAY 12TH September**.

María Jesús Vicent <mjvicent@cipf.es>

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