

**XLVII NATIONAL CONGRESS ON MAGNETIC RESONANCE**

TORINO 19-21 SEPTEMBER 2018

**SCIENTIFIC PROGRAM**

**Wednesday September 19<sup>th</sup>**

|             |   |  |
|-------------|---|--|
| 10:00-13:00 | <b>Registration</b>   |  |
| 10:30-12:30 | <b>Bruker satellite meeting</b>   |  |
| 12:45-14:00 | <b>Bruker Lunch</b>   |  |
| 14:00-14:30 | <b>Opening</b>  |  |
|             | <b>Plenary session</b><br>Chair: V. Gallo   |  |
| 14:30-15:30 | <b>GIDRM/GIRM gold medal award</b><br><b>L. Mannina</b> - MY PERSONAL HISTORY WITH NMR:<br>FROM THE CHEMICAL STRUCTURE OF SINGLE COMPOUNDS TO THE STUDY OF COMPLEX MIXTURES |  |
| 15:30-16:15 | <b>ChemPubSoc Plenary Lecture</b><br><b>A. Kenwright</b> - COMPRESSED NMR: MORE INFORMATION IN THE SAME SPACE & TIME  |  |
| 16:15-17:20 | <b>Coffee break + Poster session</b>  |  |
|             | <b>Parallel session A</b><br>Chair: L. Calucci  | <b>Parallel session B</b><br>Chair: L. Mannina   |
| 17:20-17:40 | <b>L. Bianchini</b> - REPEATABILITY AND ROBUSTNESS OF RADIOMIC FEATURES EXTRACTED FROM MAGNETIC RESONANCE IMAGES: A PHANTOM STUDY   | <b>C. Ingallina</b> - "CORNETTO DI PONTECORVO DOP" RED SWEET PEPPER CHARACTERIZED BY A MULTI-METHODOLOGICAL APPROACH |
| 17:40-18:00 | <b>M. R. Ruggiero</b> - INTRACELLULAR WATER LIFETIME AS A TUMOUR BIOMARKER BY FFC-RELAXOMETRY   | <b>V. Righi</b> - SKIN METABOLOMICS THROUGH HR-MAS NMR: EFFECTS OF INGENOL MEBUTATE ON ACTINIC KERATOSIS             |
| 18:00-18:30 | <b>E. Gianolio</b> - LOW RESOLUTION NMR AS A POWERFUL TOOL FOR DIAGNOSTIC PURPOSES  | <b>C. Airoidi</b> - NMR INTERACTION STUDIES FOR IDENTIFICATION AND DEVELOPMENT OF NEW BIOACTIVE COMPOUNDS            |
|             | <b>Plenary session</b><br>Chair: M. Botta   |  |
| 18:30-19:00 | <b>Stelar Lecture</b><br><b>D. Brougham</b> - FFC-NMR RELAXOMETRY STUDIES INTO THE INFLUENCE OF DYNAMICS ON FUNCTION IN NANO-MATERIALS FOR BIO-APPLICATION                  |  |
| 19:00-19:45 | <b>Plenary Lecture 2</b><br><b>S. Aime</b> - DESIGN AND TESTING OF MR MOLECULAR IMAGING REPORTERS   |  |

**Thursday September 20<sup>th</sup>**

|             |  |  |
|-------------|--|--|
|             | <b>Plenary session</b><br><b>Chair: P. Turano</b>  |  |
| 8:45-9:30   | <b>Plenary Lecture 3</b><br><b>I. Shimada</b> - DEVELOPMENTS AND APPLICATIONS OF NOVEL NMR METHODS TO CHARACTERIZE FUNCTIONAL DYNAMICS OF HIGH MOLECULAR WEIGHT PROTEINS   |  |
| 9:30-10:00  | <b>Bruker Lecture</b><br><b>B. Perrone</b> - BIOSOLIDS CRYOPROBE, AUTOMATION WITH MAS PROBES, AND OTHER SOLID-STATE NMR NEWS   |  |
| 10:00-10:30 | <b>Under 35 GIDRM award</b><br><b>E. Carignani</b> - SOLID STATE DYNAMICS PROBED BY NMR SPECTROSCOPY AND RELAXOMETRY: FROM CRYSTALS TO SOFT MATTER   |  |
| 10:30-11:20 | <b>Coffee break + Poster session</b>   |  |
|             | <b>Parallel session A</b><br><b>Chair: J. N. Dumez</b>   | <b>Parallel session B</b><br><b>Chair: I. Shimada</b>  |
| 11:20-11:50 | <b>R. Lamanna</b> - <sup>1</sup> H NMR CHARACTERIZATION OF AGING PROCESSES IN PRECURSOR SOLUTIONS USED FOR YBCO SUPERCONDUCTORS PRODUCTION   | <b>R. Pierattelli</b> - UN-STRUCTURAL BIOLOGY BY NMR SPECTROSCOPY                                      |
| 11:50-12:20 | <b>P. Cerreia Vioglio</b> - A TIME-RESOLVED, IN-SITU DNP NMR APPROACH TO GAIN INSIGHTS INTO METASTABLE POLYMORPHS OF GLYCINE   | <b>M. Assfalg</b> - INSIGHT INTO TRANSIENT PROTEIN-NANOPARTICLE INTERACTIONS BY SOLUTION NMR           |
| 12:20-12:40 | <b>G. Stevanato</b> - AN EFFICIENT Gd <sup>3+</sup> BASED COMPLEX FOR HIGH FIELD DYNAMIC NUCLEAR POLARIZATION  | <b>M. Grimaldi</b> - DESIGN OF PEPTIDES FOR THE EARLY DIAGNOSIS OF ALZHEIMER DISEASE                   |
| 12:40-13:00 | <b>F. Paruzzo</b> - NMR MEETS MACHINE LEARNING: CHEMICAL SHIFT PREDICTIONS IN SOLIDS IN LESS THAN A MINUTE   | <b>F. Favretto</b> - UNRAVELING THE ROLE OF CIS-TRANS PEPTIDYLPROLYL ISOMERASES IN PARKINSON'S DISEASE |
| 13:00-14:20 | <b>Lunch + Poster session</b>  |  |
|             | <b>Plenary session</b><br><b>Chair: D. Capitani</b>  |  |
| 14:20-15:05 | <b>Plenary Lecture 4</b><br><b>S. Mammi</b> - NMR CONTRIBUTIONS TO COFFEE SCIENCE: A STORY OF TECHNOLOGY TRANSFER FROM ACADEMIA TO INDUSTRY  |  |
| 15:05-15:35 | <b>Jeol Lecture</b><br><b>A. Botana</b> - SPEEDING UP STRUCTURAL ELUCIDATION WITH NMR  |  |
| 15:35-16:15 | <b>Segre Fellowships 2017</b><br><b>T. Cappello</b> - EFFECTS OF POLYSTYRENE MICROPLASTICS IN MARINE MUSSELS <i>MYTILUS GALLOPROVINCIALIS</i> BY NMR-BASED METABOLOMICS<br><b>E. Costanzi</b> - STRUCTURAL CHARACTERIZATION OF THE INTERACTION BETWEEN THE STAS DOMAIN OF MAMMALIAN PRESTIN AND CALMODULIN |  |
| 16:15-17:30 | <b>Coffee break + Poster session</b>   |  |
| 17:00-17:30 | <b>GIRM assembly</b>   |  |
| 17:30-19:30 | <b>GIDRM assembly + announcement of poster competition winner</b>  |  |
| 19:30       | <b>Departure for the social dinner</b>   |  |

**Friday September 21<sup>st</sup>**

|             |   |   |
|-------------|---|---|
|             | <b>Plenary session</b><br><b>Chair: G. Pileio</b>   |   |
| 8:45-9:30   | <b>Plenary Lecture 5</b><br><b>J. N. Dumez – DIFFUSION NMR OF OUT-OF-EQUILIBRIUM MIXTURES</b>   |   |
|             | <b>Parallel session A</b><br><b>Chair: A. Kenwright</b>   | <b>Parallel session B</b><br><b>Chair: S. Mammi</b>   |
| 9:30-10:00  | <b>P. Arosio</b> - THE EFFECT OF CHEMICO-PHYSICAL PARAMETERS OF MAGNETIC NANOPARTICLES ON THEIR FUNDAMENTAL AND BIOMEDICAL APPLICATIVE PROPERTIES: A FEW CASE STUDIES | <b>G. Malgieri</b> – METAL ION RECRUITMENT DRIVES THE FOLDING MECHANISM AND SELF-ASSOCIATION PROPENSITY OF HIGH HOMOLOGOUS PROTEINS               |
| 10:00-10:20 | <b>F. Capuana</b> - A NOVEL TETRAMERIC GADOLINIUM BASED CONTRAST AGENT FOR MR MOLECULAR IMAGING OF TROPOELASTIN   | <b>F. Nardelli</b> – SUCCINIMIDE-BASED CONJUGATES IMPROVE ISODGR CYCLOPEPTIDE AFFINITY TO AVB3 WITHOUT PROMOTING INTEGRIN ALLOSTERIC ACTIVATION   |
| 10:20-10:40 | <b>F. Carniato</b> – NMR DETERMINATION OF THE HYDRATION NUMBER AND EXCHANGE RATE OF THE BOUND WATER MOLECULE ACROSS THE LN[AAZTA]-SERIES                              | <b>F. Munari</b> – STRUCTURAL AND MOLECULAR RECOGNITION PROPERTIES OF UBB <sup>+1</sup> , A UBIQUITIN MUTANT ASSOCIATED WITH ALZHEIMER’S DISEASE  |
| 10:40-11:10 | <b>Coffee break</b>   |   |
|             | <b>Parallel session A</b><br><b>Chair: M. Chierotti</b>   | <b>Parallel session B</b><br><b>Chair: M. D’Onofrio</b>   |
| 11:10-11:40 | <b>F. Martini</b> – PHASE SEPARATION, DYNAMICS AND INTERACTION IN STARCH-SUCROSE AMORPHOUS BLENDS BY SOLID STATE NMR  | <b>T. Pertinhez</b> - NMR IN TRANSFUSION MEDICINE   |
| 11:40-12:00 | <b>F. Rossi</b> – ULTRAFAST MAS PROTON-DETECTED 3D SOLID STATE NMR EXPERIMENT TO RECOUPLE <sup>15</sup> N CHEMICAL SHIFT ANISOTROPY                                   | <b>F. Savorani</b> - THE HUMAN URINARY METABOLOME TO ASSESS THE RISK-OF-POVERTY STATUS ACROSS EUROPEAN POPULATIONS: A NMR NUTRI-METABOLOMIC STUDY |
| 12:00-12:20 | <b>M. Mauri</b> – DIRECT AND INDIRECT EXPLORATION OF NANOCRYSTAL SURFACE  | <b>G. Petrella</b> - A COMPREHENSIVE URINARY METABOLOMIC APPROACH BASED ON NMR AND LC-HRMS TO IDENTIFY BLADDER CANCER                             |
|             | <b>Plenary session</b><br><b>Chair: M. Geppi</b>  |   |
| 12:20-12:50 | <b>Poster competition winner lectures</b>   |   |
| 12:50-13:35 | <b>Plenary Lecture 6</b><br><b>M. Duer – HEAVY MICE AND LIGHT THINGS: USING SOLID-STATE NMR SPECTROSCOPY TO UNDERSTAND BIOLOGICAL TISSUES IN HEALTH AND DISEASE</b>   |   |
| 13:35-13:40 | <b>Closing</b>  |   |
| 13:40-15:00 | <b>Lunch</b>  |   |