### DAY 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speakers</th>
</tr>
</thead>
</table>
| 08:00 – 08:15 | OPENING SESION                                                          | Dr. José López-Barneo (Scientific Director IBiS)  
Dr. Benjamin Bonavida  
Dr. Jordi Muntané                                                   |
| 08:15 – 10:30 | SESSION 1: NITRIC OXIDE, MUTAGENESIS, CARCINOGENESIS, TUMOR PROMOTION AND TUMOR GROWTH | 1) Deciphering the complex biological interactions of nitric oxide in cancer (Dr. S.P. Hussain, National Cancer Institute, Bethesda, USA)  
2) The oncogenic properties of the redox inflammatory protein inducible nitric oxide synthase in ER(-) breast cancer (Dr. D.A. Wink, National Cancer Institute, Bethesda, USA).  
3) Nitric oxide: genomic instability and synthetic lethality (Dr. V.A. Yakovlev, Virginia Commonwealth University, Richmond, USA) |
| 10:30 – 11:00 | COFFEE BREAK                                                            |                                                                                                      |
| 11:00 – 13:15 | SESSION 2: NITRIC OXIDE REGULATION OF CELL DEATH PATHWAY                | 1) Regulation of cell death apoptotic pathways by nitric oxide in cancer: reversal of drug/immune resistance (Dr. B. Bonavida, Jonsson Comprehensive Cancer Center, University of California, Los Angeles, USA).  
2) Role of S-nitrosylation in the extrinsic apoptotic signaling pathway in cancer (Dra. S. Plenchette, EPHE-University of Burgundy, Dijon, France).  
3) Synergistic interactions between nitric oxide and oxygen free radicals cause selective apoptosis induction in malignant cells (Dr. G. Bauer, Department of Medical Microbiology and Hygiene, University Medical Center, Freiburg, Germany) |

**Young investigation session**  
Selected oral communications

1) Activation of wild-type HRas suppresses the earliest stages of pancreatic cancer (J. Weyandt, Duke University, Durham NC, USA)  
2) Biochemical and tumorigenic effects of redox modification of Ras-G12C by nitric oxide (M. Crowe, Duke University, Durham NC, USA)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:15 – 15:00</td>
<td><strong>LUNCH</strong></td>
</tr>
</tbody>
</table>
| 15:00 – 17:15| **SESSION 3: NITRIC OXIDE: PROLIFERATION AND EPITHELIAL-MESENCHYMAL TRANSITION**
|              | Moderator: Dr. Timothy R. Billiar                                    |
|              | 1) STAT3 regulation by S-nitrosylation: implication in cancer (Dr. I. Singh, Medical University of South Carolina, Charleston, USA) |
|              | 2) Mechanisms of hypoxia-induced immune escape in cancer and their regulation by nitric oxide. (Dr. Ch.H. Graham, Queen’s University, Kingston, Canada) |
|              | 3) Evaluating the role of nitric oxide synthase in oncogenic RAS-driven tumorigenesis (Dr. Ch. Counter, Duke University Medical Center, Durham, USA) |
| 17:15 – 17:45| **COFFEE BREAK**                                                    |
| 17:45 – 20:00| **SESSION 4: REGULATION OF IMMUNE RESPONSE BY NITRIC OXIDE**
|              | Moderator: Dr. Khosrow Kashfi                                        |
|              | 1) Cellular protective mechanisms of inducible nitric oxide synthase (Dr. T.R. Billiar, University of Pittsburgh, USA). |
|              | 2) Post-translational nitric oxide-dependent modifications in immune system (Dr. A. Martínez-Ruiz, Hospital Universitario de La Princesa, Madrid, Spain) |
|              | 3) Macrophage polarization in the tumor microenvironment (Dr. B. Brüne, Goethe-University Frankfurt, Germany) |
| Young investigation session  
| Selected oral communications  
| 1) Polymorphisms in the nitric-oxide synthase 2 gene and prostate cancer pathogenesis (Ch. Ryk, Department of Molecular Medicine and Surgery, Karolinska Institutet, Stockholm, Sweden)
**SESSION 5: ANTITUMORAL ACTIVITY OF NITRIC OXIDE-BASED RELEASING STRATEGIES: PRE-CLINICAL STUDIES**

**Moderator:** Dr. S. Perwez Hussain

1) Utility of nitric oxide and hydrogen sulfide-releasing chimeras as anticancer agents (Dr. K. Kashfi, Sophie Davis School of Biomedical Education, New York, USA).

2) Antitumoral activity of nitric oxide-releasing compounds (Dra. M. Klink, Institute of Medical Biology, Polish Academy of Sciences, Lodz, Poland).

3) Nitric oxide synthase type III overexpression by gene therapy exerts antitumoral activity in mouse hepatocellular carcinoma (Dr. R. González, Department of Biochemistry and Molecular Biology, University of Córdoba, Córdoba, Spain)

**Young investigation session**

Selected oral communications

1) NOSH-aspirin inhibits colon cancer cell growth: effects of positional isomerism (F. Vannini, Sophie Davis School of Biomedical Education, City University of New York Medical School, New York, USA)

**COFFEE BREAK**

10:15 – 10:45

**KEYNOTE SESSION**

**NITRIC OXIDE AND OXYGEN: ACTIONS AND INTERACTIONS IN HEALTH AND DISEASE**

Professor Sir Salvador Moncada (Director of Cancer Sciences, University of Manchester, Wolfson Molecular Imaging Centre, Manchester, UK)

**SESSION 6: ANTITUMORAL ACTIVITY OF NITRIC OXIDE-BASED RELEASING STRATEGIES: CLINICAL TRIALS**

**Moderator:** Dr. Benjamin Bonavida

1) The development of RRx-001, a novel nitric oxide-mediated epigenetically active anticancer agent (Dr. J. Scicinski, Epicentrix Inc., California, USA)

2) Treatment of sunitinib-induced hypertension in solid tumor by nitric oxide donor (Dr. L. León, Servicio de Oncología Médica, Complexo Hospitalario Universitario de Pontevedra, Pontevedra, Spain).

3) The role of nitric oxide after repeated low dose photodynamic treatments in prostate carcinoma cells (Dra. V. Rapozzi, University of Udine, Italy).

**LUNCH, REWARDS AND CONCLUDING REMARKS**

13:00 – 15:30