# MONDAY, NOVEMBER 30<sup>TH</sup>

# REGISTRATION OPENING SESSION + INITIATION TO RESEARCH AWARDS Dña. Josefina Bueno Alonso, Il·lma. Sra. Directora General d'Universitat, Investigació i Ciència, Generalitat Valenciana D. José Capilla Romá, Vice-Rector for Research, Innovation & Transfer, Universitat Politècnica de València Ramón Martínez Máñez, Scientific Director of CIBER-BBN 10.15 PLENARY SESSION 1: miRNA and Biomaterials for Musculoskeletal Regenerative Medicine. Martijn van Griensven, Ph.D. Department of Trauma Surgery, Klinikum Rechts der Isar. Technical University Munich. Chairman: Julio San Román

11.00 **EUROPA REDES Y GESTORES Project.** Internationalization Platform Cristina Rodríguez, CIBER-BBN, CIBERES, CIBERER *Chairman: Pablo Laguna* 

# 11.30 COFFEE BREAK / POSTERS

# 12.00 INTRAMURAL PROJECTS (category Excellence) Chairman: Jaume Veciana

#### 12.00 NANOHYPERTHERMIA

Development of new nanoparticles and protocols for enhanced hyperthermia

José Javier Serrano Olmedo. Center for Biomedical Technology-Bioengineering and Telemedicine Group, UPM.

#### 12.10 MAGNETO-NH IA

 ${\it Multiplexed\ determination\ of\ pathogenic\ bacteria\ in\ sepsis\ by\ novel}$   ${\it magneto-nanohollows\ immunoassay}$ 

 $\label{thm:condition} \mbox{\it Juan Pablo Salvador Vico. Nanobiotechnology for Diagnostics Group, $\operatorname{CSIC}$}$ 

#### 12.20 TBIO-GATE

New nanoparticles containing bio-gated scaffoldings for tuberculosis diagnosis

Elena Aznar Gimeno. Applied Molecular Chemistry Group of IDM, UPV.

#### 12.30 MICROREN

Development of regenerative therapies for acute kidney injuries based on microfluidic devices filled with microencapsulated cells
Luis J. Fernández Ledesma. Group of Structural Mechanics and

Materials Modeling, UZ.

#### 12.40 DIAB-SUPPORT

Personalized Decision Support based on real-time monitoring of patients with type 1 diabetes

Carmen Pérez Gandía. Center for Biomedical Technology-Bioengineering and Telemedicine Group, UPM.

# 12.50 OLIGOCODES

A universal Diagnostic Platform Based On Oligonucleotide Codified Nanoparticles and DNA Microarray Sensor Devices

Mª Pilar Marco Colás. Nanobiotechnology for Diagnostics Group, CSIC.

### 13.00 **OPTOGEN**

A wide spectrum of bioengineered devices tailored to complement and enhance optogenetic research with clinical implications

Lawrence Humphreys. Neuroprosthesis and Neuroengineering Research Group. UMH

#### 13.10 **GLYCOHIV-3**

Gold glyconanoparticles as nonviral platform for HIV vaccine candidates Isabel García Martín. Biofunctional Nanomaterials Laboratory, CICbiomaGUNE

#### 13.20 MOLGLIO

Molecular Imaging strategies for development of surrogate biomarkers of early therapy response/resistance detection in glioblastoma Carles Arús Caraltó. Research Group in Biomedical Applications of Nuclear Magnetic Resonance, UAB.

#### 13.30 MUDIRES-2PSD

Multimodal Diagnosis by Signal Interpretation of the Respiratory System oriented to Pulmonary Diseases and Sleep Disorders
Raimon Jané Campos. Biomedical Systems and Signals Research Group,
IRFC

#### 13.40 NANOXEN++

Xenopus Tropicalis as a platform to test light-regulated drugs with applications in nanomedicine

Pau Gorostiza Langa. Nanomembrane Group, UB

#### 13.50 NANOMETS

Drug nanconjugates and nanovesicles for the treatment of metastatic colorectal cancer

Ramón Mangues Bafalluy. Oncogenesis and Antitumour Drug Group, IIB SANT PAU

#### 14.00 LUNCH / POSTERS

# 15.30 INTRAMURAL PROJECTS (category Excellence)

Chairman: Julio San Román

#### 15.30 E-LEUKEMIA

The nanoconductance of redox proteins of the respiratory chain and its physiopathological implication in leukemia

Pau Gorostiza Langa. Nanomembrane Group, UB

#### 15.40 NAVISURG

Intelligent support and navigation assistance for safer image-guided surgery in pancreatic interventions

Borja Rodríguez Vila. Center for Biomedical Technology-Bioengineering and Telemedicine Group, UPM.

#### 15.50 BIOMIMESH

New abdominal biomimetic prostheses to improve adaptation to host tissue properties. Application in hernia repair

Gemma Pascual González. Translational Research Group in Biomaterials and Tissue Engineering, UAH.

# 16.00 HOT-SCAFF

Plasmonic scaffolds for deliberate regulation of transgene expression in bone tissue engineering

Nuria Vilaboa Díaz. Research Group in Bone Physiopathology and Biomaterials. FIOBI-HULP.

#### 16.10 NANOPROTHER

Cell-targeted nanomedicines base on therapeutic, protein-only nanoparticles

Antoni Villaverde Corrales. Nanobiotechnology Group, UAB.

#### 16.20 COLOCOMB

Combinatory and targeted nanomedicines for the treatment of advanced colorectal cancer

Simó Schwartz Navarro. Drug Delivery and Targeting Group, VHIR.

#### 16.30 NANO-OPHTHAL

 ${\it New si-RNA-nanoparticle conjugates for the treatment of ocular surface inflammations}$ 

Santiago Sala Vergés. Molecular Nanoscience and Organic Materials Group, CSIC.

#### 16.40 CP-SENS

Development of a biosensing diagnostic tool for the fast identification of infection by Pneumocystis

Anna Avinyó Andrés. Nucleic Acid Chemistry Group, CSIC.

# 50 BIOSURFACES

Biofunctionalization of titanium implant surfaces: protein conformation, osseointegration and antimicrobial activity José Luis Gómez Ribelles. Biomaterials Centre, UPV.

#### 17.00 **PS VALVE**

Patient-Specific image-based computational flow dynamic simulations for assessment of optimal biological aortic Valve replacement selection and delivery

Miguel Ángel Martínez Barca. Group of Structural Mechanics and Materials Modeling, UZ.

### 17.10 DYNAMIC-VASC

Dynamic Molecular Bio-Interfaces for Controlled Environments Towards Vascular Morphogenesis

Inma Ratera Bastardas. Molecular Nanoscience and Organic Materials Group, CSIC

#### 17.20 **TEA**

New Therapeutic Approaches for Retinal Degenerative Diseases Eduardo Fernández Jover. Neuroprosthesis and Neuroengineering Research Group, UMH

## 17.30 COFFEE BREAK / POSTERS

## 18.00 INTRAMURAL PROJECTS (category Excellence)

Chairman: Ramón Mangues

# 18.00 **B-CUBE**

Microfluidic blood-brain barrier model for screening of novel pharmacological drugs

Rosa Villa Sanz. Biomonitoring Group, UAB

# 18.10 ULTRASEN-4BIO-2MD

Characterization and evaluation of novel ultrasensitive piezoresistive all-organic sensors for biomedical signals applied to multimodal diagnosis

Raimon Jané Campos. Biomedical Systems and Signals Research Group, IBEC  $\,$ 

#### 18.20 **ORDECA**

Organic Radicals and Radical Dendrimers as Contrast Agents in Magnetic Resonance Imagina

José Vidal Gancedo. Molecular Nanoscience and Organic Materials Group, CSIC.

# 18.30 Presentaciones resultados I convocatoria CIBER-BBN, CIBERES y SEPAR

Chairman: Ramón Manques

#### 18.30 NANOBIOSEPRES

Design and evaluation of a novel impedimetric immunosensor for the diagnosis of respiratory sepsis origin due to Pseudomonas aeruginosa Mª Pilar Marco Colás. Nanobiotechnology for Diagnostics Group. CSIC

#### 18.40 AD4AD

Supervisory system to enhance patient adherence to Tuberculosis and other long-lasting treatments

Jordi Aguiló Llobet. Biomonitoring Group, UAB

#### 19.10 BUS TO HOTEL

#### 20.30 **DINNER**

HOTEL BARCELÓ, Av. de França, 11, 46023 Valencia

## **TUESDAY DECEMBER, 1ST**

09.00 PLENARY SESSION 2: Knowledge, Technology and Value in Health Juan Bigorra M.D, Ph.D. Director Strategy and Innovation Barcelona Global Health Institute Senior Advisor Innovation. University of Barcelona Clinic Hospital Chairman: José Becerra 09.40 NEW CIBER-BBN GROUP PRESENTATION

Chairman: Ramón Martínez Máñez

10.00 NANBIOSIS PRESENTATION
NANBIOSIS PRESENTATION
NANBIOSIS PRESENTATION
NANBIOSIS PRESENTATION



10.40 GROUPS PRESENTATIONS / HIGHLIGHTS Chairman: José Becerra

10.40 Towards a safe and non-invasive approach for the treatment of inherited retinal diseases

Gustavo Puras Ochoa, NANOBIOCEL: Micro and Nano Technologies, Biomaterials and Cells Research Group, UPV/EHU

10.48 Smart4NB: Smart nanoparticles for advanced therapy in pediatric neuroblastoma (CIBER-ECO project) Alejandro Baeza García. Research Group in Intelligent Biomaterials, UCM

10.56 Brain-connectivity-based biomarkers for the early detection of Alzheimer Disease

Francisco del Pozo Guerrero. Center for Biomedical Technology-Bioengineering and Telemedicine Group, UPM

11.04 Effect of cell adhesion and surface stiffness on T cell activation usina nanostructures

Judith Guasch Camell, Molecular Nanoscience and Organic Materials Group, CSIC

#### 11.12 COFFE BREAK / POSTERS

# 11.45 GROUPS PRESENTATIONS / HIGHLIGHTS

Chairman: Raimon Jané

11.45 Prokaryotic protein nanocages based on human vaults: a new drug delivery system?

José Luis Corchero Nieto. Nanobiotechnology Group, UAB

11.53 Nanobiosensors for deciphering gene regulation processes Mª Carmen Estévez Alberola. Nanobiosensors and Bioanalytical Applications Group (nanoB2A), ICN2

12.01 Multifunctional polymeric nanoparticles as advanced delivery systems across the blood-brain barrier

Aurora Dols Pérez. Colloidal and Interface Chemistry Group, CSIC

12.09 Silk-graphene-based biomaterials for tissue engineering Rick Visser. Tissue Bioengineering and Regeneration Laboratory (LABRET), UMA

12.17 New drug eluted stents for vascular applications. From the laboratory to the clinical application Julio San Román del Barrio. Biomaterials Group, CSIC.

# **TUESDAY DECEMBER, 1ST**

12.25 Biomedical Engineering Group University of Seville: Translation to the Public Health System and Industry

Laura Ma Roa Romero. Biomedical Engineering Research Group,

12.33 Integrated Project of Excellence derived from NanoMets Intramural Project

Ramón Mangues Bafalluy. Oncogenesis and Antitumour Drug Group,

12.41 Neurogenesis and vascularization of the damaged brain using a biomimetic scaffold

> Elisabeth Engel López. Research Group in Biomaterials, Biomechanics and Tissue Engineering, IBEC

12.49 Single molecule footprinting of nucleic acid drugs Félix Ritort Farran. Small Biosystems Lab, UB

12.57 Highlights grupo GEMM

Miguel Ángel Martínez Barca. Group of Structural Mechanics and Materials Modeling, UZ

Null Diffusion Statistics for the Enrichment of Metabolomics Data Álex Perera Lluna. Biomedical Systems and Signals Research Group,

# 13.15 YOUNG SCIENTIST FORUM ON BIOMATERIALS

Chairs: María Rosa Aguilar/ Joana Magalhaes/ Julio San Román

13.15 CIBER-BBN YSF in Biomaterials Award

13.30 Being successful in ERC Calls. The advantages of a Consolidator Grant María Jesús Vicent. Polymer Therapeutics Lab. Centro de Investigación Príncipe Felipe

13.45 Promotion of the Scientific, Technological and Innovative Culture in

Joana Magalhaes. Tissue Bioengineering and Cell Therapy Group, CHUAC, INIBIC

14.00 CLOSING

14.15 *LUNCH* 

STEERING COMMITTEE & ADVISORY BOARDS MEETING



"Una manera de hacer Europa"







# **JORNADAS CIBER-BBN 2015** Valencia, 30 nov - 1 dic 2015

AUDITORIO. Edificio 8B, Planta 3ª, Cubo Azul Universidad Politécnica de Valencia Camino de Vera s/n, 46022 Valencia