

51ST NATIONAL CONGRESS ON MAGNETIC RESONANCE

FLORENCE 04-06 SEPTEMBER 2024

SCIENTIFIC PROGRAM

Wednesday September 04th

9:00-14:00	Registration	
10:00-11:30	Jeol satellite meeting	
11:30-13:00	Bruker satellite meeting	
13:00-14:00	Bruker/Jeol Lunch	
14:00-14:30	Opening	
	Plenary session	
	Chair: A. Mucci and M.R. Chierotti	
14:30-15:20	Plenary Lecture 1	
	GIDRM/GIRM gold medal award	
	Roberto Fattorusso (University of Campania Luigi Vanvitelli)	
	NMR SPECTROSCOPY APPLIED TO PROTEIN CONFORMATION EQUILIBRIA: MY SCIENTIFIC AND HUMAN TRIP	
15:20-16:05	Plenary Lecture 2	
	Chair: A. Randazzo	
	Maria Rosaria "Sasi" Conte (King's College London)	
	TELLING THE TALE OF LA-RELATED PROTEINS THROUGH NMR AND BIOPHYSICAL CHARACTERISATIONS	
16:05-17:00	Coffee break + Poster session (ODD abstract numbers)	
	Parallel session A	Parallel session B
	Chair: L. Russo	Chair: G. Parigi
17:00-17:30	Leone M. SEARCHING FOR NOVEL ANTICANCER AGENTS BY NMR-BASED APPROACHES: SAM DOMAINS AS CHALLENGING TARGETS	Stevanato G. PARAHYDROGEN BASED PYRUVATE HYPERPOLARIZATION
17:30-17:45	Castiglione F. RECENT ADVANCES IN HYALURONIC ACID-BASED HYDROGELS: ¹ H HR-MAS INVESTIGATION OF DIFFUSION MOTION	Golini C. PORTABLE LOW FIELD NMR FOR IN SITU DIAGNOSIS AND MONITORING OF CULTURAL HERITAGE
17:45-18:00	Cerofolini L. COMBINING SOLID-STATE NMR WITH STRUCTURAL AND BIOPHYSICAL TECHNIQUES TO DESIGN CHALLENGING PROTEIN-DRUG CONJUGATES	Niccoli L. NOVEL POLARIZING AGENTS FOR EFFICIENT HIGH FIELD AND FAST MAS DYNAMIC NUCLEAR POLARIZATION
18:00-18:15	Di Carluccio C. SIGLEC-7 NMR ASSIGNMENT AND BINDING SPECIFICITIES TO DISIALYLATED GANGLIOSIDES	Licciardi G. HIGH RESOLUTION RELAXOMETRY FOR MULTISCALE DYNAMICS IN COMPLEX SYSTEMS
18:15-18:30	Bracaglia L. STRUCTURALLY HETEROGENEOUS PROTEINS STUDIED BY RELAXATION-EDITED NMR EXPERIMENTS	Pierigè M. EFFECT OF RESINS ON SBR DYNAMICS BY SOLID STATE NMR AND NMR RELAXOMETRY
	Plenary session	
	Chair: S. Geninatti Crich	
18:30-18:45	Sponsorship Lecture (Stelar): A. Nagmutdinova	
	FFC NMR APPLICATION IN FOOD SCIENCE AND BEYOND	
18:45-19:30	Plenary Lecture 3	
	Mathilde Hauge Lerche (Technical University of Denmark)	
	ENHANCING NMR SENSITIVITY FOR COMPLEX MIXTURE ANALYSIS THROUGH HYPERPOLARIZATION	

Thursday September 05th

	Plenary session Chair: G. Parigi
8:45-9:30	Plenary Lecture 4 Claudio Luchinat (University of Florence) IMPROVING THE INFORMATION CONTENT OF NMR SPECTRA OF METABOLOMIC SAMPLES
9:30-9:45	Sponsorship Lecture (Bruker): A. Moreno NEW EXPERIMENTS IN TOPSPIN: PURESIFT, GEMSTONE, DOSY, AND MORE!
9:45-10:15	Chair: M.R. Chierotti Under 35 GIDRM M. Spano (Sapienza University of Rome) NMR METABOLOMICS TO BETTER DEFINE ALTERNATIVE AND SUSTAINABLE FOOD SOURCES
10:15-10:30	Sponsorship Lecture (Jeol): A. Botana THE MILLIGRAM CHALLENGE

10:30-11:20 **Coffee break + Poster session (EVEN abstract numbers)**

	Parallel session A Chair: A. Randazzo	Parallel session B Chair: D. Kubicki
11:20-11:50	Ingallina C. METABOLOMIC MARVELS: DECODING THE FOOD WORLD THROUGH NMR SPECTROSCOPY	Gallo A. SOLID STATE NMR AS ELEGANT TOOL IN CRYSTAL STRUCTURE DETERMINATION OF SMALL ORGANIC MOLECULES
11:50-12:05	Sozzi M. CHALLENGES IN MEASURING ETHANOL CONTENT IN ALCOHOLIC BEVERAGES USING ¹ H NMR: METHOD EVALUATION AND A WINE CASE STUDY	Piva S. DYNAMICS OF FAST-ROTATING ROTORS IN A METAL-ORGANIC FRAMEWORK AS EXPLORED BY SOLID-STATE NMR
12:05-12:20	Cicero D. NOVEL INSIGHTS INTO METABOLIC CROSSTALK IN MULTIMORBID PATIENTS USING NMR SPECTROSCOPY	Bravetti F. SYNTHESIS AND SOLID-STATE NMR-DRIVEN CRYSTAL STRUCTURE DETERMINATION OF THE FIRST CO-DRUG OF VALPROIC ACID AND L-CARNITINE
12:20-12:35	Brigante F. NOVEL CHARACTERIZATION OF PLANT-BASED BEVERAGES BY 1D AND 2D NMR	Della Latta E. USING ¹³ C HIGH-RESOLUTION SOLID-STATE NMR TECHNIQUES TO INVESTIGATE A Cu(II)-BASED PARAMAGNETIC MOF
12:35-12:50	Zampieri S. ¹ H-NMR FOR MASLD DIAGNOSIS: MULTIVARIATE ANALYSIS OF SERUM METABOLITES TO DIFFERENTIATE DISEASE STAGES	Martini F. UNVEILING LOCAL DYNAMICS IN TRIPTYCENE-BASED POROUS POLYMERS: A SOLID-STATE NMR STUDY

12:50-14:10 **Lunch + Poster session (ODD abstract numbers)**

	Plenary session Chair: S. Borsacchi
14:10-14:55	Plenary Lecture 5 Dominik Kubicki (University of Birmingham) LOCAL STRUCTURE AND DIFFUSION OF SODIUM IN A HYBRID GLASS FROM HIGH-TEMPERATURE ²³ Na MAS NMR AT 20 T
14:55-15:10	Sponsorship Lecture (Bracco): A. Macula ASSESSING THE RELIABILITY OF VIRTUAL CONTRAST: A GENERALIZATION STUDY ACROSS DIFFERENT TUMOR TYPES AND PATIENT DEMOGRAPHICS
15:10-15:25	Sponsorship Lecture (Magritek/FKV): D. Bouillaud NEW BENCHMARK FOR BENCHTOP NMR MAGNET HOMOGENEITY: HOW SPINSOLVE™ ULTRA NMRS BOOST SOLVENT SUPPRESSION PERFORMANCE FOR 1- AND 2D NMR

	Chair: L. Ragona Segre-Capitani Fellowships
15:25-15:40	C. Papi (University of Turin) A MRI-CEST METHOD FOR MAPPING WATER CYCLING ACROSS CELLULAR MEMBRANES
15:40-15:55	A. Gambini (University of Modena and Reggio Emilia) NMR-BASED METABOLOMICS IN MNGIE RARE DISEASE

15:55-16:10	A. Barbanente (University of Bari) AN NMR-BASED APPROACH TO ELUCIDATE THE LINK BETWEEN DIETARY ZINC STORAGE AND TRYPTOPHAN METABOLISM
16:10-17:30	Coffee break + Poster session (EVEN abstract numbers)
16:40-17:30	GIRM assembly
17:30-19:30	GIDRM assembly + announcement of poster competition winner
20:30	social dinner

Friday September 06st

	Plenary session Chair: P. Turano
8:45-9:30	Plenary Lecture 6 Alceo Macchioni (University of Perugia) APPLICATION OF NMR TO THE STUDY OF CATALYTIC REACTIONS

	Parallel session A Chair: S. Geninatti Crich	Parallel session B Chair: A. Macchioni
9:30-10:00	Testa C. MAPPING BRAIN CONNECTIVITY THROUGH WATER MOTION	Airoldi C. NMR-BASED IDENTIFICATION AND DEVELOPMENT OF BIOACTIVE COMPOUNDS
10:00-10:15	Brero F. OPTIMIZATION OF IRON OXIDE MAGNETIC NANOPARTICLES FOR ENHANCED MRI CONTRAST AND HYPERTHERMIA TREATMENT	Di Pietro M.E. CHALLENGES IN USING NMR FOR SUSTAINABLE STRUCTURED SOLVENTS: CAUTION IN INTERPRETING INTERMOLECULAR NOE
10:15-10:30	Quattrociocchi C. IN VITRO AND IN VIVO MR IMAGING OF THE CAIX EXPRESSION IN BREAST CANCER	Todisco S. A MULTINUCLEAR NMR STUDY OF SELECTIVE DEGRADATION OF ORGANOSILICON COMPOUNDS BY OXALATE ION IN AQUEOUS SOLUTION
10:30-10:45	Porru M. ZINC AND MANGANESE DOPED IRON OXIDE MAGNETIC NANOPARTICLES: EFFECT ON THE ¹ H-NMR RELAXATION PROPERTIES	Sabena C. QUANTITATIVE SOLID-STATE NMR ANALYSIS BY CHEMOMETRIC APPROACH
10:45-11:00	Macchia M.L. ASSESSING THE IMPACT OF DONOR GROUPS ON THE COORDINATION AND MAGNETIC PROPERTIES OF MONOHYDRATED Fe(III) COMPLEXES FOR MRI APPLICATIONS	Righetti G. DEEP EUTECTIC SOLVENTS FOR HMF VALORIZATION

11:00-11:30	Coffee break
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	Parallel session A Chair: M. Piccioli	Parallel session B Chair: S. Borsacchi
11:30-12:00	Cantini F. SOLUTION NMR TO ADDRESS STRUCTURE AND INTERACTIONS OF METALLOPROTEINS: THE CASE OF THE IRON-SULPHUR C1SD3 AND CALCIUM BINDING PROTEIN C1B2	Pedone A. ADVANCEMENT IN THE SIMULATIONS OF SOLID-STATE NMR SPECTRA OF OXIDE GLASSES: INTEGRATING AB INITIO CALCULATIONS AND MACHINE LEARNING
12:00-12:15	Acconcia C. NMR-GUIDED DESIGN OF SELECTIVE INTEGRIN LIGANDS	Ravera E. AN INTEGRATIVE VIEW ON BIOINSPIRED SILICA-LYSOZYME COMPOSITES
12:15-12:30	Grasso D. INVESTIGATION OF THE DYNAMICS/FUNCTION RELATIONSHIP OF PHOSPHORYLATED ONCOPROTEIN YB-1 BY NUCLEAR MAGNETIC RESONANCE	Pizzanelli S. STRUCTURE AND DYNAMICS OF HIGHLY CONCENTRATED LiCl METHANOLIC SOLUTIONS CONFINED IN A MESOPOROUS SILICA: AN NMR STUDY
12:30-12:45	Grifagni D. AN ABERRANT INTERACTION BETWEEN THE PATHOGENIC P144L MUTANT OF FDX2 AND FDXR PROVIDES THE MOLECULAR GROUNDS OF AN ULTRA-RARE HUMAN GENETIC DISORDER	Fiorucci L. REDEFINING THE TOOLBOX TOWARDS PRECISE PARAMAGNETIC NMR PREDICTIONS AT ULTRAHIGH FIELDS

	Plenary session Chair: L. Ragona and M.R. Chierotti
12:45-13:25	Poster competition winner lectures
13:25-13:30	Closing
13:30-14:30	Lunch