

40

**CONGRESSO
NAZIONALE della
SOCIETÀ ITALIANA
di FARMACOLOGIA**

**|| VALORE
SCIENTIFICO
e l'USO
APPROPRIATO
del FARMACO**

**PROGRAMMA
SCIENTIFICO
PRELIMINARE**

**SIF WEEK
DIGITAL EDITION
9 | 13 MARZO 2021**

40° CONGRESSO NAZIONALE della SOCIETÀ ITALIANA di FARMACOLOGIA



SEGRETERIA SCIENTIFICA Società Italiana di Farmacologia

Via Giovanni Pascoli, 3
20129 Milano

sif.congressi@segr.it

sif.farmacologia@segr.it

Tel. +39 02-29520311

www.sifweb.org

Referenti della segreteria:

- Ida Ceserani
- Muriel Bertomoro
- M. Elena Scamoni
- Adele Tangolo

Durante il Congresso è possibile contattare la Segreteria SIF dalle ore 11.00 alle ore 11.30 nella sezione "Coffee Chat" della piattaforma.



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Carissime e Carissimi,
è un grande piacere invitarvi al 40° Congresso Nazionale della Società Italiana di Farmacologia (SIF), che si svolgerà in modalità digitale il prossimo 9-13 marzo 2021. Durante il mio mandato, il Consiglio Direttivo ha approvato la mia proposta di trasformare il Congresso da biennale ad annuale, pertanto il 41° Congresso si terrà nel 2022 in sede da definire. Ho ritenuto di fare questa sperimentazione, in quanto la Farmacologia sta vivendo un periodo esaltante e di grande trasformazione. È chiamata a rivestire un ruolo sempre più centrale attraverso nuove metodologie di ricerca, terapie avanzate quali le terapie geniche e cellulari, l'intelligenza artificiale, i *big data* e le medicina personalizzata.

Per malattie cronic-degenerative, oncologiche, immunologiche, cardiovascolari-dismetaboliche e infettive sono in sviluppo farmaci innovativi che possono dare risposta alle esigenze dei pazienti e che hanno contribuito a curare malattie per le quali, fino a qualche anno fa, non vi erano prospettive terapeutiche. Siamo consapevoli che le terapie avanzate hanno un costo elevato, bisogna quindi impostare delle politiche di *governance* del farmaco che non mettano in crisi la sostenibilità del nostro Servizio Sanitario Nazionale. Il mondo del farmaco sta, quindi, cambiando rapidamente ed il Farmacologo deve essere aggiornato in tempo reale sul piano della formazione, dell'appropriatezza e della ricerca preclinica, traslazionale e clinica. Nel Congresso annuale verranno affrontati temi di grande attualità con lo scopo di implementare un dialogo multidisciplinare attraverso *joint symposia* con le Società cliniche specifiche delle diverse aree terapeutiche, stimolando anche la partecipazione di medici specialisti.

Il tema del mio mandato è: **"Il valore scientifico e l'uso appropriato del farmaco"**. Ci confronteremo quindi con diversi *stakeholders* della filiera di sviluppo di un farmaco. I farmacologi di base e clinici devono essere gli attori principali (SIF-First) che dovranno promuovere attività ed iniziative post-congressuali con altri esperti di ricerca pubblici e privati, con i regolatori e i politici, con le associazioni dei cittadini-pazienti e con le aziende farmaceutiche con modalità di confronto costruttivo. Durante il Congresso, affronteremo anche delicate tematiche universitarie, non solo sulla formazione e sulle carriere del Farmacologo nei vari corsi di laurea, ma anche come rivalutare il suo ruolo essenziale per lo sviluppo e le conoscenze del farmaco in laboratori di ricerca e nel Servizio Sanitario Nazionale.

Particolare riguardo verrà dato anche al ruolo dei giovani farmacologi della SIF, che avranno spazio nella giornata pregressuale (il giorno 8 marzo) per organizzare sessioni scientifiche da loro selezionate.

Vi aspetto numerosi al Congresso.

Giorgio Racagni
Presidente SIF



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40° CONGRESSO NAZIONALE della SOCIETÀ ITALIANA di FARMACOLOGIA



Con il patrocinio di:





INFORMAZIONI SCIENTIFICHE

TEMI TRASVERSALI

- Aspetti regolatori e politiche del farmaco
- Digital health
- Dipendenze patologiche
- Dispositivi medici
- Farmacogenetica
- Farmacologia di genere
- Farmacologia pediatrica
- Farmacovigilanza, farmacoepidemiologia, farmacoeconomia & Real World Evidence (RWE)
- Innovazione, etica e sostenibilità
- Medicina personalizzata
- Povertà farmaceutica
- Ricerca farmacologica di base e clinica
- Tossicologia

TEMI SPECIFICI

- Chemioterapia e vaccini
- Farmacognosia, fitoterapia e nutraceutica
- Farmacologia apparato digerente
- Farmacologia del dolore
- Farmacologia oncologica
- Farmacologia rigenerativa
- Farmacologia sistema cardiovascolare e metabolico
- Farmacologia sistema endocrino
- Farmacologia sistema immunitario e dell'infiammazione
- Farmacologia sistema nervoso
- Farmacologia sistema respiratorio
- Malattie infettive
- Malattie rare
- Terapie avanzate





SVOLGIMENTO DEI LAVORI

Per assicurare un corretto svolgimento delle sessioni, tutti gli oratori dovranno attenersi rigorosamente ai tempi assegnati. I moderatori saranno tenuti a collegarsi 30 minuti prima dell'inizio dei lavori e far rispettare i tempi di inizio di ogni sessione ed il tempo assegnato ad ogni presentazione.

I relatori saranno tenuti a collegarsi 30 minuti prima della loro relazione e a restare a disposizione per le domande che verranno poste dal moderatore. La durata di ciascun intervento è stata comunicata direttamente ai relatori.

Al momento del collegamento una hostess accoglierà i relatori e darà supporto unitamente al personale tecnico in caso di problemi o richieste specifiche.

ORAL COMMUNICATIONS

Le oral communications saranno presentate dal 10 al 13 marzo 2021 dalle ore 8.30 alle ore 10.00. Il tempo a disposizione per le comunicazioni orali sarà di 8 minuti. Le presentazioni si terranno in lingua italiana.

Dopo la presentazione, sarà possibile visionare le relazioni on demand nell'area dedicata della piattaforma. Sarà possibile ricercare le oral communications per argomento, per titolo o per autore.

La presentazione delle oral communications accettate è subordinata all'iscrizione dell'autore al Congresso.

POSTER

I poster avranno un'area dedicata della piattaforma. Sarà possibile ricercare i poster per argomento, per titolo o per autore.

I poster saranno accompagnati da una presentazione audio degli autori.

La presentazione dei Poster accettati è subordinata all'iscrizione dell'autore al Congresso.

PREMIAZIONI

La Cerimonia di Premiazione dei "Premi SIF - Farindustria" avrà luogo alle ore 17.30 del 9 marzo 2021. La SIF premierà i migliori Poster presentati da membri (under 38) non strutturati della Società (che siano in regola con il pagamento della quota associativa SIF) durante il Congresso nella sessione *Conclusions and Awards* del 13 marzo 2021 alle ore 12.00.

La cerimonia di premiazione dei premi "Alberico Benedicenti" 2020, delle borse di ricerca in memoria del Prof. Paolo Preziosi e delle borse in collaborazione con il GdL Farmacognosia, Fitoterapia e Nutraceutica avrà luogo nella sessione *Conclusions and awards* il 13 marzo 2021 alle ore 12.00.





ACCESSO AL CONGRESSO

L'accesso sarà consentito esclusivamente agli iscritti in possesso del link ricevuto dalla segreteria.

Nel caso non fossero state ricevute le credenziali di accesso, contattare il provider all'indirizzo mail: segreteriacongresso@3psolution.it

L'accesso alle sale live del congresso è consentito, dopo aver effettuato il login, ad un solo device alla volta, in caso di accessi da più device in automatico il sistema scatterà il device precedentemente collegato per permettere al nuovo device di collegarsi.

Per problemi tecnici di collegamento, sarà disponibile un servizio di customer service per tutto il periodo del congresso.

LA PIATTAFORMA

Prima di accedere alla piattaforma, verrà richiesto di registrarsi utilizzando l'indirizzo e-mail utilizzato al momento dell'iscrizione al congresso.

Per poter utilizzare tutte le funzionalità della piattaforma si raccomanda l'utilizzo di uno dei seguenti browser: Google Chrome, Microsoft Edge, Mozilla Firefox.





INFORMAZIONI SUL PROGRAMMA

Il Congresso è suddiviso in due aree:

- un'area di formazione ECM
- un'area congressuale NON ECM

Il partecipante interessato ad acquisire i crediti ECM dovrà entrare nell'area dedicata che prevede l'accesso alla piattaforma validata da Agenas.

ECM

La Commissione Nazionale per la Formazione Continua ha formulato parere positivo all'accreditamento di 3P Solution Srl come PROVIDER STANDARD (codice 327, autorizzato il 15 ottobre 2012).

La responsabilità per i contenuti, la qualità e la correttezza etica di questa attività ECM è a carico di 3P Solution. L'evento è stato accreditato (ID ECM 327-311561) con obiettivo formativo Farmacoepidemiologia, farmacoeconomia, farmacovigilanza con acquisizione di nozioni tecnico-professionali per tutte le professioni per 1000 partecipanti e ha ottenuto 19,5 crediti.

Per ottenere l'attribuzione dei crediti E.C.M. è necessario:

1. partecipare ad almeno il 90% dei lavori scientifici, per i quali è prevista la verifica delle presenze;
2. compilare il questionario di apprendimento e rispondere correttamente ad almeno il 75% delle domande;
3. compilare il questionario di valutazione dell'evento.

SERVIZIO MYECM

Age.na.s ha attivato il servizio MyEcm (pagina personalizzata a disposizione di ogni professionista sanitario) tramite il quale è possibile: 1. consultare l'offerta formativa 2. consultare il riepilogo degli eventi frequentati e i crediti conseguiti 3. esprimere una valutazione su corsi frequentati organizzati dai Provider. Per accedere ai servizi online è necessario registrarsi alla pagina: <http://ape.agenas.it/professionisti/myecm>. Può procedere a cliccare sull'icona per esprimere la propria valutazione su questo corso.

ATTESTATO DI PARTECIPAZIONE

L'attestato di partecipazione sarà scaricabile nella propria area personale. I certificati saranno disponibili solo per l'effettiva presenza al congresso. L'attestato dei crediti ECM verrà inviato dal Provider via e-mail una volta superata la verifica di apprendimento.



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Martedì 9 marzo 2021

Ora	AREA FORMAZIONE ECM	AULA 1	AULA 2	AULA 3	AULA 4	AULA 5	AULA 6
10.00 11.00		OPENING CEREMONY Giorgio Racagni, Elena Cattaneo, Michael Spedding					
11.00 11.30		Plenary Lecture Clinical trials between innovation and ethics: what have we learnt in the last 20 years and during COVID-19 - Nicola Magrini					
11.30 13.00		Plenary Round Table Drug policies and future priorities					
13.00 14.00		Break					
14.00 14.30		Scientific Session Epigenetic and genetic modulation in substance use disorders	SIF-Farindustria Symposium Value of pharmaceutical industry for innovation and sustainability	Scientific Session New possible pharmacological targets for the treatment of obesity and metabolic syndrome	Scientific Session Early synaptic failure: from developmental to age related diseases	Scientific Session (R)evolution of cancer therapy: are we ready to identify and manage the new safety features?	Scientific Session Translational research openings for the cure of Amyotrophic Lateral Sclerosis
14.30 15.00							
15.00 15.30							
15.30 16.00		Scientific Session Neurobiology of Post-Traumatic Stress Disorder: from rodents to patients			Scientific Session Targeting purinergic receptors to remote damage resolution and repair in neurodegenerative diseases	Lecture Druggable targets meet oncogenic drivers: opportunities of target-based classification of tumors and the role of institutional Precision Oncology Support Team	Scientific Session Non-coding RNA based strategies in sporadic and familial neurodegenerative disorders
16.00 16.30	Scientific Session The circular life of human CD38: from basic science to clinics and back						
16.30 17.00							
17.00 17.30			Scientific Session New trends in hereditary rare channelopathies: complex genetics, phenotype heterogeneity and precision medicine		Round Table Cardiovascular Prevention: what European Guidelines say and how to apply in Italy		

17.30

Cerimonia di Premiazione dei Premi SIF - Farindustria



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Mercoledì 10 marzo 2021

Ora	AREA FORMAZIONE ECM	AULA 1	AULA 2	AULA 3	AULA 4	AULA 5	AULA 6	AULA 7
8.30 10.00		Oral Communications Neuropharmacology 1	Oral Communications Cardiovascular Pharmacology	Oral Communications Basic and Clinical Research 1	Oral Communications Cancer Pharmacology 1	Oral Communications Pharmacovigilance, Pharmacoepidemiology, Pharmacoeconomics and Real World Evidence 1	Oral Communications Inflammation Pharmacology and Immunopharmacology	Oral Communications Pharmacognosy, Phytotherapy and Nutraceuticals 1
10.00 10.30	Scientific Session PCSK9: from Biology to Genetics to Pharmacology	Scientific Session Innovation in narcolepsy ESD and in OSA	Scientific Session The three XXI century virus: their management, control and eradication	Scientific Session WARNING ON: The value of plasma-derived therapies: immunoglobulins as essential drugs	Scientific Session Tackling progression of Multiple Sclerosis: from pathogenesis of neurodegeneration to therapeutic opportunities		Round Table Therapeutic needs in pediatric pharmacology	
10.30 11.00								
11.00 11.30		<i>Coffee Chat</i>						
11.30 12.00		Plenary Lecture Vaccines and monoclonals to regain our freedom - <i>Rino Rappuoli</i>						
12.00 13.30		Plenary Round Table Anti-COVID vaccines and new therapeutic avenues						
13.30 14.30		<i>Break</i>						
14.30 15.00	Scientific Session The long road of cannabinoids in epilepsy	Scientific Session When the interaction leads to dysfunction: new perspectives for therapeutic intervention in Neurodegenerative Diseases	Scientific Session Translational Pharmacology in Disease-induced depression: from genes to hard-data to therapy	Scientific Session Novel drugs and therapies for rare genetic pediatric diseases	SIF-Egalia Symposium The Added Value to Health: medicines, health and innovation, the new frontiers of value added medicines	Round Table Druggable targets meet oncogenic drivers: the role of Tumor Molecular Boards in Precision Oncology	Scientific Session Heart failure: anything new on the horizon?	
15.00 15.30								
15.30 16.00	Scientific Session Focus On Esketamine in treatment resistant depression	Scientific Session A new approach to the inflammatory response in patients with COVID-19 pneumonia	Intercompany Symposium with Round Table on Antimicrobials - Healthcare-related infections sustained by MDR Gram negative bacteria	Scientific Session New development in neuroimmunology	Scientific Session Nutraceuticals: clinical efficacy and safety	Scientific Session State of the art and perspectives in cancer pharmacology (II)	Scientific Session As time goes by: ageing and the heart	
16.00 16.30								
16.30 17.00	Scientific Session CNS disorders: much more than neurons							
17.00 17.30								
17.30 18.00		Round Table Narcolepsy and impact on quality of life, how to recognize and treat it						
18.00 18.30								



40° CONGRESSO NAZIONALE della SOCIETÀ ITALIANA di FARMACOLOGIA

Giovedì 11 marzo 2021

Ora	AREA FORMAZIONE ECM	AULA 1	AULA 2	AULA 3	AULA 4	AULA 5	AULA 6	AULA 7
8.30 10.00		Oral Communications Neuropharmacology 2	Oral Communications Sensitive windows of vulnerability for cannabis use on brain development	Oral Communications Pharmacology of Nutritional Disorders	Oral Communications Basic and Clinical Research 2	Oral Communications Pharmacovigilance, Pharmacoepidemiology, Pharmacoeconomics and Real World Evidence 2	Oral Communications Cancer Pharmacology 2	Oral Communications Toxicology
10.00 10.30	Scientific Session The role of Real World Evidence in optimizing the management of chronic diseases	Scientific Session Substance use disorder across life: from neurobiological mechanisms to new pharmacological treatments	Scientific Session The certification in Pharmacology: the Italian way	Scientific Session Extended Release Calcifediol: a combined approach to the Secondary Hyperparathyroidism treatment	Scientific Session Precision medicine and pharmacological treatment of psychiatric disorders			
10.30 11.00						Lecture An alternative perspective in approaching Rare Disease: the complement involvement		
11.00 11.30		Coffee Chat						
11.30 12.00		Plenary Lecture University and Research - <i>Gaetano Manfredi</i>						
12.00 13.30		Plenary Round Table The University and Life Science Research: what's next?						
13.30 14.30		Break						
14.30 15.00	Scientific Session The value of research in rare diseases in the pandemic era	Lecture Adherence therapy with antidepressants	Scientific Session The role of Real-World Evidence for the holistic health management and research: The SIF -RWE Consensus Document	Scientific Session Frontiers in Immunomodulation	Scientific Session Pharmacology Teaching: pitfalls and opportunities	Scientific Session New targets for pain eradication	Round Table SIF-Assobiotec Clinical trials in Italy: focus on advanced therapies medicinal products	
15.00 15.30		Scientific Session Gut microbiota-brain-immune axis: emerging evidence for a role in neurological conditions						
15.30 16.00								
16.00 16.30								
16.30 17.00	Scientific Session FOCUS ON Multiple Sclerosis: The right therapy in the right time			Scientific Session New possible pharmacological targets for the treatment of eating disorders		Scientific Session Pain and Opioids: from preclinical news to clinical perspectives	Scientific Session Pharmacogenetics in personalized therapy: the impact of big data and artificial intelligence	
17.00 17.30								
17.30 18.00								



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Venerdì 12 marzo 2021

Ora	AREA FORMAZIONE ECM	AULA 1	AULA 2	AULA 3	AULA 4	AULA 5	AULA 6
8.30 10.00		Oral Communications Neuropharmacology 3	Oral Communications Immunometabolism	Oral Communications Pharmacology of Rare Disease	Oral Communications Basic and Clinical Research 3	Oral Communications Pharmacovigilance, Pharmacoeconomics and Real World Evidence 3	Oral Communications Personalized Medicine and Advanced Therapies
10.00 10.30							
10.30 11.00	Lecture Understanding the neurobiology in Alzheimer's disease: from beta-amyloid and beyond		Scientific Session Therapeutic management of the main neuromuscular diseases	Scientific Session Advanced Therapies for Ocular Rare Diseases	Lecture Multifactorial inertia as a barrier to the use of pharmacological innovation in diabetes	Scientific Session Innovative medicines in oncology: how to guarantee the recognition of value and rapid access for patients	
11.00 11.30		Special event Speech from Prof.ssa Maria Cristina Messa, Ministry of University and Research					
11.30 12.00		Plenary Lecture Transformative genetic and cellular therapy - Franco Locatelli					
12.00 13.30		Plenary Round Table Innovation and sustainability					
13.30 14.30		Break					
14.30 15.00	Scientific Session Innovation of the Science & Regulation worlds: transformative therapies and paradigm shifts in the health and regulatory systems	Scientific Session New insights in Autism Spectrum Disorders: from basic science to novel therapeutic approaches	Round Table Pharmacological evolution between efficacy and sustainability	Scientific Session IUPHAR Mediterranean Group of Natural Products Pharmacology: highlights from a novel international community	Scientific Session The role of Real-World Evidence in healthcare emergency for informed drug regulatory decision making	Lecture New pharmacological perspective for the treatment of diffuse large B-cell lymphoma	Scientific Session Central and peripheral redox dysregulation and inflammation in neuropsychiatric disorders: from molecular targets to novel therapeutic opportunities
15.00 15.30						Lecture Innovative therapies for treating advanced or unresectable hepatocellular carcinoma (HCC): from studies to clinical practice	
15.30 16.00	Scientific Session New frontiers in cardiovascular disease pharmacology: from gene silencing to cell therapy					Scientific Session State of the art and perspectives in cancer pharmacology	Round Table Preclinical animal research: do we meet EU standards?
16.00 16.30							
16.30 17.00				Scientific Session Pharmacology and physio- complex products: the case of substance-based medical devices	Round Table Pharmaceutical Poverty		
17.00 17.30							
17.30 18.00							



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Sabato 13 marzo 2021

Ora	AREA FORMAZIONE ECM	AULA 1	AULA 2	AULA 3	AULA 4	AULA 5	AULA 6
8.30 10.00		Oral Communications Pharmacognosy, Phytotherapy and Nutraceuticals 2	Oral Communications Pharmacovigilance, Pharmacoepidemiology, Pharmacoeconomics and Real World Evidence 4	Oral Communications Basic and Clinical Research 4	Oral Communications Pharmacogenetics	Oral Communications Gender and Pediatric Pharmacology	Oral Communications Pain Pharmacology and Pathological Addiction
10.00 11.00	Scientific Session Pharmacological effects and genotoxic properties of synthetic psychoactive substances		Scientific Session From medication review to deprescribing: new strategies to improve a rationale use of medicine	Scientific Session Drugs in the environment: risk assessment, regulatory landscape and future challenges	Scientific Session Gender pharmacology and SARS-CoV-2: a call for action	Scientific Session Tumor molecular board for cancer diagnosis and therapy: rationale and practice	
11.00 11.30							
11.30 12.00		Plenary Lecture Inflammation, a metanarrative from cancer to COVID-19 - <i>Alberto Mantovani</i>					
12.00 13.00		CONCLUSIONS AND AWARDS					



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SIF

SOCIETÀ ITALIANA DI FARMACOLOGIA

AREA FORMAZIONE ECM





16.00 | 17.00

Scientific session

**The circular life of human CD38:
from basic science to clinics and back**

Chairperson: Pier Luigi Canonico

16.00 | 16.15

Role of anti CD38+ antibodies in Multiple Myeloma

Alessandra Larocca

16.15 | 16.35

The unique personalities of the therapeutic anti-CD38 antibodies

Fabio Malavasi

16.35 | 17.00

**Discussion "The circular life of human CD38: from basic science to clinics
and back"**

Pier Luigi Canonico, Alessandra Larocca, Fabio Malavasi





10.00 | 11.00

Scientific session

**PCSK9: from biology to genetics
to pharmacology**

Chairperson: Francesco Rossi

10.00 | 10.15

PCSK9 biology: liver and beyond

Giuseppe Danilo Norata

10.15 | 10.30

**New insights into PCSK9 genetics: a lesson from loss of function
and gain of function mutations**

Patrizia Tarugi

10.30 | 10.45

Clinical efficacy of PCSK9 inhibitors

Marcello Arca

10.45 | 11.00

Discussion “PCSK9: from biology to genetics to pharmacology”

Marcello Arca, Giuseppe Danilo Norata, Francesco Rossi, Patrizia Tarugi





14.30 | 15.30

Scientific session

The long road of cannabinoids in epilepsy

Chairpersons: Emilio Russo, Roberto Russo

14.30 | 14.45

The endocannabinoid system in epilepsy: where do we stand and go?

Valentina Franco, Gaetano Terrone

14.45 | 15.00

Cannabidiol and other phytocannabinoids: the long road of the others

Rita Citraro, Antonio Leo

15.00 | 15.15

Cannabinoids in the resistant epilepsy: which, where and why

Pasquale Striano

15.15 | 15.30

Discussing the rolling over cannabinoids pharmacology

Rita Citraro, Valentina Franco, Antonio Leo, Emilio Russo, Roberto Russo, Pasquale Striano, Gaetano Terrone

15.30 | 16.30

Scientific session

FOCUS ON Esketamine in treatment resistant depression

Chairpersons: Vincenzo Cuomo, Giorgio Racagni

15.30 | 15.45

Why esketamine in treatment resistant depression

Laura Musazzi

15.45 | 16.00

How and what esketamine treatment resistant depression

Andrea Fagiolini

16.00 | 16.30

Discussion "FOCUS ON esketamine in treatment resistant depression"

Andrea Fagiolini, Laura Musazzi, Giorgio Racagni





16.30 | 18.00

Scientific session

**CNS disorders:
much more than neurons**

Chairpersons: Giovanni Biggio, Mariagrazia Grilli, Maria Angela Sortino

16.30 | 16.45

Astroglipathology in neuropsychiatric and neurodegenerative diseases

Alexej Verkhatsky

16.45 | 17.00

Unraveling the complex glial response in aging and Alzheimer's disease

Caterina Scuderi

17.00 | 17.15

Early microglial responses to β -amyloid as a target for neuroprotection

Sara Merlo

17.15 | 17.30

Type I narcolepsy: the pathology and the pathophysiological mechanism

Giuseppe Plazzi

17.30 | 17.45

**Neurogenic niches as pharmacological targets in aging
and brain disorders**

Mariagrazia Grilli

17.45 | 18.00

Discussion "CNS disorders: much more than neurons"

*Sara Merlo, Mariagrazia Grilli, Giuseppe Plazzi, Caterina Scuderi, Maria Angela Sortino,
Alexej Verkhatsky*





10.00 | 11.00

Scientific session

**The role of Real World Evidence
in optimizing the management
of chronic diseases**

Chairpersons: Achille P. Caputi, Nello Martini, Giorgio Racagni

10.00 | 10.05

Introduction to the topic

Nello Martini

10.05 | 10.20

Italian guidelines on polypharmacy management and comorbidities

Graziano Onder

10.20 | 10.35

**The importance of RWE for the GP in the management
of chronic conditions**

Walter Marrocco

10.35 | 10.50

**What role for the pharmacologist in supporting GPs
and specialists for the management of chronic diseases**

Gianluca Trifirò

10.50 | 11.00

**Discussion "The role of Real World Evidence in optimizing
the management of chronic diseases"**

Achille P. Caputi, Walter Marrocco, Nello Martini, Graziano Onder, Giorgio Racagni,
Gianluca Trifirò





14.30 | 16.30

Scientific session

The value of research in rare diseases in the pandemic era

Chairpersons: Pier Luigi Canonico, Annamaria De Luca

14.30 | 14.45

Impact of the COVID-19 pandemia on access to care and therapy development for rare disease patients

Lucia Monaco

14.45 | 15.00

Drug innovation and rare diseases: does the paradigm change after COVID-19?

Patrizia Popoli

15.00 | 15.15

The added value of the research in rare diseases in the pandemic era

Manuela Battaglia

15.15 | 15.30

Research in rare disease and ATMP development: the Italian excellence

Franco Locatelli

15.30 | 15.45

Priorities and incentives for innovative therapies for rare diseases: the pipeline in 2020

Anna Chiara Rossi

15.45 | 16.00

Research in rare disease: a chance for attracting young pharmacologists

Ornella Cappellari

16.00 | 16.30

Discussion "The value of research in rare diseases in the pandemic era"

Manuela Battaglia, Pier Luigi Canonico, Ornella Cappellari, Annamaria De Luca, Franco Locatelli, Lucia Monaco, Patrizia Popoli, Anna Chiara Rossi

16.30 | 17.15

Scientific session

FOCUS ON Multiple Sclerosis: The right therapy in the right time

Pharmacological aspects, Romano Danesi - Clinician aspects, Diego Centonze





10.30 | 11.00

Lecture

Understanding the neurobiology in Alzheimer's disease: from beta-amyloid and beyond

Chairperson: Giorgio Racagni

Speaker: Monica Di Luca - Management Committee of Pharmadvances

14.30 | 15.30

Scientific session

Innovation of the Science & Regulation worlds: transformative therapies and paradigm shifts in the health and regulatory systems

Chairperson: Filippo Drago

14.30 | 14.45

Advanced therapies: innovation in science and the world of gene therapies

Mauro Giacca

14.45 | 15.00

Towards a new model of health system and economic sustainability: the policy challenges

Filippo Drago

15.00 | 15.15

Healthcare as an investment and its role in economic and social sustainability

Mauro Marè

15.15 | 15.30

Discussion "Innovation of the Science & Regulation worlds: transformative therapies and paradigm shifts in the health and regulatory systems"

Filippo Drago, Mauro Giacca, Mauro Marè





15.30 | 17.00

Scientific session

**New frontiers in cardiovascular disease
pharmacology: from gene silencing
to cell therapy**

Chairperson: Alberico L. Catapano

15.30 | 15.50

Gene silencing approaches for dyslipidemia

Alberico L. Catapano

15.50 | 16.10

New approaches for transthyretin cardiac amyloidosis

Pasquale Perrone Filardi

16.10 | 16.30

Gene therapy for the heart

Mauro Giacca

16.30 | 16.50

Cell therapy for familial hypercholesterolaemia

Maurizio Averna

16.50 | 17.00

**Discussion "New frontiers in cardiovascular disease pharmacology:
from gene silencing to cell therapy"**

Maurizio Averna, Alberico L. Catapano, Mauro Giacca, Pasquale Perrone Filardi





10.00 | 11.30

Scientific session

Pharmacological effects and genotoxic properties of synthetic psychoactive substances

Chairpersons: Liana Fattore, Walter Fratta, Matteo Marti

10.00 | 10.15

Pharmaco-toxicological effects and histopathological evaluation of damage caused by the main classes of new psychoactive substances (NPS): cannabinoids, stimulants and synthetic opioids

Matteo Marti

10.15 | 10.30

Neurobiological sequelae of contingent and not-contingent administration of synthetic cannabinoid receptor agonists

Maria Antonietta De Luca

10.30 | 10.45

Zebrafish as a new tool for studying NPS effects in preclinical studies

Luisa Ponzoni

10.45 | 11.00

Genotoxicity: an overview of the different NPS

Monia Lenzi

11.00 | 11.15

New insights into potential mechanisms of action of the dissociative drug methoxetamine

Liana Fattore

11.15 | 11.30

Discussion "Pharmacological effects and genotoxic properties of synthetic psychoactive substances"

Maria Antonietta De Luca, Liana Fattore, Walter Fratta, Monia Lenzi, Matteo Marti, Luisa Ponzoni



40

CONGRESSO
NAZIONALE della
SOCIETÀ ITALIANA
di FARMACOLOGIA

Il VALORE
SCIENTIFICO
e l'USO
APPROPRIATO
del FARMACO

SIF

SOCIETÀ ITALIANA DI FARMACOLOGIA

AREA CONGRESSUALE NON ECM





10.00 | 11.00

Opening Ceremony

Giorgio Racagni, Elena Cattaneo, Michael Spedding

11.00 | 11.30

Plenary Lecture: Clinical trials between innovation and ethics: what have we learnt in the last 20 years and during Covid19

Chairperson: Giorgio Racagni

Speaker: Nicola Magrini

11.30 | 13.00

Round table: Drug policies and future priorities

Chairpersons: Nello Martini, Giorgio Racagni

Participants: Renato Bernardini, Annalisa Capuano, Arturo Cavaliere, Armando A. Genazzani, Fabrizio Greco, Enrique Häusermann, Riccardo Palmisano, Patrizia Popoli





14.00 | 15.30

Scientific session

**Epigenetic and genetic modulation
in substance use disorders**

Chairpersons: Paola Fadda, Patrizia Romualdi

14.00 | 14.15

**Adolescent WIN 55, 212-2 pre-exposure affects subsequent
responses to cocaine: behavioral and epigenetic studies**

Maria Scherma

14.15 | 14.30

The role of the endocannabinoid system in substance use disorders

Philippe Melas

14.30 | 14.45

Involvement of epigenetic regulation in molecular effects of MDMA

Patrizia Romualdi

14.45 | 15.00

**Genetic and environmental factors of vulnerability
to cannabis use disorder development: preliminary data**

Maria Carla Gerra

15.00 | 15.30

**Discussion "Epigenetic and genetic modulation
in substance use disorders"**

Paola Fadda, Maria Carla Gerra, Patrizia Romualdi, Maria Scherma





15.30 | 17.30

Scientific session

**Neurobiology of Post-Traumatic Stress Disorder:
from rodents to patients**

Chairpersons: Patrizia Campolongo, Filippo Drago

15.30 | 15.45

**Dopamine D3 receptor signaling promotes resilience
to Post-Traumatic Stress Disorder (PTSD)**

Gian Marco Leggio

15.45 | 16.00

**Cannabinoids to treat both cognitive and emotional features
of Post-Traumatic Stress Disorder (PTSD)**

Patrizia Campolongo

16.00 | 16.15

**Teaching old drugs new tricks: effects of carbonic anhydrases
modulators on fear memory extinction**

Gustavo Provensi

16.15 | 16.30

**Endocannabinoid modulation of stress influence
on mechanisms of fear extinction**

Maria Morena

16.30 | 16.45

**Stress as risk factor for psychiatric disorders:
influence of genetic manipulation of the serotonergic system**

Francesca Calabrese

16.45 | 17.00

Clinical evidence to treat Post-Traumatic Stress Disorder (PTSD)

Andrea Fagiolini

17.00 | 17.30

**Discussion "Neurobiology of Post-Traumatic Stress Disorder:
from rodents to patients"**

Francesca Calabrese, Patrizia Campolongo, Filippo Drago, Andrea Fagiolini,
Gian Marco Leggio, Maria Morena, Gustavo Provensi





14.00 | 16.00

SIF-Farindustria Symposium - Value of pharmaceutical industry for innovation and sustainability

Chairpersons: Giuseppe Caruso, Giuseppe Cirino

14.00 | 14.15

Innovative methodologies in clinical research to ensure rapid access to therapy

Loredana Bergamini

14.15 | 14.30

Quality of scientific data in clinical

Anna Maria Porrini

14.30 | 14.45

Patient centrality and therapeutic needs

Mario Mangrella

14.45 | 15.00

Treatment pathways and impact of chronicity

Gaia Panina

15.00 | 15.15

Innovation, new technologies and digital therapies for patient care

Domenico Valle

15.15 | 15.30

Scientific communication to consolidate trust in the pharmaceutical industry

Laura Franzini

15.30 | 16.00

General discussion "Value of pharmaceutical industry for innovation and sustainability"

Chairpersons: Giorgio Racagni, Marco Zibellini

Participants: Annalisa Capuano, Nello Martini, Gaia Panina, Gianluca Trifirò, Domenico Valle





14.00 | 16.00

Scientific session

New possible pharmacological targets for the treatment of obesity and metabolic syndrome

Chairpersons: Silvana Gaetani, Maria Vittoria Micioni Di Bonaventura

14.00 | 14.30

Emerging aspects of pharmacotherapy for obesity

Enzo Nisoli

14.30 | 14.45

Cross-talk between endothelial and metabolic mediators highlights potential targets for treatment of metabolic syndrome and its cardiovascular complication

Monica Montagnani

14.45 | 15.00

Pharmacological targeting of key proximal drivers of metaflammation in diet-induced metabolic diseases

Massimo Collino

15.00 | 15.15

Effects of oleoylethanolamide in a rat model of diet-induced obesity: from the modulation of microbiota to neuroprotective properties

Adele Romano

15.15 | 15.30

Herbal preparations for weight loss and weight of clinical evidence

Annabella Vitalone

15.30 | 16.00

General Discussion "New possible pharmacological targets for the treatment of obesity and metabolic syndrome"

Massimo Collino, Silvana Gaetani, Maria Vittoria Micioni Di Bonaventura, Monica Montagnani, Enzo Nisoli, Adele Romano, Annabella Vitalone





16.00 | 17.30

Scientific session

**New trends in hereditary rare channelopathies:
complex genetics, phenotype heterogeneity
and precision medicine**

Chairpersons: Paola Imbrici, Francesco Miceli

16.00 | 16.15

**Novel therapeutic options for myotonia: from pharmacogenetics
to drug repurposing**

Concetta Altamura

16.15 | 16.30

**Novel clinical phenotypes and pharmacological treatment
of Kv7-related disorders**

Francesco Miceli

16.30 | 16.45

SOCE channelopathies: a focus on Tubular Aggregate Myopathy

Elena Conte

16.45 | 17.00

**Cardiac channelopathies and familial cardiomyopathies:
different genes, similar threats**

Elisabetta Cerbai

17.00 | 17.15

**Pharmacological approaches to correct the chloride
secretion defect in cystic fibrosis**

Luis Galletta

17.15 | 17.30

**General discussion "New trends in hereditary rare channelopathies:
complex genetics, phenotype heterogeneity and precision medicine"**

*Concetta Altamura, Elisabetta Cerbai, Elena Conte, Luis Galletta, Paola Imbrici,
Francesco Miceli*





14.00 | 15.30

Scientific session

**Early synaptic failure:
from developmental to age related diseases**

Chairpersons: Paolo Calabresi, Monica Di Luca

14.00 | 14.15

Dystonia: a neurodevelopmental network disorder

Antonio Pisani

14.15 | 14.30

Neuroinflammation and synaptic function in experimental multiple sclerosis

Massimiliano Di Filippo

14.30 | 14.45

**CAP2 in the synapse: new insights into the role of actin
cytoskeleton in Alzheimer's Disease**

Silvia Pelucchi

14.45 | 15.00

**Synaptic dysfunctions in neurodevelopmental disorders:
lessons from fragile X syndrome**

Maria Vincenza Catania

15.00 | 15.15

**Transient Maternal IL-6 boosts glutamatergic synapses
and disrupts hippocampal connectivity in the offspring**

Davide Pozzi

15.15 | 15.30

**General discussion "Early synaptic failure:
from developmental to age related diseases"**

*Paolo Calabresi, Maria Vincenza Catania, Massimiliano Di Filippo, Monica Di Luca,
Silvia Pelucchi, Antonio Pisani, Davide Pozzi*





15.30 | 17.00

Scientific session

**Targeting purinergic receptors
to promote damage resolution
and repair in neurodegenerative diseases**

Chairpersons: Felicita Pedata, Patrizia Popoli

15.30 | 15.45

Targeting adenosine tone in Niemann Pick type C Disease

Antonella Ferrante

15.45 | 16.00

**Adenosine orchestrates oligodendroglialogenesis and myelination *in vitro*:
focus on A_{2A} and A_{2B} receptors**

Elisabetta Coppi

16.00 | 16.15

**Investigating microglia and oligodendroglial progenitors interactions
for myelin repair in brain ischemia**

Marta Fumagalli

16.15 | 16.30

**Extracellular vesicles released by microglia in early synaptic dysfunction
in Alzheimer's disease**

Claudia Verderio

16.30 | 16.45

**Abnormal up-regulation of P2Y-like receptor GPR17 contributes
to oligodendrocyte dysfunction in a murine model of ALS**

Stefano Raffaele

16.45 | 17.00

**General discussion "Targeting purinergic receptors to promote
damage resolution and repair in neurodegenerative diseases"**

Elisabetta Coppi, Antonella Ferrante, Marta Fumagalli, Felicita Pedata, Patrizia Popoli,
Stefano Raffaele, Claudia Verderio





14.00 | 15.30

Scientific session

**(R)evolution of cancer therapy:
are we ready to identify and manage
the new safety features?**

Chairpersons: Annalisa Capuano, Giuseppe Pimpinella, Francesco Rossi

14.00 | 14.15

**How much reliable is to explore safety and efficacy
of new drugs in real world**

Carmen Ferrajolo

14.15 | 14.30

**Tisagenlecleucel in Children and Young Adults: reverse translational
research through the analysis of real-world safety data**

Concetta Rafaniello

14.30 | 14.45

**Promise and challenge of Mutational Tumor Board in efficacy
and safety evaluation**

Marzia Del Re

14.45 | 15.15

Checkpoint inhibitor: neurotoxicity and cardiotoxicity

Cristina Scavone, Liberata Sportiello

15.15 | 15.30

**General discussion "(R)evolution of cancer therapy:
are we ready to identify and manage the new safety features?"**

*Annalisa Capuano, Marzia Del Re, Carmen Ferrajolo, Giuseppe Pimpinella,
Concetta Rafaniello, Francesco Rossi, Cristina Scavone, Liberata Sportiello*

15.30 | 16.00

Lecture

**Druggable targets meet oncogenic drivers:
opportunities of target-based classification
of tumors and the role of institutional
Precision Oncology Support Team**

Chairperson: Romano Danesi

Speaker: Pierfranco Conte





16.00 | 17.30

**Round table - Cardiovascular prevention:
what European guidelines say
and how to apply in Italy**

Chairpersons: Alberico L. Catapano, Carlo Patrono

- **European guidelines on hypertension**
Giuseppe Mancia
- **The European guidelines on the control of dyslipidemias**
Manuela Casula
- **European guidelines on diabetes**
Bianca Rocca
- **European guidelines in cardiology**
Pasquale Perrone Filardi
- **General discussion "Cardiovascular prevention:
what European guidelines say and how to apply in Italy"**
Liberato Berrino, Manuela Casula, Alberico L. Catapano, Giuseppe Mancia,
Carlo Patrono, Pasquale Perrone Filardi, Bianca Rocca, Francesco Rossi





14.00 | 15.30

Scientific session

**Translational research openings for the cure
of Amyotrophic Lateral Sclerosis (ALS)**

Chairpersons: Giambattista Bonanno, Sabata Pierno

14.00 | 14.15

**Natural killer cells modulate motor neuron-immune cell cross talk
in models of Amyotrophic Lateral Sclerosis**

Cristina Limatola

14.15 | 14.30

***In-vitro* and *in-vivo* studies depict metabotropic glutamate
receptor 5 as a potential pharmacological target
to modulate disease progression in ALS**

Marco Milanese

14.30 | 14.45

**New therapeutic target in Amyotrophic Lateral Sclerosis:
focus on ion channels and skeletal muscle**

Sabata Pierno

14.45 | 15.00

**From dying back to saving back: how to restore the molecular interplay
between muscle and nerve in the Amyotrophic Lateral Sclerosis**

Antonio Musarò

15.00 | 15.15

Small heat shock proteins a potential therapeutic target for ALS

Angelo Poletti

15.15 | 15.30

**General discussion "Translational research openings for the cure
of Amyotrophic Lateral Sclerosis"**

*Giambattista Bonanno, Cristina Limatola, Marco Milanese, Antonio Musarò, Sabata Pierno,
Angelo Poletti*





15.30 | 17.00

Scientific session

Non-coding RNA based strategies in sporadic and familial neurodegenerative disorders

Chairpersons: Maria Pia Abbracchio, Lucio Annunziato

15.30 | 15.45

Endogenous neuroprotection and miRNA signature: development as theranostic tool

Giuseppe Pignataro

15.45 | 16.00

TPD43 and its fragments in extracellular vesicle. Is there a link with Amyotrophic Lateral Sclerosis (ALS) pathogenesis?

Valeria Crippa

16.00 | 16.15

Characterization of a novel miRNA involved in myelination: a new potential pathogenetic mechanism in multiple sclerosis

Davide Lecca

16.15 | 16.30

miR-206 as modulator of Motor Neuron Degeneration in Spinal Muscular Atrophy (SMA)

Valeria Valsecchi

16.30 | 16.45

Nanotechnology strategies for miRNA exploitation in neurological disorders

Giuseppe De Rosa

16.45 | 17.00

General discussion "Non-coding RNA based strategies in sporadic and familial neurodegenerative disorders"

Maria Pia Abbracchio, Lucio Annunziato, Valeria Crippa, Giuseppe De Rosa, Davide Lecca, Giuseppe Pignataro, Valeria Valsecchi





11.30 | 12.00

**Plenary lecture: Vaccines and monoclonals
to regain our freedom**

Chairperson: Luca Pani

Speaker: Rino Rappuoli

12.00 | 13.30

**Round table: Anti-COVID vaccines
and new therapeutics avenues**

Chairpersons: Giorgio Cantelli Forti, Luca Pani

Participants: Giovambattista De Sarro, Massimo Galli, Antonio Gaudioso, Giuseppe Ippolito,
Giuseppe Nocentini, Giorgio Palù, Walter Ricciardi, Massimo Scaccabarozzi





10.00 | 11.00

Scientific session

Innovation in narcolepsy ESD and in OSA

Chairpersons: Carlo Cifani, Giorgio Racagni

10.00 | 10.15

Drugs providing wakefulness: pharmacological classification

Ferdinando Nicoletti

10.15 | 10.30

**Excessive Daytime Sleepiness in narcolepsy patients:
disease definition and new treatment perspectives**

Giuseppe Plazzi

10.30 | 10.45

**Excessive Daytime Sleepiness in OSAS patients:
disease definition and new treatment perspectives**

Luigi Ferini Strambi

10.45 | 11.00

General discussion "Innovation in narcolepsy ESD and in OSA"

Carlo Cifani, Luigi Ferini Strambi, Ferdinando Nicoletti, Giuseppe Plazzi, Giorgio Racagni





14.30 | 16.00

Scientific session

**When the interaction leads to dysfunction:
new perspectives for therapeutic intervention
in Neurodegenerative Diseases**

Chairpersons: Maria Del Zompo, Antonella Scorziello

14.30 | 14.45

**Pharmacological approaches to aberrant TDP-43 phosphorylation
in disease**

Emanuele Buratti

14.45 | 15.00

**Neuronal microtubules and proteins linked to Parkinson's disease:
a relevant interaction?**

Graziella Cappelletti

15.00 | 15.15

**New insight for striatal astrocyte-neuronintercellular communications:
the A2A-D2 interaction**

Manuela Marcoli

15.15 | 15.30

**Kv3.4 potassium channels and Abeta1-42 interaction: a new potential
mechanism for neuroinflammation in AD**

Anna Pannaccione

15.30 | 16.00

**General discussion "When the interaction leads to dysfunction:
new perspectives for therapeutic intervention in
Neurodegenerative Diseases"**

*Emanuele Buratti, Graziella Cappelletti, Maria Del Zompo, Manuela Marcoli,
Anna Pannaccione, Antonella Scorziello*



16.00 | 17.00

Scientific session

**A new approach to the
inflammatory response in
patients with COVID19 pneumonia**

16.00 | 16.30

**Recent advances in the characterization of a new class
of IL-8 chemokine inhibitor**

Marcello Allegretti

16.30 | 17.00

First clinical evidence and potential fields of application of IL-8 inhibitors

Flavio Mantelli

17.30 | 18.30

**Round table: Narcolepsy
and impact on quality of life,
how to recognize and treat it**

Chairperson: Laura Berti

17.30 | 17.40

Institutional greetings

17.40 | 18.00

Sleep disorders

Giuseppe Plazzi

18.00 | 18.30

Final discussion with Patients Association AIN

Fabiola Bologna, Patrizio Ceretelli, Massimo Zenti





10.00 | 11.00

Scientific session

**The three XXI century virus:
their management, control and eradication**

Chairperson: Barbara Rebesco

10.00 | 10.15

HCV: towards the elimination of the virus

Salvatore Petta

10.15 | 10.30

The management of the chronicity of the HIV virus: PNAIDS

Massimo Galli

10.30 | 10.45

**COVID-19: strategies for clinical and health control
of a global viral pandemic**

Massimo Andreoni

10.45 | 11.00

**General discussion “The three XXI century virus: their management,
control and eradication”**

Massimo Andreoni, Massimo Galli, Salvatore Petta, Barbara Rebesco





14.30 | 16.00

Scientific session

**Translational Pharmacology
in Disease-induced depression:
from genes to hard-data to therapy**

Chairpersons: Nicoletta Brunello, Marco A. Riva, Fabio Tascedda

14.30 | 14.45

Translational pharmacology in Depression from hard-data to real drugs

Luca Pani

14.45 | 15.00

Inflammation and depression

Cristina Benatti

15.00 | 15.15

Alzheimer-related depression: perspectives for drug development

Filippo Caraci

15.15 | 15.30

**Chronic stress exposure affects cognitive performance:
searching for the underlying molecular mechanisms**

Paola Brivio

15.30 | 15.45

Chronic pain induced neuropsychiatric changes

Livio Luongo

15.45 | 16.00

**Drugs of abuse-induced negative emotional state: interaction between
serotonin and glutamate in the transition toward addiction**

Lucia Caffino





16.00 | 18.00

**Intercompany symposium
with Round table on
Antimicrobials - Healthcare-related
infections sustained
by MDR Gram negative bacteria**

Chairpersons: Francesco Scaglione

16.00 | 16.15

**The correct interpretation of phenotypic and genotypic tests
as drivers for precision medicine**

Stefania Stefani

16.15 | 16.30

**PK/PD profiles of optimal therapeutic options for the treatment
of Gram negative bacterial infections**

Francesco Scaglione

16.30 | 18.00

**Round table: The correct place in therapy in the practical and clinical
management of patients with MDR Gram negative bacterial infections**

Chairpersons: Giorgio Racagni, Francesco Scaglione

Participants: Antonino Giaratano, Filippo Pieralli, Stefania Stefani, Pierluigi Viale





10.00 | 11.00

Scientific session

WARNING ON:

**The value of plasma-derived therapies:
immunoglobulins as essential drugs**

Chairperson: Pier Luigi Canonico

10.00 | 10.20

**Key economic and value considerations for Plasma-Derived Medicinal
Products (PDMPs) in Europe**

Tomasz Kluszczynski

10.20 | 11.00

**Round table "The value of plasma-derived therapies: immunoglobulins
as essential drugs"**

Chairperson: Pier Luigi Canonico

Participants: Vincenzo De Angelis, Domenico Di Giorgio, Claudio Jommi, Isabella Quinti,
Oliver Schmitt, Alessandro Segato





14.30 | 16.00

Scientific session

Novel drugs and therapies for rare genetic pediatric diseases

Chairpersons: Annamaria De Luca, Alberto Tommasini

14.30 | 14.45

Personalized therapies for developmental encephalopathies

Maurizio Tagliatela

14.45 | 15.00

Exon skipping therapies with antisense oligonucleotides in spinal muscular atrophy and Duchenne muscular dystrophy

Eugenio Mercuri

15.00 | 15.15

Therapeutic innovations for rare genetic autoinflammatory pediatric diseases

Stefano Volpi

15.15 | 15.30

Biomarkers and precision therapy for primary immunodeficiencies: an *in vitro* study based on induced pluripotent stem cells from patients

Elena Genova

15.30 | 15.45

Innovative therapies for atypical hemolytic uremic syndrome

Gianluigi Ardissino

15.45 | 16.00

General discussion

Gianluigi Ardissino, Annamaria De Luca, Elena Genova, Eugenio Mercuri, Maurizio Tagliatela, Alberto Tommasini, Stefano Volpi





16.00 | 17.00

Scientific session

New development in neuroimmunology

Chairperson: Pier Luigi Canonico

16.00 | 16.20

Differences between optic neuromyelitis and multiple sclerosis from a diagnostic-clinical point of view

Luca Massacesi

16.20 | 16.40

Differential pharmacological and therapeutic aspects between optic neuromyelitis and multiple sclerosis

Ferdinando Nicoletti

16.40 | 17.00

General discussion "New development in neuroimmunology"

Pier Luigi Canonico, Luca Massacesi, Ferdinando Nicoletti





10.00 | 11.00

Scientific session

**Tackling progression of Multiple Sclerosis:
from pathogenesis of neurodegeneration
to therapeutic opportunities**

Chairpersons: Diego Centonze, Alberto Chiarugi

10.00 | 10.15

**An overview of multiple sclerosis progression between causes
and treatments**

Marco Salvetti

10.15 | 10.30

In search for biomarkers of multiple sclerosis progression

Roberto Furlan

10.30 | 10.45

**Therapeutic approaches targeting inflammatory synaptopathy
in multiple sclerosis**

Diego Centonze

10.45 | 11.00

**Innovative pharmacological approaches to tackle progression
in a mouse model of multiple sclerosis**

Daniela Buonvicino





14.30 | 16.00

SIF-Egualia Symposium “The Added Value to Health: medicines, health and innovation, the new frontiers of value added medicines”

Chairperson: Irma D’Aria

14.30 | 14.45

AIFA: AIFA’s guidelines for price and reimbursement of medicines in Italy, a focus on value added evaluation

Giuseppe Traversa

14.45 | 15.00

Syreon Research Institute: A core evaluation framework for value added medicines (VAMs)

Zoltan Kalò

15.00 | 15.15

IQVIA Solutions Italy: Value Added Medicines (VAMs) classification in Italy

Carlo Salvioni

15.15 | 16.00

Rounde table “The Added Value to Health: medicines, health and innovation, the new frontiers of value added medicines”

Chairperson: Irma D’Aria

Participants: Zoltan Kalò, Francesco Saverio Mennini, Carlo Salvioni, Geremia Secli, Giuseppe Traversa, Gianluca Trifirò





16.00 | 18.00

Scientific session

Nutraceuticals: clinical efficacy and safety

Chairpersons: Carla Ghelardini, Orlando Giustino

16.00 | 16.15

Probiotics in gastrointestinal and liver diseases

Stefano Fiorucci

16.15 | 16.30

Amino acid supplements and health: clinical evidence

Enzo Nisoli

16.30 | 16.45

**The clinical efficacy and safety of plant-derived products:
the experience with "SIF Farmaci in evidenza"**

Lara Testai

16.45 | 17.00

**Surveillance of plant-derived preparations:
an overview on the Italian experience**

Gioacchino Calapai

17.00 | 17.15

**Adverse drug reactions to herbal extracts used
for overweight and obesity**

Silvia Di Giacomo

17.15 | 17.30

Adverse events due to inadequate control quality of dietary supplements

Ilaria Carnevali

17.30 | 18.00

General discussion "Nutraceuticals: clinical efficacy and safety"

Gioacchino Calapai, Ilaria Carnevali, Silvia Di Giacomo, Stefano Fiorucci, Carla Ghelardini, Orlando Giustino, Enzo Nisoli, Lara Testai





14.30 | 16.00

Round table: druggable targets meet oncogenic drivers: the role of Tumor Molecular Boards in Precision Oncology

Chairperson: Marzia Del Re

Participants: Ettore Capoluongo, Patrizia Popoli, Giancarlo Pruneri, Antonio Russo, Daniela Turchetti

16.00 | 18.00

Scientific session

State of the art and perspectives in cancer pharmacology (II)

Chairpersons: Romano Danesi, Amelia Filippelli

16.00 | 16.15

Pharmacogenetic biomarkers of cancer drug toxicity

Giuseppe Toffoli

16.15 | 16.30

Cancer transcriptomic profiles as biomarkers of resistance to drug treatment: from bench to bedside

Stefania Nobili

16.30 | 16.45

Soluble biomarkers of the third millennium

Rosalinda Sorrentino

16.45 | 17.00

Therapeutic drug monitoring in oncology

Antonio D'Avolio

17.00 | 17.15

Artificial intelligence in data mining for the discovery of biomarkers

Marzia Del Re

17.15 | 17.30

Cardio-Oncology

Giorgio Minotti

17.30 | 18.00

General discussion "State of the art and perspectives in cancer pharmacology"

Antonio D'Avolio, Romano Danesi, Marzia Del Re, Amelia Filippelli, Giorgio Minotti, Stefania Nobili, Giuseppe Toffoli





10.00 | 11.00

Round table: therapeutic needs in pediatric pharmacology

Chairpersons: Viviana Giannuzzi, Gabriele Stocco

- **Introduction to therapeutic needs in paediatrics and role of pharmacology to address them**
Viviana Giannuzzi
- **Children are not little adults: what are we learning from COVID19 disease and therapy**
Giuseppe Indolfi
- **Therapeutic need lists from the European Medicines Agency**
Francesca Rocchi
- **From symptoms to molecular signatures: the contribution of pharmacopigenomics to precision therapies of paediatric inflammatory diseases**
Marianna Lucafo
- **Palliative therapies for children: where we are now and updates on therapeutic needs**
Franca Benini





14.30 | 16.00

Scientific session

Heart failure: anything new on the horizon?

Chairpersons: Elisabetta Cerbai, Francesco Rossi

14.30 | 14.45

Heart failure story: the parallel paths of concept evolution and therapeutic opt

Konrad Urbanek

14.45 | 15.00

Cardio-renal axis and heart failure: new pharmacological targets

Antonella Liantonio

15.00 | 15.15

Current understanding of myocardial regeneration: friend or foe?

Eleonora Cianflone

15.15 | 15.30

Precision medicine: personalized therapy in arrhythmic heart

Raffaele Coppini

15.30 | 15.45

Emerging role of steroids in the failing heart

Stefano Bruscoli

15.45 | 16.00

General discussion "Heart failure: anything new on the horizon?"

Stefano Bruscoli, Elisabetta Cerbai, Raffaele Coppini, Antonella Liantonio, Francesco Rossi, Konrad Urbanek





16.00 | 17.30

Scientific session

As time goes by: ageing and the heart

Chairpersons: Liberato Berrino, Annamaria De Luca

16.00 | 16.15

When the heart and brain get old: ageing and heart failure

Silvana Gaetani

16.15 | 16.30

Inflammaging as a new actor on cardiovascular disease stage

Raffaele De Palma

16.30 | 16.45

Epigenetic processing in cardiometabolic disease

Sarah Costantino

16.45 | 17.00

New panacea for heart failure? The case of neprilysin

Donato Cappetta

17.00 | 17.15

The value of nutraceuticals for the cardiovascular ageing

Vincenzo Calderone

17.15 | 17.30

The future of cardiovascular clinical Research

Marco Scatigna





11.30 | 12.00

**Plenary lecture:
University and Research**

Chairpersons: Giuseppe Cirino

Speaker: Gaetano Manfredi

12.00 | 13.30

**Round table: The University
and Life Science Research: what's next?**

Chairperson: Liberato Berrino, Maurizio Tagliatela

Participants: Giuseppe Banfi, Salvatore Cuzzocrea, Romano Danesi, Maurizio de Cicco, Amelia Filippelli, Patrizia Hrelia, Angela Ianaro, Dario Manfredotto, Francesca Pasinelli





10.00 | 11.00

Scientific session

**Substance use disorder across life:
from neurobiological mechanisms
to new pharmacological treatments**

Chairpersons: Roberto Ciccocioppo, Fabio Fumagalli

10.00 | 10.12

**Developmental exposure to cocaine influences its reward
properties in adulthood**

Fabio Fumagalli

10.12 | 10.24

**Detrimental effects of the abused 'bath salt'
Methylenedioxypyrovalerone on social behavior in juvenile rats**

Viviana Trezza

10.24 | 10.36

**Polydrug abuse to MDMA and ethanol induces specific changes
in opioid system: behavioural and molecular studies in mSP rats**

Laura Rullo

10.36 | 10.48

**Individual trajectory to development of substance use disorders:
Focus on opioids and psychostimulants**

Nazzareno Cannella

10.48 | 11.00

**General discussion "Substance use disorder across life:
from neurobiological mechanisms to new pharmacological treatments"**

Nazzareno Cannella, Roberto Ciccocioppo, Fabio Fumagalli, Laura Rullo, Viviana Trezza

14.30 | 15.00

Lecture

**Adherence therapy
with antidepressants**

Speaker: Luca Pani

Con la sponsorizzazione di





15.00 | 16.30

Scientific session

Gut microbiota-brain-immune axis: emerging evidence for a role in neurological conditions

Chairpersons: Pasquale Striano, Annamaria Vezzani

15.00 | 15.15

Gut microbiota -brainimmune axis in neurological/neuropsychiatric disorders: clinical evidence

Pasquale Striano

15.15 | 15.30

Neuroinflammation and gut microbiota: alternative therapeutic targets for Alzheimer's disease?

Claudia Balducci

15.30 | 15.45

Intestinal inflammation, seizures and antiepileptic drug efficacy

Carmen De Caro, Emilio Russo

15.45 | 16.00

Altered gut microbiota and endocannabinoid system in chronic pain

Francesca Guida

16.00 | 16.15

Organ-On-A-Chip *in vitro* Models to study the Microbiota-Gut-Brain Axis in neurodegeneration

Carmen Giordano

16.15 | 16.30

General discussion "Gut microbiota-brain-immune axis: emerging evidence for a role in neurological conditions"

Claudia Balducci, Carmen Giordano, Francesca Guida, Pasquale Striano, Annamaria Vezzani





10.00 | 11.00

Scientific session

**The certification in Pharmacology:
the Italian way**

Chairpersons: Filippo Drago, Thomas Griesbacher

10.00 | 10.12

**From Paracelsus to the Certified Pharmacologist: 400 years of experience
in innovation and improvement of research and clinical practice**

Filippo Drago

10.12 | 10.24

**The experience of the Institute of Pharmacological Sciences of Italian
Switzerland (ISFSI): a network of professionals for a better application
of Clinical Pharmacology**

Alessandro Ceschi

10.24 | 10.36

**From the laboratory counter to the patient's bed: when the pharmacologist
experience expedites research and development of new drugs**

Aletta Kraneweld

10.36 | 10.48

**The EuCP Program: current tools, institutions and experiences that
facilitate the networking of skills and careers for young pharmacologists**

Thomas Griesbacher

10.48 | 11.00

General discussion "The certification in Pharmacology: the Italian way"

Alessandro Ceschi, Filippo Drago, Thomas Griesbacher, Aletta Kraneweld





14.30 | 17.00

Scientific session

The role of Real-World Evidence for the holistic health management and research: the SIF -RWE Consensus Document

Chairpersons: Nello Martini, Giorgio Racagni

14.30 | 14.50

From Consensus Document to proposals and studies in different areas

Nello Martini

14.50 | 15.05

RWE as strategy for the chronic diseases and multimorbidity management to support health regional planning

Giovanni Corrao

15.05 | 15.35

**RWE at the regulatory level: studies to define target population of new drugs
The case of CAR-T**

Antonio Addis

The case of metastatic breast cancer HR+/HER2-

Antonella Pedrini

15.35 | 15.50

RWE at the regulatory level: Post-marketing RWE studies to define the risk/benefit profile of drugs

Gianluca Trifirò

15.50 | 16.05

RWE for the governance of care processes: integrated costs to overcoming silos budget

Carlo Piccinni

16.05 | 16.20

RWE in fragile population studies: the example of "RIMEDIO" protocol on the drug appropriateness in polytreated patients

Annalisa Capuano

16.20 | 16.35

RWE and industry perspective

Andrea Pierini

16.35 | 16.50

Discussion "The role of Real-World Evidence for the holistic health management and research: the SIF -RWE Consensus Document"

Antonio Addis, Annalisa Capuano, Giovanni Corrao, Nello Martini, Antonella Pedrini, Carlo Piccinni, Andrea Pierini, Giorgio Racagni, Gianluca Trifirò

16.50 | 17.00

Conclusion

Giorgio Racagni, Nello Martini





10.00 | 11.00

Scientific session

**Extended Release Calcifediol:
a combined approach to the Secondary
Hyperparathyroidism treatment**

Chairperson: Pier Luigi Canonico

10.00 | 10.20

**Lecture: The Pharmacology of Vitamin D compounds:
more complex than we thought**

Pierluigi Navarra

10.20 | 10.40

**Lecture: Mineral Bone Disorder treatment in
Chronic Kidney Disease stages 3-4**

Mario Cozzolino

10.40 | 11.00

**General discussion "Extended Release Calcifediol: a combined approach
to the Secondary Hyperparathyroidism treatment"**

Pier Luigi Canonico, Mario Cozzolino, Pierluigi Navarra





14.30 | 16.00

Scientific session

Frontiers in Immunomodulation

Chairperson: Simona Ronchetti

14.30 | 14.45

New molecular targets in T cell-mediated neuroinflammation

Oxana Bereshchenko

14.45 | 15.00

Adenosine receptor stimulation: a new hope for systemic sclerosis

Natasha Irrera

15.00 | 15.15

Efficacy of micronized n-palmitoyl-d-glucosamine in management of arthritis disease in a preclinical model

Enrico Gugliandolo

15.15 | 15.30

Immune dysregulation in cardiovascular disease - from novel mechanisms to therapeutic targeting

Pasquale Maffia

15.30 | 15.45

Immunopharmacological modulation in allergic diseases: can we be happier than we were?

Francesca Levi-Schaffer

15.45 | 16.00

General discussion "Frontiers in Immunomodulation"

Oxana Bereshchenko, Enrico Gugliandolo, Natasha Irrera, Francesca Levi-Schaffer, Pasquale Maffia, Simona Ronchetti





16.00 | 17.30

Scientific session

**New possible pharmacological targets
for the treatment of eating disorders**

Chairpersons: Carlo Cifani, Adele Romano

16.00 | 16.15

Emerging novel targets for the treatment of binge eating disorder

Maria Vittoria Micioni Di Bonaventura

16.15 | 16.30

**Preclinical studies of the severe eating disorder Anorexia Nervosa
in young female rats**

Paola Fadda

16.30 | 16.45

**Activity-based anorexia dysregulates peripheral and central stress
response in adolescent female rats**

Francesca Mottarlini

16.45 | 17.00

**Beyond hyphophagic action: a pas de deux between
oleoylethanolamide and histamine**

Gustavo Provensi

17.00 | 17.15

**Attentional and behavioral processes toward food in Eating Disorders:
research observations and clinical implications**

Enrico Collantoni

17.15 | 17.30

**General discussion "New possible pharmacological targets for the
treatment of eating disorders"**

*Carlo Cifani, Enrico Collantoni, Paola Fadda, Maria Vittoria Micioni Di Bonaventura,
Francesca Mottarlini, Gustavo Provensi, Adele Romano*





10.00 | 11.00

Scientific session

Precision medicine and pharmacological treatment of psychiatric disorders

Chairperson: Dario Cattaneo

10.00 | 10.15

Therapeutic drug monitoring of psychotropic drugs: utility and limitations

Dario Cattaneo

10.15 | 10.30

Pharmacogenetics of antidepressants and antipsychotics

Chiara Fabbri

10.30 | 10.45

How to manage multiple drug therapy

Edoardo Spina

10.45 | 11.00

General discussion "Precision medicine and pharmacological treatment of psychiatric disorders"

Dario Cattaneo, Chiara Fabbri, Edoardo Spina





14.30 | 17.00

Scientific session

Pharmacology Teaching: pitfalls and opportunities

Chairpersons: Amelia Filippelli, Maurizio Tagliatela

14.30 | 14.45

Teaching to Medical Students

Guido Fumagalli, Giorgio Minotti, Maurizio Tagliatela

14.45 | 15.00

Teaching to Pharmacy students - Combining transmissive and transactional didactics: changing the roles and the rules

Marco Racchi, Stefano Govoni

15.00 | 15.15

Teaching to Biological Sciences and Biotechnology Students

Susanna Cotecchia

15.15 | 15.30

Teaching to Residents (Medical and non-Medical)

Amelia Filippelli, Francesco Squadrito, Giuseppe Toffoli

15.30 | 15.45

Teaching to Master and other post-graduate students

Alberto Corsini

15.45 | 16.30

Comparative analysis of Medical Pharmacology teaching between Italy and US

15.45 | 16.00

Cooperative agreement and double medical degree

Raffaele Landolfi

16.00 | 16.15

Transitioning from a free-standing course to an integrated curriculum

Emma Meagher

16.15 | 17.00

Round table and Final remarks

Giuseppe Cirino, Alberto Corsini, Susanna Cotecchia, Amelia Filippelli, Guido Fumagalli, Stefano Govoni, Raffaele Landolfi, Emma Meagher, Giorgio Minotti, Marco Racchi, Francesco Squadrito, Maurizio Tagliatela, Giuseppe Toffoli





14.30 | 15.30

Scientific session

New targets for pain eradication

Chairpersons: Livio Luongo, Romina Nassini

14.30 | 14.42

Anti-VEGFR1 immunoblocking relieves neuropathic pain

Laura Micheli

14.42 | 14.54

Pain and frailty: the effect of morphine treatment in aged mice

Giada Amodeo

14.54 | 15.06

Role of N-acylethanolamines in the hippocampal plasticity in neuropathic pain

Serena Boccella

15.06 | 15.18

Macrophages and glial cells of peripheral nerves drive chronic pain

Francesco De Logu

15.18 | 15.30

General discussion "New targets for pain eradication"

Giada Amodeo, Serena Boccella, Francesco De Logu, Pierangelo Geppetti, Livio Luongo, Romina Nassini

15.30 | 16.30

Scientific session

Strategies for the therapy of visceral hypersensitivity

Chairpersons: Lorenzo Di Cesare Mannelli, Giuseppe Esposito

15.30 | 15.45

Role of enteric glia as bridging element between acute gut inflammation and chronic visceral pain

Luisa Seguela

15.45 | 16.00

Visceral pain: is the immune system a potential target?

Carolina Pellegrini

16.00 | 16.15

Does manipulating the gut microbiota hold the key to visceral pain relief?

Elena Lucarini

16.15 | 16.30

General discussion "Strategies for the therapy of visceral hypersensitivity"

Lorenzo Di Cesare Mannelli, Giuseppe Esposito, Elena Lucarini, Carolina Pellegrini, Luisa Seguela





16.30 | 17.30

Scientific session

Pain and Opioids: from preclinical news to clinical perspectives

Chairpersons: Guido Mannaioni, Patrizia Romualdi

16.30 | 16.45

Characterization of Chronic Administration of Biased MOR Agonists in Mouse Pain Models

Laura M. Bohn

16.45 | 17.00

Pharmacological treatment of prescription opioid use disorder

Cecilia Lanzi

17.00 | 17.15

Safe opioid prescribing for chronic pain: risk assessment

Flaminia Coluzzi

17.15 | 17.30

General discussion "Pain and Opioids: from preclinical news to clinical perspectives"

Laura M. Bohn, Flaminia Coluzzi, Cecilia Lanzi, Guido Mannaioni, Patrizia Romualdi





10.30 | 11.00

Scientific session

**An alternative perspective
in approaching Rare Disease:
the Complement involvement**

Chairperson: Fabio Ciceri

10.30 | 10.45

Lecture: Perspective in PNH (Paroxysmal nocturnal hemoglobinuria)

Simona Sica

10.45 | 11.00

Lecture: Perspective in Neurology

Francesco Sacca

14.30 | 16.00

**Round table SIF-Assobiotech. Clinical trials in Italy:
focus on advanced therapies medicinal products**

Chairpersons: Liberato Berrino, Riccardo Palmisano

*Participants: Massimo Cardillo, Valentino Confalone, Paola Di Matteo, Luigi Naldini,
Cristiana Perrotta, Sandra Petraglia, Carlo Petri, Francesco Ripa di Meana*





16.00 | 18.00

Scientific session

**Pharmacogenetics in personalized therapy:
the impact of big data and artificial intelligence**

Chairpersons: Sabrina Angelini, Diego Fornasari

16.00 | 16.15

Pharmacogenomics and circulating tumor DNA to refine multi-modality treatment in locally advanced rectal cancer

Erika Cecchin

16.15 | 16.30

Tumor Heterogeneity in Endometrial Carcinoma: the contribute of omics for personalized medicine

Gloria Ravegnini

16.30 | 16.45

The pharmacogenomics of episodic and chronic migraine

Sarah Cargnin

16.45 | 17.00

The promise and hurdles of multi omic data to predict response to antidepressants treatment

Alessio Squassina

17.00 | 17.15

Pharmacogenetics of antipsychotic drugs

Alessandra Napoli

17.15 | 17.30

Cardiovascular pharmacogenomics

Valeria Conti

17.30 | 18.00

General discussion "Pharmacogenetics in personalized therapy: the impact of big data and artificial intelligence"

Sabrina Angelini, Sarah Cargnin, Erika Cecchin, Valeria Conti, Diego Fornasari, Alessandra Napoli, Gloria Ravegnini, Alessio Squassina





11.00 | 11.30

Special event:
Speech from Prof.ssa Maria Cristina Messa,
Ministry of University and Research

Chairperson: Giorgio Racagni

Speaker: Maria Cristina Messa

11.30 | 12.00

Plenary lecture:
Transformative genetic and cellular therapy

Chairperson: Francesco Rossi

Speaker: Franco Locatelli

12.00 | 13.30

Round table:
Innovation and sustainability

Chairpersons: Annamaria De Luca, Marco Pistis

Participants: Carlo Bianciardi, Giambattista Bonanno, Francesco De Santis, Filippo Drago,
Patrizia Popoli, Giuseppe Remuzzi, Giovanna Scroccaro





14.30 | 16.30

Scientific session

**New insights in Autism Spectrum Disorders:
from basic science to novel therapeutic approaches**

Chairpersons: Flavia Antonucci, Viviana Trezza

14.30 | 14.45

**Coordination between excitatory and inhibitory synaptic plasticity
in an animal model of autism**

Andrea Barberis

14.45 | 15.00

**The electrophysiological investigation of disease animal models unveils
new amenable targets for the treatment of autism spectrum disorder**

Alessio Masi

15.00 | 15.15

**Testing positive allosteric modulation of mGluR5 in preclinical models
of CDKL5 deficiency disorder**

Maurizio Giustetto

15.15 | 15.30

mGlu5 receptor signaling alteration in Phelan McDermid syndrome

Chiara Verpelli

15.30 | 15.45

Repositioning of Mirtazapine as a treatment of Rett syndrome

Enrico Tongiorgi

15.45 | 16.00

**Modulation of microglia-neuron crosstalk as a possible target
for autism spectrum disorder**

Erica Zamberletti

16.00 | 16.30

**General discussion "New insights in Autism Spectrum Disorders:
from basic science to novel therapeutic approaches"**

*Flavia Antonucci, Andrea Barberis, Maurizio Giustetto, Alessio Masi, Enrico Tongiorgi,
Viviana Trezza, Chiara Verpelli, Erica Zamberletti*





10.00 | 11.00

Scientific session

Therapeutic management of the main neuromuscular diseases

Chairperson: Patrizia Popoli

10.00 | 10.15

New pharmacological approaches in neuromuscular therapies

Annamaria De Luca

10.15 | 10.30

New therapeutic approaches in SMA

Enrico S. Bertini

10.30 | 10.45

Advances therapies in Duchenne

Claudio Bruno

10.45 | 11.00

General discussion "Therapeutic management of the main neuromuscular diseases"

Enrico S. Bertini, Claudio Bruno, Annamaria De Luca, Patrizia Popoli

14.30 | 16.00

Round table: Pharmacological evolution between efficacy and sustainability

Chairperson: Pier Luigi Canonico

Participants: Americo Cicchetti, Antonio Gaudio, Francesco Perrone, Andrea Pierini, Giuseppe Pompilio





10.00 | 11.00

Scientific session

Advanced Therapies for Ocular Rare Diseases

Chairpersons: Claudio Bucolo, Filippo Drago

10.00 | 10.12

**Pharmacological approaches to retinitis pigmentosa:
a basic research perspective**

Enrica Stretto

10.12 | 10.24

Gene therapy for inherited retinal dystrophy: a clinical reality

Francesca Simonelli

10.24 | 10.36

Clinical therapy for acanthamoeba keratitis

Paolo Rama

10.36 | 10.48

Retinal pharmacological targets for Hermansky-Pudlak syndrome 7

Claudio Bucolo

10.48 | 11.00

General discussion “Advanced Therapies for Ocular Rare Diseases”

Claudio Bucolo, Filippo Drago, Paolo Rama, Settimio Rossi, Francesca Simonelli, Enrica Stretto





14.30 | 16.30

Scientific session

IUPHAR Mediterranean Group of Natural Products Pharmacology: highlights from a novel international community

Chairpersons: Mario Dell'Agli, Angelo A. Izzo

14.30 | 14.50

Presentation of IUPHAR Natural Products Section

Valérie B. Schini-Kerth

14.50 | 15.10

Presentation of IUPHAR Mediterranean Group

Gioacchino Calapai

15.10 | 15.30

Mediterranean Plants for human health: the roots for the future

Enrico Sangiovanni

15.30 | 15.50

Natural substances within the systems medicine evolutive platform

Jacopo Lucci

15.50 | 16.30

Rounde table IUPHAR Mediterranean Group of Natural Products Pharmacology

Gioacchino Calapai, Mario Dell'Agli, Angelo A. Izzo, Jacopo Lucci, Enrico Sangiovanni, Valérie B. Schini-Kerth





16.30 | 18.00

Scientific session

**Pharmacology and
physio-complex products:
the case of substance-based
medical devices**

Chairperson: Giorgio Racagni

16.30 | 16.35

Opening greetings

Giorgio Racagni

16.35 | 16.50

**The physiological action of natural substances to complement
the pharmacological approach in therapy**

Valentino Mercati

16.50 | 17.05

The regulatory context for certification

Nello Martini

17.05 | 17.15

Systems Biology for the study of the mechanism of action

Jacopo Lucci

17.15 | 17.30

Clinical evidence according to the principles of Systems Medicine

Andrea Cossu

17.30 | 17.40

The Pharmadvances publication

Marco Racchi

17.40 | 18.00

**Round table "Pharmacology and physio-complex products:
the case of substance-based medical devices"**

Chairpersons: Emiliano Giovagnoni, Giorgio Racagni

Participants: Andrea Cossu, Jacopo Lucci, Nello Martini, Valentino Mercati, Marco Racchi



10.30 | 11.00

Lecture

**Multifactorial inertia
as a barrier to the use
of pharmacological innovation in diabetes**

Chairperson: Gianluca Trifirò

Speaker: Antonio Nicolucci





14.30 | 16.30

Scientific session

The role of Real-World Evidence in healthcare emergency for informed drug regulatory decision making

Chairpersons: Nello Martini, Giorgio Racagni

Invited discussants: Lara Pippo, Janet Sultana

14.30 | 14.45

How RWE can be better incorporated in regulatory processes in post-SARS-COV-2 pandemic period: a worldwide regulatory perspective

Luca Pani

14.45 | 15.00

How RWE can be better incorporated in regulatory processes in post-SARS-COV-2 pandemic period: a regulatory perspective

Patrizia Popoli

15.00 | 15.15

How RWE can be better incorporated in regulatory processes in post SARS-COV-2 pandemic: an industry perspective

Giovanni Giuliani

15.15 | 15.30

Role of pharmacologists and RWE in healthcare emergency: the SIF expert document on RWE

Gianluca Trifirò

15.30 | 15.45

Assessment of role of medicines in prognosis of COVID-19 patients: an application of ITA-COVID database network

Stefania Spila Alegiani

15.45 | 16.00

How RWE can weight the indirect impacts of SARS-COV-2 pandemic: the case of acute coronary syndromes

Aldo P. Maggioni

16.00 | 16.30

Discussion and conclusion

Nello Martini, Giorgio Racagni





16.30 | 17.30

Round table:
Pharmaceutical Poverty

Chairpersons: Silvano Cella, Gianluca Trifirò

- **Current pharmacological treatment of type 2 Diabetes Mellitus in undocumented migrants: is it appropriate for the phenotype of the disease?**
Gianfrancesco Fiorini
- **Impact of respiratory diseases among the irregular migrants and low-income Italians during the SARS-COV-2 pandemic: analysis of drugs dispensations by Charities and comparison with the previous year**
Antonello E. Rigamonti
- **Impact of the Sars-Cov-2 pandemic on the healthcare for irregular migrants and low-income Italians. The experience of the NGO "Opera San Francesco per i Poveri"**
Annamaria Villa
- **Temporal changes in the prevalence of NCDs and co-morbidities among irregular migrants and low-income Italians by the analysis of drugs dispensations by Charities in the last 10 years**
Matteo Franchi





10.00 | 11.00

Scientific session

**Innovative medicines in oncology:
how to guarantee the recognition
of value and rapid access for patients"**

Chairperson: Alberto Corsini

10.00 | 10.20

Access, innovative drugs and "value" in Oncology

Carmine Pinto

10.20 | 10.40

Funds for innovative medicines: which options for a reform?

Claudio Jommi

10.40 | 11.00

**General discussion "Innovative medicines in oncology:
how to guarantee the recognition of value and rapid access
for patients"**

Alberto Corsini, Claudio Jommi, Carmine Pinto

14.30 | 15.00

Lecture

**New pharmacological perspective for the
treatment of diffuse large B-cell lymphoma**

Chairperson: Teresita Mazzei

Speaker: Mario Petrini



15.00 | 15.30

Lectures

**Innovative therapies for treating
advanced or unresectable
hepatocellular carcinoma (HCC):
from studies to clinical practice**

Speakers: Antonio Gasbarrini, Erika Martinelli





15.30 | 17.30

Scientific session

**State of the art and perspectives
in cancer pharmacology**

Chairpersons: Enrico Mini, Gianni Sava

15.30 | 15.45

Strategies for targeted cancer drug discovery and development

Ambra Grolla

15.45 | 16.00

Pharmacological strategies for targeting oncogene addiction

Alberta Bergamo

16.00 | 16.15

Pharmacological strategies for targeting tumor microenvironment

Marina Ziche

16.15 | 16.30

Pharmacological strategies for targeting immune networks in cancer

Giuseppe Nocentini

16.30 | 16.45

Drug repurposing in cancer research

Sandra Sigala

16.45 | 17.00

The Value Based Health Care concept in oncology

Giovanni Corrao

17.00 | 17.30

**General discussion "State of the art and perspectives
in cancer pharmacology"**

*Alberta Bergamo, Giovanni Corrao, Ambra Grolla, Enrico Mini, Giuseppe Nocentini,
Gianni Sava, Sandra Sigala, Marina Ziche*





14.30 | 16.00

Scientific session

Central and peripheral redox dysregulation and inflammation in neuropsychiatric disorders: from molecular targets to novel therapeutic opportunities

Chairpersons: Raffaella Molteni, Stefania Schiavone

14.30 | 14.45

Stress-induced modulation of inflammatory system and redox balance: relevance for psychiatric disorders and impact of pharmacological treatment

Raffaella Molteni

14.45 | 15.00

Redox dysregulation and drug-induced psychosis: unravelling new pathways and pharmacological targets

Maria Bove

15.00 | 15.15

Alteration of genes related to oxidative homeostasis in fast twitch muscles of socially isolated rats and implication of PGC1- α -FNDC5-IRISIN pathway

Giulia Maria Camerino

15.15 | 15.30

Future therapeutic strategies in Alzheimer's disease targeting oxidative stress and inflammation

Fabiana Morroni

15.30 | 15.45

Antioxidant and antiinflammatory activity of carnosine in experimental models of Alzheimer's disease

Giuseppe Caruso

15.45 | 16.00

General discussion "Central and peripheral redox dysregulation and inflammation in neuropsychiatric disorders: from molecular targets to novel therapeutic opportunities"

Maria Bove, Giulia Maria Camerino, Giuseppe Caruso, Raffaella Molteni, Fabiana Morroni, Stefania Schiavone





16.00 | 17.30

Round table

Preclinical animal research: do we meet EU standards?

Chairpersons: Giuliano Grignaschi, Ester Pagano

Participants: Maria Pia Abbraccio, Angela Ianaro, Marcello Raspa, Ugo Santucci

Conclusions

Micaela Morelli, Patrizia Romualdi





11.30 | 12.00

**Plenary lecture:
Inflammation, a metanarrative
from cancer to COVID-19**

Chairperson: Nicoletta Brunello

Speaker: Alberto Mantovani

12.00 | 13.30

Conclusions and Awards

Giorgio Racagni





10.00 | 11.30

Scientific session

**From medication review to deprescribing:
new strategies to improve a rationale
use of medicine**

Chairpersons: Emilio Clementi, Marco Tuccori

10.00 | 10.15

**Inappropriate prescribing in patients with multimorbidity and
polytherapy: definitions, epidemiological burden and clinical relevance**

Alessandro Nobili

10.15 | 10.30

Medication review: methodological aspects and role of the pharmacist

Fabrizio De Ponti, Elisabetta Poluzzi

10.30 | 10.45

**Pharmacological counseling and therapeutic reconciliation:
role of the clinical pharmacologist in the hospital setting**

Carla Carnovale

10.45 | 11.00

Deprescription: methodological aspects and role of physician

Simone Miozzo

11.00 | 11.15

Training/information for the stakeholders

Barbara Rebesco

11.15 | 11.30

**General discussion "From medication review to deprescribing:
new strategies to improve a rationale use of medicine"**

*Carla Carnovale, Emilio Clementi, Fabrizio De Ponti, Simone Miozzo, Alessandro Nobili,
Elisabetta Poluzzi, Barbara Rebesco, Marco Tuccori*





10.00 | 11.30

Scientific session

**Drugs in the environment: risk assessment,
regulatory landscape and future challenges**

Chairpersons: Patrizia Hrelia, Ugo Moretti

10.00 | 10.20

An introduction to environmental risk assessment of pharmaceuticals

Ettore Zuccato

10.20 | 10.40

The regulatory landscape of drugs in the environment

Jason Snape

10.40 | 11.30

Experts Opinion on future challenges of environmental risks of drugs

Adriano Pietrosanto, Andrea Tarozzi, Sara Villa





10.00 | 11.30

Scientific session

**Gender pharmacology and SARS-CoV-2:
a call for action**

Chairpersons: Andrea Cignarella, Elena Ortona

10.00 | 10.15

Gender analysis on COVID-19 data in Piemonte: the virus prefers men

Silvia De Francia

10.15 | 10.30

Inflammatory mediators in COVID-19 patients: a gender-based response?

Vincenzo Brancaleone

10.30 | 10.45

**Time length of negativization in COVID-19 patients:
a gender perspective in real world data**

Maria Grazia Morgese

10.45 | 11.00

Gender and autoimmunity: focus on COVID-19

Amelia Filippelli

11.00 | 11.15

COVID-19, RWE on drug utilization and gender

Andrea Spini

11.15 | 11.30

**General discussion "Gender pharmacology and SARS-CoV-2:
a call for action"**

*Vincenzo Brancaleone, Andrea Cignarella, Silvia De Francia, Amelia Filippelli,
Maria Grazia Morgese, Elena Ortona, Andrea Spini*





10.00 | 11.30

Scientific session

Tumor molecular board for cancer diagnosis and therapy: rationale and practice

Chairperson: Enrico Mini

10.00 | 10.30

Lecture: Tumor molecular board for cancer diagnosis and therapy: rationale and practice

Rodrigo Dienstmann

10.30 | 11.30

Intersociety Round table: "Cancer Pharmacology, quo vadis?"

Chairpersons: Giorgio Cantelli Forti, Carlo Riccardi

Participants: Emanuele Angelucci, Giordano Beretta, Antonello Di Paolo, Teresita Mazzei, Enrico Mini, Nicola Normanno



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Laura Rullo	Alma Mater Studiorum, Università di Bologna
Emilio Russo	Università Magna Græcia di Catanzaro
Roberto Russo	Università degli Studi di Napoli Federico II, Napoli
Antonio Russo	Azienda Ospedaliera Universitaria Policlinico "Paolo Giaccone", Palermo
Francesco Saccà	Università degli Studi di Napoli Federico II, Napoli
Marco Salvetti	Sapienza Università di Roma



RELATORI E MODERATORI



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Ugo Santucci	Ministero della Salute, Roma
Gianni Sava	Università degli Studi di Trieste
Massimo Scaccabarozzi	Farmindustria, Roma
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Marco Scatigna	Università degli Studi di Milano
Cristina Scavone	Università degli Studi della Campania "Luigi Vanvitelli", Napoli
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Valérie B. Schini-Kerth	Université de Strasbourg (FR)
Oliver Schmitt	Plasma Protein Therapeutics Association, Brussels (Belgium)
Antonella Scorziello	Università degli Studi di Napoli Federico II, Napoli
Giovanna Scroccaro	Area Sanità e Sociale Regione Veneto, Verona
Caterina Scuderi	Sapienza Università di Roma
Geremia Secli	Egualia - Industrie Farmaci Accessibili, Roma
Alessandro Segato	Associazione Immunodeficienze Primitive (AIP), Brescia
Luisa Seguella	Sapienza Università di Roma
Simona Sica	Fondazione Policlinico Universitario Agostino Gemelli IRCCS, Roma
Sandra Sigala	Università degli Studi di Brescia
Francesca Simonelli	Università degli Studi della Campania "Luigi Vanvitelli", Napoli
Jason Snape	AstraZeneca
Rosalinda Sorrentino	Università degli Studi di Salerno
Maria Angela Sortino	Università degli Studi di Catania



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Stefania Spila Alegiani	Istituto Superiore di Sanità, Roma
Edoardo Spina	Università degli Studi di Messina
Andrea Spini	Università degli Studi di Siena
Liberata Sportiello	Università degli Studi della Campania "Luigi Vanvitelli", Napoli
Francesco Squadrito	Università degli Studi di Messina
Alessio Squassina	Università degli Studi di Cagliari
Stefania Stefani	Università degli Studi di Cagliari
Gabriele Stocco	Università degli Studi di Trieste
Enrica Stretto	Consiglio Nazionale delle Ricerche (CNR), Pisa
Pasquale Striano	Università degli Studi di Genova
Janet Sultana	Mater Dei Hospital, Malta
Maurizio Taglialatela	Università degli Studi di Napoli Federico II, Napoli
Andrea Tarozzi	Alma Mater Studiorum, Università di Bologna
Patrizia Tarugi	Università degli studi di Modena e Reggio Emilia, Modena
Fabio Tascetta	Università degli Studi di Modena e Reggio Emilia, Modena
Gaetano Terrone	Università degli Studi di Napoli Federico II, Napoli
Lara Testai	Università di Pisa
Giuseppe Toffoli	Centro di Riferimento Oncologico (CRO) di Aviano
Alberto Tommasini	Università degli Studi di Trieste
Enrico Tongiorgi	Università degli Studi di Trieste
Giuseppe Traversa	Agenzia Italiana del Farmaco (AIFA), Roma
Viviana Trezza	Università degli Studi Roma Tre, Roma
Gianluca Trifirò	Università degli Studi di Verona



RELATORI E MODERATORI

Marco Tuccori	Azienda Ospedaliero Universitaria Pisana, Pisa
Daniela Turchetti	Alma Mater Studiorum, Università di Bologna
Konrad Urbanek	Università Magna Græcia di Catanzaro
Domenico Valle	Eli Lilly Italia, Sesto Fiorentino (FI)
Valeria Valsecchi	Università degli Studi di Napoli Federico II, Napoli
Claudia Verderio	Università Vita-Salute San Raffaele, Milano
Alexej Verkhatsky	University of Manchester (UK)
Chiara Verpelli	Consiglio Nazionale delle Ricerche (CNR), Milano
Annamaria Vezzani	Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milano
Pierluigi Viale	Alma Mater Studiorum, Università di Bologna
Annamaria Villa	Opera San Francesco per i Poveri Onlus, Milano
Sara Villa	Università degli Studi di Milano Bicocca, Milano
Annabella Vitalone	Sapienza Università di Roma
Stefano Volpi	Istituto Giannina Gaslini - IRCCS, Genova
Erica Zamberletti	Università degli Studi dell'Insubria
Massimo Zenti	Associazione Italiana Narcolettici (AIN), Firenze
Marco Zibellini	Farmindustria, Roma
Marina Ziche	Università degli Studi di Firenze
Ettore Zuccato	Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milano



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CONGRESSO
NAZIONALE della
SOCIETÀ ITALIANA
di FARMACOLOGIA

Il VALORE
SCIENTIFICO
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APPROPRIATO
del FARMACO

SIF

SOCIETÀ ITALIANA DI FARMACOLOGIA

ORAL COMMUNICATIONS





08.30 | 10.00

Neuropharmacology 1

Chairpersons: Carla Cannizzaro, Cristiano Chiamulera

Detailed *in vitro* pharmacological characterization of the clinically viable NOP receptor antagonist BTRX-246040

Chiara Ruzza, Federica Ferrari, Sabrina Rizzo, Girolamo Calo' (Ferrara)

Mesolimbic dopamine dysregulation as a signature of information processing deficits imposed by prenatal THC exposure

Roberto Frau¹, Claudia Sgheddu¹, Francesco Traccis¹, Valeria Serra¹, Mauro Congiu¹, Joseph F. Cheer², Miriam Melis¹ (¹Cagliari; ²Baltimore - USA)

Inhibitory effects induced by *Vicia faba*, *Uncaria rhyncophylla*, and *Glycyrrhiza glabra* water extracts on oxidative stress biomarkers and dopamine turnover in HypoE22 cells and isolated rat striatum challenged with 6-hydroxydopamine

Annalisa Chiavaroli (Chieti)

Effects of Acetylcholinesterase Inhibitors on brain energy metabolism of non-synaptic and synaptic mitochondria

Federica Ferrari^{1,2}, Elena Dini², Roberto Federico Villa² (¹Milano; ²Pavia)

New light on oxytocin receptors

Marta Busnelli, Francesca Santini, Valentina Gigliucci, Alessandro Gori, Bice Chini (Milano)

The blood brain barrier as a new pharmacological target for the S1P receptor 1 modulator siponimod

Simona Federica Spampinato, Giuseppe Costantino, Maria Angela Sortino (Catania)





CHI3L1 as a novel astrocytic modulator of adult hippocampal neural progenitors

Valeria Bortolotto¹, Marco Daffara¹, Pier Luigi Canonico¹, Marcello Manfredi², Emilio Marengo², Mariagrazia Grilli¹ (¹Novara; ²Alessandria)

Activity-based anorexia alters reward-related mechanisms in the rat nucleus accumbens: focus on the glutamatergic synapse

Giorgia Botton, Giorgia Targa, Francesca Mottarlini, Benedetta Tarenzi, Fabio Fumagalli, Lucia Caffino (Milano)





08.30 | 10.00

Cardiovascular pharmacology

Chairpersons: Franco Bernini, Paola Patrignani

Pharmacological characterization of the biosynthesis of prostanoids and hydroxyeicosatetraenoic acids in human whole blood and platelets by targeted chiral lipidomics analysis

Stefania Tacconelli, Rosa Fullone, Melania Dovizio, Graziana Pizzicoli, Stephanie Marschler, Annalisa Bruno, Mirco Zucchelli, Annalisa Contursi, Patrizia Ballerini, Paola Patrignani (Chieti)

Montelukast, an available and safe anti-asthmatic drug, exerts cardiac protection after myocardial infarction

Laura Castiglioni, Paolo Gelosa, Joanna Rzemieniec, Francesca Colazzo, Elena Tremoli, Luigi Sironi (Milano)

The vascular protection induced by erucin, a H₂S-donor from *Eruca sativa* Mill., in obese patients arteries and in human endothelial and smooth muscle cells

Alma Martelli¹, Eugenia Piragine¹, Valentina Citi¹, Lara Testai¹, Roberto Matteo², Luisa Ugolini², Eleonora Pagnotta², Luca Lazzeri², Lorenzo Di Cesare Mannelli³, Carla Ghelardini³, Emiliano Duranti¹, Alessandro Mengozzi¹, Stefano Masi¹, Agostino Virdis¹, Vincenzo Calderone¹ (¹Pisa; ²Bologna; ³Firenze)

The role of stat3 in the activation of PCSK9

Chiara Macchi¹, Maria Francesca Greco¹, Paola Dongiovanni¹, Luca Valenti¹, Arrigo F.G. Cicero², Claudio Borghi², Maria Giovanna Lupo³, Alberto Corsini¹, Paolo Magni¹, Nicola Ferri³, Massimiliano Ruscica¹ (¹Milano; ²Bologna; ³Padova)

Shedding light on a new class of small molecule able to inhibit proprotein convertase subtilisin/kexin type 9 (PCSK9): an *in vitro* study on HEPG2 cell line

Maria Giovanna Lupo¹, Marco Radi², Nicola Ferri¹ (¹Padova; ²Parma)





Proprotein convertase subtilisin/kexin type 9 enhances arterial medial calcification in a uremic rat model of chronic kidney disease

Nicola Ferri¹, Maria Giovanna Lupo¹, Marina Camera², Andre Baragetti¹, Marcello Rattazzi²
(Padova¹; Milano²)

SerpinB3: a novel target for treating hepatic ischemia-reperfusion injury

Mariapia Vairetti¹, Laura Giuseppina Di Pasqua¹, Cristian Turato^{1,2}, Clarissa Berardo¹,
Alessandra Biasiolo², Andrea Ferrigno¹, Patrizia Pontisso² (¹Pavia; ²Padova)

Unique involvement of the P2Y12 receptor in the exposure of Tissue Factor on the platelet membrane

Marta Brambilla, Paola Canzano, GianEnrico Rovati, Nicola Cosentino, Daniela Trabattoni,
Marco Cattaneo, Elena Tremoli, Marina Camera (Milano)





08.30 | 10.00

Basic and clinical research 1

Chairpersons: Patrizia Di Iorio, Ernesto Fedele

Nrf2-pathway, RPE, and stress response: in search of the biological signature and a new potential pharmacological strategy for Age-related Macular Degeneration

Michele Catanzaro¹, Cristina Lanni¹, Filippo Basagni², Michela Rosini², Stefano Govoni¹, Mariacarla Amadio¹ (¹Pavia; ²Bologna)

Tuning of ATM activity to control molecular, functional and behavioural defects in autism spectrum disorders

Lara Pizzamiglio¹, Elisa Focchi¹, Luca Murru¹, Clara Cambria¹, Nicoletta Landsberger¹, Michela Matteoli^{1,2}, Maria Passafaro¹, Elisabetta Menna^{1,2}, Flavia Antonucci¹ (¹Milano; ²Rozzano)

Proteomics analysis links alterations of bioenergetics, mitochondria-ER interaction and proteostasis in hippocampal astrocytes from 3xTg-AD mice

Giulia Dematteis¹, Gabriele Vydmantaitė², Federico Alessandro Ruffinatti¹, Malak Chahin¹, Serena Farruggio¹, Elettra Barberis¹, Eleonora Ferrari¹, Emilio Marengo¹, Carla Distasi¹, Ramune Morkuniene², Armando Genazzani¹, Mariagrazia Grilli¹, Elena Grossini¹, Marco Corazzari¹, Marcello Manfredi¹, Dmitry Lim¹, Aiste Jekabsone², Laura Tapella¹ (¹Novara; ²Kaunas - Lithuania)

Seeting up 3D *in vitro* brain model for drug discovery: molecular and functional characterization

Francesca Ciarpella¹, Raluca Zamfir¹, Alessandra Campanelli¹, Sissi Dolci¹, Marzia DiChio¹, Cristina Patuzzo¹, Elisa Ren², Rita Bardoni², Giulia Pedrotti¹, Loris Mannino¹, Guido Fumagalli¹, Annika Ahtinen³, Giovanni Malerba¹, Jari Hyttinen³, Gabriella Panuccio⁴, Gemma Palazzolo⁴, Giulia Curia², Ilaria Decimo¹ (¹Verona; ²Modena; ³Tampere-Finland; ⁴Genova)





The pharmacological inhibition of lysosomal Ca^{2+} channel Transient Receptor Potential Mucolipin 1 (TRPML1) produces neuroprotective effects in experimental models of brain ischemia

Valentina Tedeschi, Tiziana Petrozziello, Maria José Sisalli, Antonio Vinciguerra, Giuseppe Pignataro, Agnese Secondo (Napoli)

Remote Postconditioning ameliorates stroke damage by preventing neuronal let-7a and astrocytic miR-143 up-regulation

Antonio Vinciguerra, Pasquale Cepparulo, Serenella Anzilotti, Ornella Cuomo, Lucio Annunziato, Giuseppe Pignataro (Napoli)

PCSK9 affects brain cholesterol metabolism and neuroinflammation in human cell models of astrocytes and neurons

Francesca Zimetti¹, Nicola Ferri², Maria Pia Adorni¹, Bianca Papotti¹, Cinzia Marchi¹, Eleonora Vandini^{1,3}, Nicoletta Ronda¹, Daniela Giuliani³, Franco Bernini¹
(¹Parma, ²Padova; ³Modena e Reggio Emilia)

Investigation on the endocannabinoid system in a neurodevelopmental model of schizophrenia induced by maternal immune activation

Michele Santoni, Maria Scherma, Paola Fadda, Marco Pistis (Cagliari)





08.30 | 10.00

Cancer pharmacology 1

Chairpersons: Alessandra Bitto, Aldo Pinto

Modulation of N-Acylethanolamine acid amidase (NAAA) impacts colorectal cancer growth

Barbara Romano¹, Ester Pagano¹, Fabio A. Iannotti², Fabiana Piscitelli², Vincenzo Brancaleone³, Giuseppe Lucariello¹, Donatella Cicia¹, Ruggero Lionetti¹, Alexandros Makriyannis⁴, Michael Malamas⁴, Giovanni Aprea¹, Maria D'Armiento¹, Raffaele Capasso⁵, Tommaso Venneri⁵, Vincenzo Di Marzo^{2,6}, Francesca Borrelli¹, Angelo A. Izzo¹ (¹Napoli; ²Pozzuoli; ³Potenza; ⁴Boston; ⁵Portici; ⁶Québec City. Endocannabinoid Research Group)

Peripheral nerve resident macrophages and Schwann cell M-CSF and TRPA1 sustain cancer pain

Francesco De Logu¹, Matilde Marini¹, Lorenzo Landini¹, Daniel Souza Monteiro de Araujo¹, Niccolò Bartalucci¹, Gabriela Trevisan², Gennaro Bruno¹, Martina Marangoni¹, Brian L. Schmidt³, Nigel W. Bunnett³, Pierangelo Geppetti¹, Romina Nassini¹ (¹Firenze; ²Santa Maria – Brasile; ³New York - USA)

Generation of 12-hydroxyeicosatetraenoic acid (HETE) and phospholipid-esterified-12-HETE in platelet-cancer cell crosstalk

Melania Dovizio¹, Simone Schiavone¹, Christine Hinz², Rosa Fullone¹, Stefania Tacconelli¹, Rosalia Grande¹, Paola Lanuti¹, Marco Marchisio¹, Mirco Zucchelli¹, Patrizia Ballerini¹, Valerie B. O'Donnell², Paola Patrignani¹ (¹Chieti; ²Cardiff - UK)

Knockdown of PTGS2 by CRISPR/CAS9 system designates a new potential gene target for melanoma treatment

Giuseppe Ercolano¹, Paola De Cicco², Valentina Rubino^{2,3}, Giuseppe Terrazzano^{2,3}, Giuseppina Ruggiero², Roberta Carriero⁴, Paolo Kunderfranco⁴, Angela Ianaro² (¹Losanna; ²Napoli; ³Potenza; ⁴Rozzano)





Heparan sulfate binds the extracellular form of Annexin A1 blocking its oncogenic effects on pancreatic cancer cells

Raffaella Belvedere¹, Nunzia Novizio¹, Emanuela Pessolano¹, Alessandra Tosco¹, Mauro Perretti², Amelia Filippelli³, Antonello Petrella¹ (¹Fisciano; ²Londra - UK; ³Baronissi)

Therapeutic drug monitoring might identify poor responders to ruxolitinib treatment in myeloproliferative neoplasms

Valentina Giudice¹, Rosa Rosamilio², Bruno Charlier¹, Francesca Mensitieri¹, Giuliana Donadio¹, Bianca Cuffa², Bianca Serio², Fabrizio Dal Piaz¹, Viviana Izzo¹, Carmine Selli¹, Amelia Filippelli¹ (¹Baronissi; ²Salerno)

Clinical utility of panel of pharmacogenetic markers associated with Adverse Drug Reactions in Fluoropyrimidine and Irinotecan-treated cancer patients enrolled in the PREPARE study- Results from a preliminary analysis

Rossana Roncato¹, Francesco Angelini¹, Tania Di Raimo¹, Francesco Comello¹, Alessia Bignucolo¹, Silvia Mezzalana¹, Luisa Foltran¹, Massimiliano Berretta¹, Antonino De Paoli¹, Michela Guardascione¹, Fabio Puglisi¹, Mario D'Andrea², Erika Cecchin¹, Giuseppe Toffoli¹ (¹Aviano; ²Roma)

Sex differences on mitotane concentration and treatment outcome in patients with adrenocortical carcinoma

Sarah Allegra, Soraya Puglisi, Francesco Chiara, Irene Brescia, Vittoria Basile, Anna Calabrese, Giuseppe Reimondo, Silvia De Francia (Orbassano)





08.30 | 10.00

Pharmacovigilance, pharmacoepidemiology, pharmacoconomics and Real World Evidence 1

Chairpersons: Massimo Baraldo, Antonietta Martelli

Detecting adverse drug reactions associated with Drug-Drug interactions for serious suspected reports in a Spontaneous Reporting Database

Lara Magro, Ugo Moretti, Elena Arzenton, Marilisa Giustina Stano, Michele Vezzaro, Annette Rudolph, Irene Castagna, Roberto Leone (Verona)

Immune checkpoint inhibitors and cardiotoxicity

Alessia Zinzi, Annamaria Mascolo, Cristina Scavone, Gabriella di Mauro, Cristina di Mauro, Maria Giuseppa Sullo, Francesco Rossi, Annalisa Capuano (Napoli)

Preliminary results from FASM study, an on-going multicenter Italian active pharmacovigilance project

Cristina Di Mauro, Cristina Scavone, Barbara Stelitano, Carmen Ferrajolo, Maria Giuseppa Sullo, Francesco Rossi, Annalisa Capuano (Napoli)

PCSK9 inhibitors and neurocognitive adverse drug reactions: analysis of Individual Case Safety Reports from the Eudravigilance database

Gabriella di Mauro, Alessia Zinzi, Cristina Scavone, Carmen Ferrajolo, Liberata Sportiello, Concetta Rafaniello, Annamaria Mascolo, Rosanna Ruggiero, Mario Gaio, Francesco Rossi, Annalisa Capuano (Napoli)

Risk of hospitalization associated to cardiovascular medications in elderly: a nationwide multicenter study in emergency departments

Giada Crescioli¹, Alessandra Bettiol¹, Roberto Bonaiuti¹, Marco Tuccori^{1,2}, Marco Rossi¹, Annalisa Capuano³, Mauro Venegoni⁴, Giuseppe Vighi⁵, Guido Mannaioni¹, Alfredo Vannacci¹, Niccolò Lombardi¹. On behalf of the MEREAFaPS Study Group (1¹Firenze; 2²Pisa; 3³Napoli; 4⁴Milano; 5⁵Vimercate)





Renin Angiotensin Aldosterone System Inhibitors are not associated with COVID-19 severity: a meta-analysis of retrospective studies

Simona Costanzo¹, Augusto Di Castelnuovo², Licia Iacoviello^{1,3}, Giovanni de Gaetano¹
(¹Pozzilli; ²Napoli; ³Varese)

β -blocker-induced hypoglycaemia: nested case/non-case analysis, pharmacovigilance-pharmacokinetic study in FAERS and systematic review

Michele Gringeri¹, Giulia Mosini¹, Vera Battini¹, Elena Invernizzi¹, Faizan Mazhar¹,
Valentina Fabiano¹, Francesco Bergamaschi¹, Carla Carnovale¹, Sonia Radice¹, Emilio Clementi^{1,2}
(¹Milano; ²Bosisio Parini)

Systematic review of studies of experimental and observational studies on antihypertensive drug deprescribing

Salvatore Crisafulli¹, Janet Sultana¹, Nicoletta Luxi¹, Raffaele Coppini², Annalisa Capuano³,
Cristina Scavone³, Alessia Zinzi³, Simona Vecchi⁴, Graziano Onder⁴, Gianluca Trifirò¹
(¹Messina; ²Firenze; ³Napoli; ⁴Roma)





08.30 | 10.00

Inflammation, pharmacology and immunopharmacology

Chairpersons: Girolamo Calò, Giuseppe Nocentini

In vitro, in silico and in vivo comparative study of full-length interleukin-17A (IL-17A) with short synthetic N-terminal sequence IL-17A-derived peptides

Federica Raucci¹, Anella Saviano¹, Gian Marco Casillo¹, Marialuisa Piccolo¹, Maria Grazia Ferraro¹, Carlo Irace¹, Elisabetta Panza¹, Nicola Mascolo¹, Asif Jilani Iqbal^{1,2}, Francesco Maione¹ (¹Napoli; ²Birmingham - UK)

Serum eNAMPT as a predictive biomarker of response to TNF-therapy in Inflammatory Bowel Disease patients

Giorgia Colombo¹, Davide Giuseppe Ribaldone², Luca Patorelli³, Gabriele Stocco⁴, Cristina Travelli⁵ (¹Novara; ²Torino; ³San Donato; ⁴Trieste; ⁵Pavia)

Glucocorticoid Induced Leucine Zipper (GILZ) peptides as new drugs for treatment of Inflammatory Bowel Diseases (IBD)

Stefano Bruscoli, Sara Flamini, Musetta Paglialunga, Marta Febo, Oxana Bereshehenko, Simona Ronchetti, Erika Ricci, Carlo Riccardi, Graziella Migliorati (Perugia)

The effect of Melatonin in an *in vitro* inflammatory model induced by gliadin in adipose cells

Gabriella Calì, Luana Bauso, Federica Mannino, Natasha Irrera, Giovanni Pallio, Francesco Squadrito, Alessandra Bitto (Messina)

Severe Multiple Sclerosis course after alemtuzumab treatment: a case report

Riccardo Giossi, Carlo Antozzi, Rita Frangiamore, Valentina Torri Clerici, Paolo Confalonieri, Alessandra Tozzo, Renato Mantegazza, Laura Brambilla (Milano)

Innovative therapeutic approach for dry Age-related Macular Degeneration

Monica Baiula, Daria Giacomini, Luca Gentilucci, Santi Spampinato (Bologna)





The ecto-5'-nucleotidase inhibitor, adenosine 5'-O-(alpha, beta-methylene) diphosphate, ameliorates features of allergic airway disease in mice

Elisabetta Caiazzo¹, Ida Cerqua¹, Silvana Morello², Fiorentina Roviezzo¹, Armando Ialenti¹, Carla Cicala¹ (¹Napoli; ²Salerno)

A humanized model of blood brain barrier to investigate immune cells infiltration in Multiple Sclerosis: toward a personalized medicine approach

Eliana Lauranzano¹, Marco Rasile¹, Raffaella Molteni², Elena Campo¹, Marco Pizzocri¹, Giuseppe Liberatore¹, Lorena Passoni¹, Lorenzo Bello^{1,2}, Ruggiero Pardi², Eduardo Nobile-Orazio¹, Davide Pozzi³, Michela Matteoli^{1,2,3} (¹Rozzano; ²Milano; ³Pieve Emanuele)





08.30 | 10.00

Pharmacognosy, phytotherapy and nutraceuticals 1

Chairpersons: Orazio Cantoni, Aurelia Tubaro

Anti-tumor activity of the extra-virgin olive oil polyphenol Oleacein in human melanoma cells through the modulation of miRNA expression

Sara Carpi¹, Beatrice Polini¹, Clementina Manera¹, Maria Digiacomò¹,
Jasmine Esposito Salsano², Marco Macchia¹, Egeria Scoditti³, Paola Nieri¹ (¹Pisa; ²Siena; ³Lecce)

Hemp Futura 75 Variety as a source of anti-Inflammatory, anti-Proliferative and antimycotic agents

Claudio Ferrante (Chieti)

Multidirectional pharma-toxicological investigations on *Harpagophytum procumbens* DC. ex Meisn.: focus on water extract activity

Lucia Recinella (Chieti)

Amyloid β fibrils disruption by oleuropein aglycone: investigation of the mechanism of action of this polyphenol from extra-virgin olive oil

Simone Brogi, Vincenzo Calderone (Pisa)

Hamamelis virginiana L. extract differently inhibit inflammatory mediators in human keratinocytes and endothelial cells: the role of hamamelitannin

Stefano Piazza, Giulia Martinelli, Andrea Magnavacca, Marco Fumagalli, Massimo Terno, Luisa
Canilli, Enrico Sangiovanni, Mario Dell'Agli (Milano)

Effects of *Arthrospira platensis* biomass on risk factors associated with metabolic syndrome

Mario D'Ambrosio, Elisabetta Bigagli, Lorenzo Cinci, Alberto Niccolai, Natascia Biondi, Liliana
Rodolfi, Mario R. Tredici, Cristina Luceri (Firenze)





Ethnopharmacological evaluation of Cameroonian spices in gastric inflammatory models

Enrico Sangiovanni¹, Achille Parfait Atchan Nwakiban², Stefano Piazza¹, Marco Fumagalli¹, Andrea Magnavacca¹, Giulia Martinelli¹, Giangiacomo Beretta³, Paolo Magni¹, Gabriel Agbor Agbor³, Jules-Roger Kuiafé³, Mario Dell'Agli¹ (¹Milano; ²Dschang - Cameroon; ³Yaoundé - Cameroon)

Anti-inflammatory and pain relieving activity of *Posidonia oceanica* (L.) Delile: preclinical evidences

Laura Micheli, Marzia Vasarri, Elena Lucarini, Carmen Parisio, Alessandra Toti, Lorenzo Di Cesare Mannelli, Emanuela Barletta, Donatella Degl'Innocenti, Carla Ghelardini (Firenze)





08.30 | 10.00

Neuropharmacology 2

Chairpersons: Stefania Ceruti, Maurizio Memo

SCFAs alleviates the NTG-induced migraine modulating microbiota composition in mice

Marika Lanza, Giovanna Casili, Michela Campolo, Sarah Scuderi, Alessio Ardizzone, Irene Paterniti, Emanuela Esposito (Messina)

Investigating the effects of ketamine on neurons and glial cells after an acute stress: evidence from a preclinical model

Roberta Facchinetti¹, Marta Valenza¹, Giorgia Menegoni¹, Tiziana Bonifacino², Marco Milanese², Giambattista Bonanno², Maurizio Popoli³, Luca Steardo¹, Laura Musazzi³, Caterina Scuderi¹ (¹Roma; ²Genova; ³Milano)

Acid-sensing ION Channel 1A is involved in hippocampal synaptic plasticity alterations induced by A β

Dalila Mango, Robert Nisticò (Roma)

Targeting the master neuronal epigenetic regulator REST as new pharmacological strategy for intervention in Amyotrophic Lateral Sclerosis

Natascia Guida, Valeria Valsecchi, Serenella Anzilotti, Ornella Cuomo, Luigi Mascolo, Giuseppe Pignataro, Lucio Annunziato, Luigi Formisano (Napoli)

Protective effect of carbonic anhydrase inhibitors: acetazolamide and AN11-740 in brain ischemia

Irene Bulli, Ilaria Dettori, Lisa Gaviano, Irene Fusco, Elisabetta Coppi, Martina Venturini, Lorenzo Di Cesare Mannelli, Carla Ghelardini, Claudiu Supuran, Anna Maria Pugliese, Felicità Pedata (Firenze)





Late glucocorticoid receptor antagonism normalizes the enduring effects induced by brief and repeated periods of social isolation stress during early-adolescence

Giulia Federica Mancini, Enrico Marchetta, Paola Colucci, Federica Lucarella, Patrizia Campolongo (Roma)

High fat diet induces very rapid, age- and regional-specific changes in adult-born hippocampal neuroblasts

Fausto Chiazza, Federico Ugazio, Heather Bondi, Valeria Bortolotto, Pier Luigi Canonico, Mariagrazia Grilli (Novara)

Effects of ultramicronized palmitoylethanolamide treatment on the glutamatergic alterations and mitochondrial impairment in 3xTg-AD mice

Tommaso Cassano¹, Francesco Bellanti¹, Vidyasagar Naik Bukke¹, Moola Archana¹, Caterina Scuderi², Luca Ferraro³, Gaetano Serviddio¹, Vincenzo Cuomo²
(¹Foggia; ²Roma; ³Ferrara)





08.30 | 10.00

Sensitive windows of vulnerability for cannabis use on brain development

Chairpersons: Miriam Melis, Tiziana Rubino

Sex-dependent behavioral deficits induced at early life by in utero cannabinoid exposure depend on mGlu5 receptor signalling

Antonia Manduca¹, Sara Schiavi¹, Olivier J. Manzoni², Viviana Trezza¹ (¹Roma; ²Marseille - France)

In utero THC exposure induces a dimorphic behavioural phenotype in the offspring: focus on limbic memory and alcohol vulnerability

Anna Brancato, Carla Cannizzaro (Palermo)

Mesolimbic dopamine system function of female offspring exposed in utero to THC

Francesco Traccis, Valeria Serra, Claudia Sagheddu, Mauro Congiu, Paola Devoto, Roberto Frau, Miriam Melis (Cagliari)

Crosstalk between dopamine D2 and cannabinoid CB1 receptor genes regulation driven by cannabis use: preclinical and clinical evidence

Martina Di Bartolomeo¹, Tibor Stark^{2,3}, Mauro Maccarrone⁴, Filippo Drago⁵, Bernardo Dell'Osso^{6,7}, Vincenzo Micalè^{5,8}, Claudio D'Addario^{1,9} (¹Teramo; ²Brno-Czech Republic; ³Munich-Germany; ⁴Roma; ⁵Catania; ⁶Milano; ⁷California - USA; ⁸Klecaný-Czech Republic; ⁹Stockholm-Sweden)

Effects of chronic exposure to low doses of δ -9- tetrahydrocannabinol in adolescence and adulthood on serotonin/norepinephrine neurotransmission and emotional behaviors

Danilo De Gregorio¹, Joshua Dean Conway², Martha-Lopez Canul¹, Luca Posa¹, Francis Rodriguez Bambico^{2,3}, Gabriella Gobbi¹ (¹Montreal - Canada; ²St.John's - Canada; ³Toronto - Canada)





The endocannabinoid system is a relevant player in adolescent brain maturation

Cristina Manenti¹, Pamela Prini¹, Marina Gabaglio¹, Erica Zamberletti¹, Daniela Parolaro^{1,2}, Tiziana Rubino¹ (¹Busto Arsizio; ²Milano)

Kynurenine negatively exacerbates the THC effects on tetrad and sensorimotor responses in adult mice

Sarah Beggiato¹, Sabrin Bilel², Mariachiara Zuccarini¹, Luca Ferraro², Matteo Marti² (¹Chieti; ²Ferrara)

Prosocial effects of Cannabidiol in mice

Sara Anna Bonini, Andrea Mastinu, Marika Premoli, Francesca Aria, Giuseppina Maccarinelli, Maurizio Memo (Brescia)





08.30 | 10.00

Pharmacology of nutritional disorders

Chairpersons: Giulia Chiesa, Francesco Visioli

Uterine dysfunction in diabetic mice: the role of hydrogen sulfide

Emma Mitidieri¹, Domenico Vanacore, Carlotta Turnaturi, Cirio Giuseppe, Raffaella Sorrentino, Roberta d'Emmanuele di Villa Bianca (Napoli)

MPEP, a selective mGluR5 negative allosteric modulator, attenuates fat accumulation in an *in vitro* model of benign steatosis

Clarissa Berardo, Laura Giuseppina Di Pasqua, Veronica Siciliano, Plinio Richelmi, Mariapia Vairetti, Andrea Ferrigno (Pavia)

Lipid accumulation impairs lysosomal acid lipase lactivity in NAFLD: rescue by PPAR-Alphaactivation

Anna Ludovica Fracanzani, Chiara Pavanello, Eleonora Giorgio, Lorenzo Da Dalt, Giuseppe Danilo Norata, Laura Calabresi, Silvia Fargion, Monica Gomasaschi (Milano)

Novel indole derivatives targeting HuR-mRNA complex to counteract high glucose damage in retinal endothelial cells

Chiara Bianca Maria Platania¹, Valeria Pittalà¹, Alessia Pascale², Nicoletta Marchesi², Carmelina Daniela Anfuso¹, Gabriella Lupo¹, Martina Cristaldi¹, Melania Olivieri¹, Francesca Lazzara¹, Luisa Di Paola³, Filippo Drago¹, Claudio Bucolo¹ (¹Catania; ²Pavia; ³Roma)

Growth hormone-releasing hormone analogs exert antiinflammatory and antioxidant effects in male mice

Sheila Leone¹, Lucia Recinella¹, Annalisa Chiavaroli¹, Valentina Di Valerio¹, Serena Veschi¹, Giustino Orlando¹, Claudio Ferrante¹, Iacopo Gesmundo², Riccarda Granata², Renzhi Cai³, Wei Shad³, Andrew V. Schally³, Luigi Brunetti¹ (¹Chieti; ²Torino; ³Miami - USA)

Maturity Onset Diabetes of the Young in pregnancy: management, treatment and neonatal outcomes

Alessandra Romandini, Arianna Pani, Federico Bertuzzi, Basilio Pintaudi (Milano)





Lycopene reduces myocardial hypertrophy in Zucker diabetic obese rats

Igor Pirrotta, Alessandro Scarfone, Domenico Antonio Giorgi, Natasha Irrera, Alessandra Bitto, Federica Mannino, Giovanni Pallio, Letteria Minutoli, Michelangelo Rottura, Francesco Squadrito, Domenica Altavilla (Messina)

**Biochemical analysis of Hydroxytyrosol Therapy on
Pancreatitis-Associated Gut Injury**

Roberta Fusco¹, Marika Cordaro¹, Rosalba Siracusa¹, Ramona D'Amico¹, Tiziana Genovese¹, Enrico Gugliandolo¹, Alessio Filippo Peritore¹, Rosalia Crupi¹, Daniela Impellizzeri¹, Salvatore Cuzzocrea^{1,2}, Rosanna Di Paola¹ (¹Messina, ²Saint Louis - USA)





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Basic and clinical research 2

Chairpersons: Salvatore Amoroso, Renata Ciccarelli

Investigation on the mechanism of action and translational potential of desogestrel in congenital central hypoventilation syndrome (CCHS)

Roberta Benfante¹, Silvia Cardani¹, Simona Di Lascio¹, Silvia Pagliardini², Diego Fornasari¹
(¹Milano; ²Alberta - Canada)

CER-001 ameliorates lipid profile and kidney function in a mouse model of Familial LCAT Deficiency

Alice Ossoli¹, Arianna Strazzella¹, Sara Simonelli¹, Daniela Rottoli², Monica Locatelli², Carlamaria Zoja², Ronald Barbaras³, Jean-Louis Dasseux³, Laura Calabresi¹ (¹Milano; ²Bergamo; ³Toulouse - France)

COVID-19 patients and thrombosis: the role of platelet and endothelial activation

Paola Canzano, Marta Brambilla, Elena Tortorici, Nicola Cosentino, Benedetta Porro, Martino Pengo, Alice Bonomi, Fabrizio Veglia, Gianfranco Parati, Viviana Cavalca, Elena Tremoli, Marina Camera (Milano)

Platelet activation in patent foramen ovale (PFO) patients with migraine on aspirin treatment

Paola Canzano, Daniela Trabattoni, Marta Brambilla, Laura Rossetti, Elena Tremoli, Marina Camera (Milano)

Limited sample strategy to predict the area under the curve of Mycophenolic Acid in Cardiac Transplant Patients with different clinic characteristics: a sub-validation study

Francesco Lo Re^{1,2}, Sandro Sponga¹, Chiara Nalli¹, Giovanni Benedetti¹, Antonella Zucchetto¹, Ugo Livi¹, Massimo Baraldo¹ (¹Udine, ²Milano)

Effects of metformin on C2C12 myoblast cell line

Eleonora Maniscalco, Giuliana Abbadessa, Silvia Racca (Torino)





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Pharmacovigilance, pharmacoepidemiology, pharmacoeconomics and Real World Evidence 2

Chairpersons: Tullio Florio, Domenico Motola

Post-Authorisation Studies in Paediatric population: data from the EU-PAS registry

Janet Sultana¹, Salvatore Crisafulli¹, Luca L'Abbate¹, Mariana Almas², Ippazio Antonazzo³, Esme Baan⁴, Claudia Bartolini³, Maria Paola Bertuccio¹, Fedele Bonifazi⁵, Antonella Didio⁵, Vera Ehrenstein⁶, Carmen Ferrajolo⁷, Remy Francisca⁴, Annie Fourrier-Reglat⁸, Joan Fortuny⁹, Rosa Gini³, Giulia Hyeraci³, Christel Hoeve¹⁰, Valentina Isgro¹¹, Christos Kontogiorgis¹¹, Panagiotis Lalagkas¹¹, Deborah Layton¹², Annalisa Landi⁵, Silvia Narduzzi¹², Leonardo Pereira¹³, George Poulentzas¹¹, Concita Rafaniello⁷, Simona Ravera⁵, Giuseppe Roberto³, Giulia Scondotto¹, Liberata Sportiello⁷, Maddalena Toma⁵, Massoud Toussi¹⁴, Katia Verhamme⁴, Elisabetta Volpe⁵, Gianluca Trifiro¹¹
(¹Messina; ²Lisbon - Portugal; ³Firenze; ⁴Rotterdam - The Netherlands; ⁵Bari; ⁶Aarhus - Denmark; ⁷Napoli; ⁸Bordeaux - France; ⁹Barcelona - Spain; ¹⁰Rotterdam - The Netherlands; ¹¹Thrace - Greece; ¹²London - UK; ¹³Utrecht - The Netherlands; ¹⁴Paris - France)

Pediatric Adverse Reactions to Antiseizure Medications - An analysis of data from the Italian Spontaneous Reporting System (2001-2019)

Valentina Franco¹, Maria Antonietta Barbieri², Paola Maria Cutroneo², Ignazio Arena², Giuseppe Cicala², Pasquale Marchione³, Edoardo Spina², Emilio Perucca¹ (¹Pavia; ²Messina; ³Roma)

Antibiotic use in a Child Neuropsychiatry Unit of the University Hospital of Messina

Anna Mecchio, Chiara Nasso, Michelangelo Rottura, Alessandro Scarfone, Natasha Irrera, Vincenzo Arcoraci, Domenica Altavilla (Messina)

Paediatric drug repurposing in Europe after the Paediatric Regulation

Maddalena Toma, Mariagrazia Felisi, Adriana Ceci on behalf of TEDDY Network of Excellence for Paediatric Research (Bari)





Safety of anticancer agents used in children: a focus on their offlabel use through data from the spontaneous reporting system

Annamaria Mascolo, Cristina Scavone, Michele Bertini, Simona Brusco, Francesca Punzo, Elvira Pota, Martina Di Martino, Daniela Di Pinto, Francesca Rossi (Napoli)

Post-marketing surveillance of approved CAR-T cell therapies: analysis of US FDA Adverse Event Reporting System (FAERS) database

Gabriele Puglisi¹, Michele Fusaroli², Valentina Isgrò¹, Paola Maria Cutroneo¹, Carmen Ferrajolo³, Emanuel Raschi², Elisabetta Poluzzi², Gianluca Trifirò¹ (¹Messina; ²Bologna; ³Napoli)

Quinolones-Induced Musculoskeletal, Neurological, and Psychiatric ADRs: a pharmacovigilance study based on data from the Italian Spontaneous Reporting System

Barbara Stelitano, Cristina Scavone, Annamaria Mascolo, Rosanna Ruggiero, Liberata Sportiello, Concetta Rafaniello, Liberato Berrino, Annalisa Capuano (Napoli)

Diagnostic delay and drug utilization patterns in patients with Crohn's disease: analysis of an Italian regional administrative healthcare database

Sara Ferraro¹, Claudia Bartolini², Lorenzo Bertani¹, Irma Convertino¹, Ersilia Lucenteforte¹, Sabrina Giometto¹, Francesco Costa¹, Emiliano Cappello¹, Giulia Valdiserra¹, Corrado Blandizzi¹, Rosa Gini², Marco Tuccori¹ (¹Pisa; ²Firenze)





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Cancer pharmacology 2

Chairpersons: Paolo Ciana, Angelo Torsello

Glioma and glioma-associated macrophage/microglia: the role of PDIA3 pathway

Marta Chiavari, Gabriella Maria Pia Ciotti, Francesco Canonico, Fabio Altieri, Pierluigi Navarra, Lucia Lisi (Roma)

Pharmacological and genetic modulation of TRPM8 significantly effects colon carcinogenesis

Ester Pagano¹, Barbara Romano¹, Fabio A. Iannotti¹, Giuseppe Lucariello¹, Tommaso Venneri^{1,2}, Donatella Cicia¹, Maria D'Armiento¹, Ruggiero Lionetti¹, Raffaele Capasso¹, Cristoforo Silvestri², Vincenzo Di Marzo^{1,2}, Angelo A. Izzo¹, Francesca Borrelli¹ (¹Napoli; ²Quebec - Canada)

Targeting glucose-6-phosphate dehydrogenase by 6-amino nicotinamide in combination with liposomal cisplatin as a strategy to sensitize ovarian resistant cancer cells

Isabella Giacomini, Veronica Cocetta, Daniela Catanzaro, Eugenio Ragazzi, Gianfranco Pasut, Monica Montopoli (Padova)

PPAR-γ drives IL-33-dependent ILC2 pro-tumoral functions

Giuseppe Ercolano^{1,2}, Alejandra Gomez-Cadena², Nina Dumauthioz³, Giulia Vanoni³, Tania Wyss³, Angela Ianaro¹, Pedro Romero³, Sara Trabanelli², Camilla Jandus² (¹Napoli; ²Geneva - Switzerland; ³Lausanne - Switzerland)

Hypericin and rose bengal are effective sonosensitizer agents achieving significant anticancer effects under US exposure on a three-dimensional colon cancer model

Federica Foglietta, Roberto Canaparo, Patrizia Panzanelli, Giampiero Muccioli, Franco Dosio, Loredana Serpe (Torino)





Should skeleton injury be added to the evolving list of immune-related adverse event with immune checkpoint inhibitors?

Insights from Pharmacovigilance

Milo Gatti¹, Daria Maria Filippini², Michele Fusaroli¹, Vito Di Martino², Lisa Licitra²,
Andrea Ardizzoni¹, Emanuel Raschi¹ (¹Bologna; ²Milano)

A Novel Immune-Epigenetic machine learning model for progression free survival of hepatocellular carcinoma (HCC) patients

Maurizio Polano, Luca Bedon, Michele Dal Bo, Giuseppe Toffoli (Aviano)

Therapeutic Drug Monitoring for drug-drug interactions: a case report

Sara Gagno, Michela Guardascione, Bianca Posocco, Angela Buonadonna, Martina Zanchetta,
Valentina Iacuzzi, Ariana Soledad Poetto, Erika Cecchin, Marco Orleni, Giuseppe Toffoli (Aviano)





08.30 | 10.00

Toxicology

Chairpersons: Carmela Fimognari, Barbara Viviani

Reward-related behavioral and neurochemical changes in a rat model of autism based on prenatal exposure to valproic acid

Sara Schiavi, Antonia Manduca, Stefano Leone, Francesca Melancia, Viviana Trezza (Roma)

Impairment of testicular function in Electronic Cigarette (E-Cig, E-Cigs) exposed rats under low-Voltage and Nicotine-Free conditions

Silvia Granata¹, Fabio Vivarelli¹, Silvia Cirillo¹, Vladimiro Cardenia², Maria Teresa Rodriguez-Estrada¹, Moreno Paolini¹, Donatella Canistro¹ (¹Bologna; ²Torino)

Toxicological outcomes linked to e-cigarette consumption: evidence from an *in vivo* model

Fabio Vivarelli¹, Silvia Granata¹, Carmela Fimognari², Eleonora Turrini², Maura Lodovici³, Sabrina Burattini⁴, Elisabetta Falcieri⁴, Moreno Paolini¹, Donatella Canistro¹ (¹Bologna; ²Rimini; ³Firenze; ⁴Urbino)

Sp1/p300 complex activates Bcl-xL, whereas Sp4/HDAC11 complex represses Bcl2-L2 determining apoptotic cell death in neurons after copper exposure

Luigi Mascolo, Natascia Guida, Angelo Serani, Vincenzo Pizzorusso, Lucio Annunziato, Gianfranco Di Renzo, Luigi Formisano (Napoli)

A novel HER2-targeted liposomal formulation for improving the pharmacokinetic profile of anticancer drugs and reducing the risk of hepatotoxicity

Sara De Martin, Daniela Gabbia, Elena Canato, Samantha Sarcognato, Martina Colognesi, Maria Guido, Gianfranco Pasut (Padova)





A simple method to assess alcohol withdrawal status in patients awaiting a liver transplantation

Guerzoni Simona¹, Baraldi Carlo¹, Lo Castro Flavia¹, Fiorini Alessandro¹, Dal Porto Michele¹, Manuela Licata¹, Pani Luca^{1,2} (¹Modena e Reggio Emilia; ²Miami - USA)

**Hyponatraemia following antipsychotic treatment:
In-silico pharmacodynamics analysis of spontaneous reports from the US Food and Drug Administration Adverse Event Reporting System Database and an Updated Systematic Review**

Elena Invernizzi¹, Faizan Mazhar¹, Vera Battini¹, Marco Pozzi², Giulia Mosini¹, Michele Gringeri¹, Annalisa Capuano³, Cristina Scavone³, Sonia Radice¹, Emilio Clementi^{1,2}, Carla Carnovale¹ (¹Milano; ²Bosisio - Parini; ³Napoli)





08.30 | 10.00

Neuropharmacology 3

Chairpersons: Carola Eugenia Eva, Michele Simonato

New insights into synaptic transmission: the depolarization-evoked, Ca^{2+} -dependent release of exosomes from mouse cortical nerve endings

Guendalina Olivero, Francesca Cisani, Alessandra Roggeri, Giulia Vallarino, Danilo Marimpietri, Daniela Di Paolo, Maria Cristina Gagliani, Marina Podestà, Katia Cortese, Anna Pittaluga (Genova)

Transient Maternal IL-6 boosts glutamatergic synapses and disrupts hippocampal connectivity in the offspring

Filippo Mirabella¹, Genni Desiato¹, Sara Mancinelli¹, Giuliana Fossati¹, Marco Rasile¹, Raffaella Morini¹, Marija Markicevic², Christina Grimm², Clara Amegandjin³, Alberto Termanini¹, Clelia Peano¹, Paolo Kunderfranco¹, Graziella di Cristo³, Valerio Zerbi², Simona Lodato¹, Elisabetta Menna¹, Michela Matteoli¹, Davide Pozzi¹ (¹Milano; ²Zurich - Switzerland; ³Montreal - Canada)

Neurons vs. astrocytes: bioenergetic signature of the pre- and peri-synaptic compartments in amyotrophic lateral sclerosis

Tiziana Bonifacio, Silvia Ravera, Carola Torazza, Matilde Balbi, Giulia Frumento, Marco Milanese, Katia Cortese, Isabella Panfoli, Giambattista Bonanno (Genova)

Hypoxic preconditioning enhances neurogenesis in neonate mice affected by hypoxic ischemic encephalopathy through sodium/calcium exchanger modulation

Paola Brancaccio, Serenella Anzilotti, Ornella Cuomo, Antonio Vinciguerra, Lucio Annunziato, Giuseppe Pignataro (Napoli)

Anti-inflammatory and anti-oxidant activity of Hydroxytyrosol in rotenone-induced Parkinson's disease in mice

Rosalba Siracusa¹, Roberta Fusco¹, Angela Trovato², Roberto Crea³, Rosanna Di Paola¹, Salvatore Cuzzocrea^{1,4}, Vittorio Calabrese² (¹Messina; ²Catania; ³California - USA; ⁴Saint Louis - USA)





**Modulation of neuronal activity in cognition-processing rat brain areas
by new selective inhibitors of dopamine reuptake**

Claudia Sagheddu¹, Predrag Kalaba², Jana Lubec³, Gert Lubec³, Marco Pistis¹
(¹Cagliari; ²Vienna - Austria; ³Salzburg - Austria)

**Treatment with 2-Pentadecyl-2-Oxazoline restores mild traumatic brain
injury-induced sensorial and neuropsychiatric dysfunctions**

Flavia Ricciardi, Serena Boccella, Monica Iannotta, Claudia Cristiano, Fabio Arturo Iannotti,
Fabio Del Bello, Francesca Guida, Carmela Belardo, Rosmara Infantino, Mario Giannella,
Antonio Calignano, Vincenzo Di Marzo, Sabatino Maione, Livio Luongo (Napoli)

**Possible protective effect of sodium butyrate in chemotherapy-induced
neuropathy and depressive-like behavior**

Claudia Cristiano, Carmen Avagliano, Roberto Russo, Antonio Calignano (Napoli)





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Immunometabolism

Chairpersons: Donatella Caruso, Daniela Giuliani

The low-density lipoprotein receptor (LDL-R) is an immune-metabolic checkpoint during CD8 T lymphocytes activation

Fabrizia Bonacina¹, Annalisa Moregola¹, David Coe², Monika Svecla¹, Giangiacomo Beretta¹, Alberico Luigi Catapano¹, Federica Marelli-Berg², Giuseppe Danilo Norata¹ (¹Milano, ²Londra - UK)

Aryl hydrocarbon receptor: a novel target for the anti-inflammatory activity of statin therapy

Giorgia Manni, Marco Gargaro, Letizia Mezzasoma, Giulia Scalisi, Eleonora Padiglioni, Giulia Mencarelli, Paolo Puccetti, Francesca Fallarino (Perugia)

The bile acid receptor GPBAR1 modulates CCL2/CCR2 signaling at the liver sinusoidal/macrophage interface and reverses acetaminophen-induced liver toxicity

Michele Biagioli¹, Adriana Carino¹, Chiara Fiorucci¹, Silvia Marchianò¹, Cristina di Giorgio¹, Martina Bordonì¹, Rosalinda Roselli², Monia Baldoni¹, Eleonora Distrutti¹, Angela Zampella², Stefano Fiorucci¹ (¹Perugia; ²Napoli)

Sphingosine 1-phosphate (S1P) receptor type 1 signaling induces an anti-atherogenic phenotype in macrophages and attenuates atherosclerosis in LDL-receptor-deficient mice

Francesco Potì¹, Enrica Scalerà¹, Renata Feuerborn², Josephine Fischer², Lilli Arndt³, Georg Varga², Evangelia Pardali⁴, Matthias D. Seidl², Gerhard Liebisch⁵, Bettina Hesse², Alexander H. Lukasz², Jan Rossaint⁶, Beate E. Kehrel⁷, Frank Rosenbauer², Thomas Renne⁶, Christina Christoffersen⁷, Manuela Simoni⁸, Ralph Burkhardt⁵, Jerzy-Roch Nofer⁶ (¹Parma; ²Münster - Germany; ³Leipzig - Germany; ⁴Frankfurt - Germany; ⁵Regensburg - Germany; ⁶Hamburg - Germany; ⁷Copenhagen - Denmark; ⁸Modena e Reggio Emilia)





Pharmacologic PPAR-gamma Activation Reprograms Bone Marrow Macrophages and Partially Rescues HSPC Mobilization in Human and Murine Diabetes

Mattia Albiero, Serena Tedesco, Stefano Ciciliot, Lisa Menegazzo, Marianna D'Anna, Valentina Scattolini, Roberta Cappellari, Andrea Cignarella, Angelo Avogaro, Gian Paolo Fadini (Padova)

GILZ (glucocorticoid-induced leucine zipper) regulates leukocyte liver infiltration via regulation of CCL2 expression during liver fibrosis development

Sara Flamini¹, Filipp Segreev², Zenobio Viana De Barros¹, Tommaso Mello¹, Andrea Gagliardi¹, Timofei Zatsepin², Carlo Riccardi¹, Graziella Migliorati¹, Stefano Bruscoli¹, Oxana Bereshchenko² (¹Perugia, ²Moscow - Russia)

Effect of statins on Alzheimer's disease and dementia risk: a meta-analysis of observational studies

Elena Olmastroni¹, Alberto Zamboni^{2,3}, Alberico L. Catapano^{1,2}, Manuela Casula^{1,2} (¹Milano; ²Sesto S. Giovanni; ³Padova)





08.30 | 10.00

Pharmacology of rare disease

Chairpersons: Marco Diana, Paolo Magni

Possible role of phosphodiesterases in skeletal muscle contractility: a focus on human Malignant Hyperthermia

Valentina Vellecco, Elisabetta Panza, Onorina Laura Manzo, Marianna Vallifuoco,
Antonio Mancini, Giuseppe Cirino, Mariarosaria Bucci (Napoli)

Prolonged activation of NCX1 and NCX2 in a mouse model of familial ALS prevents misfolded SOD1 accumulation, reduces neuroinflammation, ameliorates motor behavior and prolongs survival rate

Serenella Anzilotti, Valeria Valsecchi, Paola Brancaccio, Natascia Guida, Giusy Laudati,
Tiziana Petrozziello, Valentina Tedeschi, Ornella Cuomo, Luigi Formisano, Agnese Secondo,
Lucio Annunziato, Giuseppe Pignataro (Napoli)

Pharmacological impairment of Gaucher's disease gene product hinder microglia-to-neuron neuroprotective response

Electra Brunialti, Alessandro Villa, Ilaira Colombo, Alice Ratti, Federica Mornata,
Elisabetta Vegeto, Adriana Maggi, Paolo Ciana (Milano)

A novel mutation in the WFS1 gene causes the Wolfram syndrome and systemic inflammation

Eleonora Panfili, Giada Mondanelli, Ciriana Orabona, Maria L. Belladonna, Marco Gargaro,
Francesca Fallarino, Ursula Grohmann, Maria Teresa Pallotta (Perugia)

Effects of NaHS, an H2S donor, on skeletal muscle quality and performance of dystrophic mdx mice

Elisabetta Panza¹, Valentina Vellecco¹, Fabio Arturo Iannotti², Onorina Laura Manzo¹,
Martina Smimmo¹, Debora Paris², Mariarosaria Bucci¹, Giuseppe Cirino¹ (¹Napoli; ²Pozzuoli)





Functional and pharmacological study of two novel mutations in the SCN5A gene associated with Brugada syndrome in Italian patients

Francesca Gualandi¹, Cristina Balla¹, Antonella Liantonio², Rita Selvatici¹, Alessandra Ferlini¹, Matteo Bertini¹, Annamaria De Luca², Paola Imbrici² (¹Ferrara; ²Bari)

Simvastatin treatment does not ameliorate muscle pathophysiology in a mouse model for Duchenne muscular dystrophy

Ornella Cappellari^{1,2}, Sofia Nnorom², Kim E. Wells², John C.W. Hildyard², David Bull³, Dominic J. Wells² (¹Bari; ²London - UK; ³Duchenne - UK)

Understanding SOCE-related pathophysiological pathways in ultra-rare diseases triggered by STIM1/ORAI1 gain-of-function mutations

Beatrice Riva¹, Celia Cordero Sanchez¹, Marta Serafini¹, Alberto Potenzieri¹, Matteo Garibaldi², Tracey Pirali¹, Armando A. Genazzani¹ (¹Novara; ²Roma)





08.30 | 10.00

Basic and clinical research 3

Chairpersons: Fabrizio Gardoni, Vittorio Locatelli

Development of senolytic therapies

Saman Sharifi¹, Sara Zumerle¹, Marta Giacomello¹, Monica Montopoli¹, Andrea Alimonti^{1,2}
(¹Padova; ²Bellinzona - Switzerland)

Manipulation of dietary amino acids prevents and reverses obesity in male mice

Chiara Ruocco¹, Maurizio Ragni¹, Fabio Rossi¹, Fabiana Piscitelli², Rafael Maciel Ioris³,
Laura Tedesco¹, Ilenia Severi⁴, Lisa Rizzetto⁵, Matthias Scholz⁵, Kieran Tuohy⁵,
Vincenzo Di Marzo², Michele O. Carruba¹, Saverio Cinti⁴, Roberto Coppari³,
Alessandra Valerio⁶, Enzo Nisoli¹ (¹Milano; ²Pozzuoli; ³Geneva - Switzerland; ⁴Ancona;
⁵San Michele all'Adige; ⁶Brescia)

The hepatic microenvironment primes colorectal cancers cell behaviour modulating miRNAs expression

Alberta Bergamo¹, Gloria Ravegnini², Sabrina Angelini², Milena Guida¹, Gianni Sava¹,
Sabrina Pacor¹ (¹Trieste; ²Bologna)

Doxorubicin-induced immunogenic cell death is enhanced by ultrasound exposure in ovarian cancer cells

Roberto Canaparo, Federica Foglietta, Giampiero Muccioli, Enzo Terreno, Loredana Serpe
(Torino)

Druggable target Oxoeicosanoid Receptor 1 (OXER1) and its RACK1-associated pathway in breast cancer progression

Erica Buoso¹, Mirco Masi¹, Marco Bolis^{2,3,4}, Daniele di Marino, Luisa Maraccani¹, Elena Morelli¹,
Ambra Grolla⁶, Francesca Fagiani¹, Stefano Govoni¹, Emanuela Corsini², Cristina Travelli¹,
Enrico Garattini², Marco Racchi¹ (¹Pavia; ²Milano; ³Bellinzona - Switzerland; ⁴Lausanne -
Switzerland; ⁵Ancona; ⁶Novara)





Different effects of tryptophan 2,3-dioxygenase inhibition on SKMel-28 and HCT-8 cancer cell lines

Marta Cecchi, Angela Silvano, Mario D'Ambrosio, Cristina Luceri, Astrid Parenti (Firenze)

Effects of the treatment with sulforaphane in hypoxic conditions in human glioblastoma cell lines

Giulia Sita, Fabiana Morroni, Agnese Graziosi, Patrizia Hrelia (Bologna)

Real-time telemetry monitoring of energy metabolism and glutamate in the central complex of freely-walking *Gromphadorhina portentosa*

Gaia Rocchitta, Paola Arrigo, Andrea Bacciu, Patrizia Monti, Pier Andrea Serra (Sassari)





08.30 | 10.00

Pharmacovigilance, pharmaeepidemiology, pharmacoeconomics and Real World Evidence 3

Chairpersons: Robert Nisticò, Federico Pea

Changes in Anthropometric Parameters after anti-TNF-alpha therapy: New Insights from a retrospective evaluation and an Analysis of Data from the FAERS Database

Vera Battini¹, Faizan Mazhar¹, Albaraa Mohammed N. Marran³, Marco Pozzi²,
Elena Invernizzi¹, Giulia Mosini¹, Michele Gringeri¹, Sonia Radice¹, Emilio Clementi^{1,2},
Carla Carnovale¹ (¹Milano; ²Bosisio - Parini; ³Jizan - Saudi Arabia)

Changes in Anthropometric Parameters after Anti-TNF-alpha Therapy in Inflammatory Bowel Disease: A Systematic Review and Meta-analysis

Giulia Mosini¹, Faizan Mazhar¹, Vera Battini¹, Marco Pozzi², Elena Invernizzi¹,
Michele Gringeri¹, Annalisa Capuano³, Cristina Scavone³, Sonia Radice¹, Emilio Clementi^{1,2},
Carla Carnovale¹ (¹Milano; ²Bosisio-Parini; ³Napoli)

Adherence trajectories of biologic disease modifying anti-rheumatic drugs recorded in Tuscan administrative healthcare database: the Pathfinder study

Irma Convertino¹, Sabrina Giometto¹, Rosa Gini², Massimiliano Cazzato¹, Giulia Valdiserra¹,
Emiliano Cappello¹, Sara Ferraro¹, Marco Fornili¹, Giuseppe Turchetti¹, Valentina Lorenzoni¹,
Leopoldo Trieste¹, Marta Mosca², Corrado Blandizzi¹, Marco Tuccori¹, Ersilia Lucenteforte¹
(¹Pisa; ²Firenze)

Neurological outcomes in European patients treated with immune checkpoint inhibitors. Which mechanisms could be behind these serious complications?

Federica Fraenza, Rosanna Ruggiero, Barbara Stelitano, Cristina Scavone, Maria Giuseppa
Sullo, Francesco Rossi, Annalisa Capuano (Napoli)





A Systematic Review, Meta-Analysis and Meta-Regression Evaluating the Adverse Reactions to Erenumab in the Preventive Treatment of Migraine

Lanfranco Pellesi¹, Roberto De Icco², Hassan Youssef Alawie¹, Morten Andersen¹, David Liang¹, Sarkhan Amirgulyev¹, Mohammad Al-Mahdi Al-Karagholi¹, Faisal Mohammad Amin¹, Maurizio Sessa² (¹Copenhagen - Denmark; ²Pavia)

Effectiveness and safety profile of biological therapy in Inflammatory Bowel Disease: real life data from an active pharmacovigilance project

Maria Antonietta Barbieri, Anna Viola, Valentina Pisana, Paola Maria Cutroneo, Walter Fries, Edoardo Spina (Messina)

Real-world characteristics and use of disease-modifying anti-rheumatic drugs in patients with rheumatoid arthritis: a cross-national study

Ylenia Ingrasciotta¹, Saveria Serena Foti¹, Yinzhu Jin², Joan E. Landon², Seoyoung C. Kim², Gianluca Trifirò¹ (¹Messina; ²Boston - USA)

Undertreatment in psoriasis and psoriatic arthritis in a general population from Southern Italy

Valentina Isgrò, Ylenia Ingrasciotta, Valentina Lentile, Claudio Guarneri, Gianluca Trifirò (Messina)





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Personalized medicine and advanced therapies

Chairpersons: Francesco Caciagli, Laura Calabresi

An innovative approach for screening antiviral and antiproliferative drugs targeting G-quadruplex nucleic acids

Giovanni Ribauda, Alberio Ongaro, Maurizio Memo, Alessandra Gianoncelli (Brescia)

Dual CAR-T cell therapy anti-CD138 and CD19 combined with A2AR/CD73 pathway antagonist for the treatment of Multiple Myeloma

Nicole Crestan, Lorena Baboci, Federica Di Cintio, Monica Mossenta, Davide Busato, Lorenzo Marsili, Aharon Steffè, Idris Vruzhaj, Michele Dal Bo, Giuseppe Toffoli (Aviano)

Development of a Novel Nanoplatfrom for Theranostic Applications in Hepatocellular Carcinoma (HCC)

Aharon Steffè, Federica Di Cintio, Nicole Crestan, Monica Mossenta, Davide Busato, Lorenzo Marsili, Idris Vruzhaj, Lorena Baboci, Giuseppe Toffoli, Michele Dal Bo (Aviano)

Drug delivery therapy strategy through chitosan-based polymeric nanoparticles coated with anti-glypican-3 (GPC3) antibody and loaded with a chemotherapeutic drug to treat hepatocellular carcinoma

Monica Mossenta^{1,2}, Davide Busato^{1,2}, Federica Di Cintio^{1,2}, Lorenzo Marsili^{1,2}, Aharon Steffè^{1,2}, Nicole Crestan¹, Idris Vruzhaj¹, Lorena Baboci¹, Michele Dal Bo¹, Giuseppe Toffoli¹ (¹Aviano; ²Trieste)

Effect of seasons on four anti-epileptic drugs plasma levels

Francesco Chiara, Allegra Sarah, Irene Brescia, Elisa Arrigo, Silvia De Francia (Orbassano)





Perampanel in partial seizures, the importance of a method for measuring blood levels in the adjustment of multi-drug therapy

Bruno Charlier, Albino Coglianese, Federica De Rosa, Francesca Felicia Operto, Giangennaro Coppola, Valeria Conti, Valentina Manzo, Fabrizio Dal Piaz, Viviana Izzo, Amelia Filippelli (Salerno)

An integrated radiogenomic approach to monitor clonal heterogeneity of EGFR-mutated NSCLC

Federico Cucchiara¹, Marzia Del Re¹, Simona Valleggi¹, Chiara Romei¹, Iacopo Petrini¹, Maurizio Lucchesi¹, Stefania Crucitta¹, Eleonora Rofi¹, Annalisa De Liperi¹, Antonio Chella¹, Antonio Russo², Romano Danesi¹ (¹Pisa; ²Palermo)





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Pharmacognosy, phytotherapy and nutraceuticals 2

Chairpersons: Giacinto Bagetta, Anna Maria Pittaluga

Overweight/obese patients affected by chronic low back pain undergone to sulphurous mud-bath therapy

Maria Costantino^{1,2}, Valeria Conti¹, Graziamaria Corbi³, Mariagrazia Bathilde Marongiu², Mario Farroni¹, Amelia Filippelli^{1,2} (¹Salerno; ²Napoli; ³Campobasso)

Carnosine negatively modulates pro-oxidant and pro-inflammatory activities of M1 macrophages

Giuseppe Caruso^{1,2}, Claudia G. Fresta^{2,3}, Annamaria Fidilio², Giacomo Lazzarino⁴, Nicolò Musso², Margherita Grasso^{1,2}, Sara Merlo², Angela M. Amorini², Claudio Bucolo², Barbara Tavazzi⁴, Giuseppe Lazzarino², Susan M. Lunte^{2,3}, Filippo Caraci^{1,2} (¹Troina; ²Catania; ³Lawrence - USA; ⁴Roma)

The ability of green and red Brazilian propolis to improve cutaneous wound healing: a focus on HIF-1 pathway modulation and cellular regeneration

Andrea Magnavacca, Enrico Sangiovanni, Fabrizio Gelmini, Stefano Piazza, Marco Fumagalli, Giulia Martinelli, Giangiacomo Beretta, Mario Dell'Agli (Milano)

In vitro modulation of P-glycoprotein activity by Euphorbia intisy essential oil on acute myeloid leukemia cancer cell line HL60R

Monica Notarbartolo, Maurizio Sajeve, Sergio Rosselli, Marco Tutone, Manuela Labbozzetta, Paola Poma (Palermo)

Bergamot essential oil inhibits cholinergically-mediated contractions in rat isolated gut

Marilisa Straface, Laura Rombolà, Giacinto Bagetta, Luigi Antonio Morrone (Rende)





Oleacein reduces LPS-induced inflammatory response in THP-1 monocytes

Giovanni Enrico Lombardo, Santa Cirmi, Caterina Russo, Laura Musumeci, Alessandro Maugeri, Michele Navarra (Messina)

The anti-cancer properties of the furocoumarin bergamottin from *Citrus* spp. in SH-SY5Y human neuroblastoma cell line

Alessandro Maugeri, Santa Cirmi, Giovanni Enrico Lombardo, Laura Musumeci, Caterina Russo, Michele Navarra (Messina)

Effects of *Capsicum annuum* L. cv Senise in steatosis cellular model

Chiara Sinisgalli, Faustino Bisaccia, Luigi Milella, Angela Ostuni (Potenza)





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Pharmacovigilance, pharmacoepidemiology, pharmaeconomics and Real World Evidence 4

Chairpersons: Andrea Alimonti, Roberto Maggio

Cardiotoxicity in the experimental treatment for COVID-19

Andrea Burgalassi, Valentina Brilli, Elias Romanoc, Simone Sartori, Niccolò Lombardi, Giada Crescioli, Alessandra Ieri, Cecilia Lanzi, Alfredo Vannacci, Guido Mannaioni (Firenze)

Use of hydroxychloroquine in COVID-19 patients is associated with reduced mortality: findings from the observational multicentre Italian CORIST Study

Augusto Di Castelnuovo¹, Simona Costanzo², Raffaele De Caterina³, Licia Iacoviello^{2,4}, on behalf of the COVID-19 RISK and Treatments (CORIST) Collaboration, Giovanni de Gaetano¹ (1Napoli; 2Pozzilli; 3Pisa; 4Varese)

Public perception of laboratory animal testing: Will it change after SARS-CoV2?

Francesca Peletta, Roberto Ciccocioppo (Camerino)

A network approach for the study of drug (co)prescriptions: analysis of data from the ASL TO4 (Regione Piemonte, Italy)

Gianluca Miglio, Lara Basso, Lucrezia G. Armando, Sara Traina, Abdoulaye Diarassouba, Raffaella Baroetto Parisi, Mariangela Esiliato, Cristina Rolando, Elisa Remani, Clara Cena (Torino)

Monitoring the consumption and expenditure of systemic antibiotics: analysis in an Apulian AOU

Maria Viviana Fortunato¹, Edvige Quitadamo², Loredana Capobianco², Gabriella di Leo², Maria Rita Vecchia², Maria Blonda², Vittorio Renzone², Antonino Siniscalco², Carlo De Gregorio², Rosanna Stea² (1Salerno; 2Foggia)





Challenges in the development of Medical Devices containing hydrogen peroxide

Salvatore Bianco, Isabella Andreini (Pomezia)

The role of multi-database studies in the post-authorisation setting: a review of the EU PAS register

Janet Sultana¹, Salvatore Crisafulli¹, Luca L'Abbate¹, Mariana Almas², Ippazio Antonazzo³, Esme Baan⁴, Claudia Bartolini³, Maria Paola Bertuccio¹, Fedele Bonifazi⁵, Antonella Didio⁵, Vera Ehrenstein⁶, Carmen Ferrajolo⁷, Remy Francisca⁴, Annie Fourier-Reglat⁸, Joan Fortuny⁹, Rosa Gini³, Giulia Hyeraci³, Christel Hoeve⁴, Valentina Isgro¹¹, Christos Kontogiorgis¹⁰, Panagiotis Lalagkas¹⁰, Deborah Layton¹¹, Annalisa Landi⁵, Silvia Narduzzi¹², Leonardo Pereira¹³, George Poulentzas¹¹, Concita Rafaniello⁷, Simona Ravera⁵, Giuseppe Roberto³, Giulia Scondotto¹, Liberata Sportiello⁷, Maddalena Toma⁵, Massoud Toussi¹⁴, Katia Verhamme⁴, Elisabetta Volpe⁵, Gianluca Trifiro¹¹ (¹Messina; ²Lisbon - Portugal; ³Firenze; ⁴Rotterdam - The Netherlands; ⁵Bari; ⁶Aarhus - Denmark; ⁷Napoli; ⁸Bordeaux - France; ⁹Barcelona - Spain; ¹⁰Thrace - Greece; ¹¹London - UK; ¹²Utrecht - The Netherlands; ¹³Paris - France)





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Basic and clinical research 4

Chairpersons: Maria Rosaria Bucci, Diana Conte Camerino

Complete neural stem cell (NSC) neuronal differentiation requires a branched chain amino acids-induced persistent metabolic shift towards energy metabolism

Francesco Bifari¹, Sissi Dolci², Emanuela Bottani², Annachiara Pino², Marzia Di Chio², Stefania Zorzin², Maurizio Ragni¹, Raluca Georgiana Zamfir², Dario Brunetti¹, Donatella Bardelli¹, Pietro Delfino², Maria Grazia Cattaneo¹, Roberta Bordo¹, Laura Tedesco¹, Fabio Rossi¹, Patrizia Bossolasco¹, Vincenzo Corbo², Guido Fumagalli², Enzo Nisoli¹, Alessandra Valerio¹, Ilaria Decimo¹ (¹Milano; ²Verona)

Autophagy promotes survival of retinal ganglion cells in rodent models of acute glaucoma

Rossella Russo¹, Annagrazia Adornetto¹, Luigi Antonio Morrone¹, Carlo Nucci², Maria Tiziana Corasaniti³, Giacinto Bagetta¹ (¹Rende; ²Roma; ³Catanzaro)

Metformin action on reductive activity and energy production in pituitary tumor cells compared to normal proliferating cells

Giovanni Tulipano¹, Simone Paghera¹, Cristina Missale¹, Andrea Giustina² (¹Brescia; ²Segrate)

Pharmacological treatment of diabetic foot ulcer based on quercetin and oleic acid

Luca Gallelli¹, Rita Citraro¹, Antonio Leo¹, Erika Cione², Giovambattista De Sarro¹ (¹Catanzaro; ²Rende)

A protein-restricted, amino-acid defined diet impairs tumor growth in mice by the simultaneous induction of endoplasmic reticulum stress and mTOR inhibition

Maurizio Ragni, Chiara Ruocco, Laura Tedesco, Fabio Rossi, Michele O. Carruba, Alessandra Valerio, Enzo Nisoli (¹Milano; ²Brescia)





Effect of Fusarubin, a compound isolated from the endophytic fungi of *Cladosporium* spp, on senescence of acute myeloid leukemia cells

Sabrina Adorisio¹, Isabella Muscari², Lorenza Cannarile², Emira Ayroldi², Graziella Migliorati², Abdul Mazid³, Domenico Vittorio Delfino^{1,2} (¹Foligno; ²Perugia ³Dhaka - Bangladesh)

Hydrogen sulfide-hybrid corticosteroids as a novel strategy for respiratory diseases

Valentina Citi¹, Alma Martelli¹, Era Gorica¹, Flavia Giordano², Angela Corvino², Francesco Frecentese², Beatrice Severino², Ferdinando Fiorino², Lara Testai¹, Vincenzo Santagada², Giuseppe Caliendo², Vincenzo Calderone¹ (¹Pisa; ²Napoli)





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Pharmacogenetics

Chairpersons: Massimo Gennarelli, Elena Marcello

Polymorphisms in dopaminergic and serotonergic receptor genes and cariprazine clinical effects: a prospective study in schizophrenic patients

Marco Ferrari¹, Marco De Pieri², Emilio Bolla², Marco De Peri², Raffaella Colombo², Franca Marino¹, Marco Cosentino¹ (¹Varese; ²Mendrisio - Switzerland)

Increased Levels of Trackable Copy Number Aberrations (CNAs) in the cell-free DNA (cfDNA) of Locally Advanced Rectal Cancer (LARC) Patients Receiving Neoadjuvant Chemoradiotherapy (nCRT) and Pharmacological Implications on Treatment Outcome

Chiara Dalle Fratte¹, Steffen Dietz², Pitiithat Puranachot², Zhao Yuan², Agostino De Paoli¹, Elisa Palazzari¹, Elena De Mattia¹, Giuseppe Toffoli¹, Erika Cecchin¹ (¹Aviano; ²Heidelberg - Germany)

Associations of candidate gene polymorphisms with R-CHOP efficacy and toxicity in diffuse large B-cell lymphoma patients: a multicenter prospective pharmacogenetic study

Stefania Nobili¹, Gabriele Perrone¹, Marco Brugia¹, Sofia Kovalchuk¹, Benedetta Puccini¹, Ida Landini¹, Cristina Napoli¹, Giandomenico Roviello¹, Emanuele Cencini², Alberto Fabbri², Monica Bocchia², Lorenzo Iovino³, Mario Petrini³, Silvia Birtolo⁴, Lucia Loni⁵, Alessandro Melosi⁵, Simone Santini⁶, Alberto Bosi¹, Luigi Rigacci⁷, Enrico Mini¹ (¹Firenze; ²Siena; ³Pisa; ⁴Pescia; ⁵Lucca; ⁶Prato; ⁷Roma)

PI3K mutations detected in liquid biopsy are associated to reduced sensitivity to CDK4/6 inhibitors in metastatic breast cancer patients

Stefania Crucitta, Marzia Del Re, Giulia Lorenzini, Claudia De Angelis, Lucrezia Diodati, Diletta Cavallero, Irene Bargagna, Paola Cinacchi, Beatrice Fratini, Barbara Salvadori, Matteo Ghilli, Andrea Fontana, Romano Danesi, Federico Cucchiara (Pisa)





Investigation of genes and miRNAs associated with risk-taking propensity: markers shared with bipolar disorder and potential role as biomarkers of lithium response

Claudia Pisanu, Donatella Congiu, Giovanni Severino, Anna Meloni, Alberto Bocchetta, Raffaella Ardau, Caterina Chillotti, Maria Del Zompo, Alessio Squassina (Cagliari)

A patient-centered approach to prevent adverse clinical events in patients undergoing vascular surgery

Valeria Conti¹, Carminé Sellitto¹, Valentina Manzo¹, Teresa Iannaccone¹, Maria Costantino^{1,2}, Martina Torsiello¹, Emanuela De Bellis¹, Giancarlo Accarino¹, Giovanna Nicoletta¹, Graziamaria Corbi³, Amelia Filippelli¹ (¹Salerno; ²Napoli; ³Campobasso)

Toxic epidermal necrolysis: economic and pharmacogenetic considerations from the Cardarelli hospital experience

Chiara Resnati, Anna Grasso, Alessandra Salierno, Giuseppe Foreste, Gaetano Panico, Francesca Russo, Antonella Mastroianni, Valeria Diglio, Anna Lanza, Romolo Villani (Napoli)

Pharmacological targeting of GLUT1 to overcome doxorubicin resistance

Veronica Cocetta¹, Isabella Giacomini¹, Daniela Catanzaro¹, Daniela Gabbia¹, Eugenio Ragazzi¹, Marco Biagi², Maria Carrara¹, Monica Montopoli¹ (¹Padova; ²Siena)





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Gender and pediatric pharmacology

Chairpersons: Luigia Trabace, Lucia Vicentini

Hormone treatment impacts on high density lipoprotein function in transgender people

Maria Pia Adorni¹, Daan M. van Velzen², Francesca Zimetti¹, Marcella Palumbo¹, Franco Bernini¹, Suat Simsek^{2,3}, Cesare R. Sirtori⁴, Martin den Heijer², Massimiliano Ruscica⁴
(¹Parma; ²Amsterdam - The Netherlands; ³Alkmaar - The Netherlands; ⁴Milano)

Gender differences in pattern of use, baseline cardiovascular risk and concomitant use of serotonergic medications among triptan users in Tuscany, Italy

Giulia Hyeraci, Rosa Gini, Silvia Benemei, Chiara Lupi, Francesco de Cesaris, Pierangelo Geppetti, Giuseppe Roberto (Firenze)

Identification of sex-specific phenotypes in the secretome of human endothelial cells

Maria Grazia Cattaneo, Cristina Banfi, Maura Brioschi, Donatella Lattuada, Lucia M. Vicentini (Milano)

Treatment initiation and management of Italian children and adolescents with familial hypercholesterolemia enrolled in the lipigen paediatric group

Marta Gazzotti, Elena Olmastroni, Federica Bonaiti, Alberico L Catapano, Manuela Casula, Francesco Angelico, Marcello Arca, Maurizio Aversa, Giacomo Biasucci, Claudio Borghi, Paola Sabrina Buonomo, Paolo Calabrò, Francesca Carubbi, Francesco Cipollone, Nadia Citroni, Giuliana Fortunato, Ornella Guardamagna, Arcangelo Iannuzzi, Lorenzo Lughetti, Graziana Lupattelli, Giuseppe Mandraffino, Lorenzo Maroni, Giuliana Mombelli, Sandro Muntoni, Cristina Pederiva, Fabio Pellegatta, Livia Pisciotta, Arturo Pujia, Francesco Purrello, Paolo Rubba, Carlo Sabbà, Riccardo Sarzani, Giovanni Battista Vigna, José Pablo Werba, Sabina Zambon, Maria Grazia Zenti, Stefano Bertolini, Sebastiano Calandra, Patrizia Tarugi, Veronica Zampoleri (Milano)





EPTRI, a paediatric-dedicated research infrastructure to promote the availability of safer and efficacious drug for children

Donato Bonifazi¹, Angelica Intini¹, Mariangela Lupo², Fedele Bonifazi¹, Emmanuel Mikros³, Hana Kubova⁴, Marialuisa Lavitrano⁵, Marina Kleanthous⁶, Evelyne Jacqz-Aigrain⁷, Saskia de Wildt⁸, Catherine Tuleu⁹, Nunzio Denora¹, Giovanni Migliaccio¹, Adriana Ceci¹ (¹Bari; ²Pavia; ³Athens - Greece; ⁴Prague - Czech Republic; ⁵Graz - Austria; ⁶Nicosia - Cyprus; ⁷Paris - France; ⁸Nijmegen - The Netherlands; ⁹London - UK)

A case of cyclosporine-associated ocular toxicity linked to CYP3A4 polymorphism

Elisabetta Bigagli, Sara Ciullini Mannurita, Ebe Schiavo, Eleonora Gambineri, Cristina Luceri (Firenze)

Polypharmacy in a pediatric autoimmune hepatitis cohort: the Federico II teaching hospital experience

Chiara Resnati, Fabiola Di Dato, Federica Manco, Marinella Ferraro, Raffaele Iorio, Mauro Cataldi (Napoli)

Data Interoperability and FAIRification: a key technology in the context of the European Paediatric Translational Research Infrastructure - EPTRI

Elisabetta Volpe¹, Adriana Ceci¹, Donato Bonifazi¹, Oscar Della Pasqua², Claudio Franceschi³, Angelica Intini¹, Moshe Gavish⁴, Marina Kleanthous⁵, Giovanni Migliaccio¹, Graziano Pesole¹, Valeria Pignataro¹, Giuseppe Pontrelli⁶, Maddalena Toma¹, Fedele Bonifazi¹ (¹Bari; ²London - UK; ³Bologna; ⁴Haifa - Israel; ⁵Nicosia - Cyprus; ⁶Roma)





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Pain pharmacology and pathological addiction

Chairpersons: Daniela Parolaro, Paola Giuseppina Sacerdote

Binging on alcohol and social stress in adolescence: a translational research in Sicily

Fulvio Plescia, Valentina Castelli, Anna Brancato, Giuseppe Maniaci, Carla Cannizzaro (Palermo)

Deepening the regulation of PDYN gene, as a function of alcohol consumption

Fabio Bellia¹, Annalaura Sabatucci¹, Aranza Wille-Bille², Mariangela Pucci¹, Ricardo Marcos Pautassi², Claudio D'Addario^{1,3} (¹Teramo; ²Cordoba - Argentina; ³Stockholm - Sweden)

Developmental framework of alcohol binge-drinking: the impact on sociability and stress responsivity, while investigating on ecb system manipulation as a potential therapeutic strategy

Valentina Castelli, Amedeo Calè, Carla Cannizzaro, Anna Brancato (Palermo)

Effectiveness and safety between racemic methadone and levomethadone in opioid use disorder

Anita Ercolini, Giulia Borgioli, Marilena Emanuela Schirinzi, Luca Papini, Lorenzo Losso, Giacomo Baldereschi, Monica Salomoni, Daniele Innocenti, Sara Traversoni, Maya Salimova, Massimo Trombini, Giulia Pelagalli, Brunella Occupati, Cecilia Lanzi, Andrea Ungar, Stefano Fumagalli, Guido Mannaioni (Firenze)

Glial cell activation and altered metabolic profile in the spinal-trigeminal axis in a model of multiple sclerosis-associated trigeminal pain

Giulia Magni, Silvia Pedretti, Matteo Audano, Donatella Caruso, Nico Mitro, Stefania Ceruti (Milano)





**Development and characterization of a kappa opioid receptor (KOR)
partial agonist displaying more favorable pharmacological profile
in vitro and *in vivo***

Andrea Bedini¹, Brian Reed², Lorenzo Di Cesare Mannelli³, Laura Micheli³, Junwei Zhao¹,
Luca Gentilucci¹, Carla Ghelardini³, Santi Spampinato¹ (¹Bologna; ²New York - USA; ³Firenze)

**Biomarkers of pain in patients with bone metastases treated
with radiation therapy**

Emanuela Elisa Sorbara, Fabrizio Calapai, Luigi Cardia, Giulia Nardino, Gioacchino Calapai,
Carmen Mannucci (Messina)

Biomarkers of pain in women with breast cancer

Marco Calapai, Vincenzo Panebianco, Luisa Puzzo, Giuseppe Bova, Emanuela Elisa Sorbara,
Luigi Cardia, Giulia Nardino, Gioacchino Calapai, Carmen Mannucci (Messina)



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del FARMACO

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SOCIETÀ ITALIANA DI FARMACOLOGIA

POSTERS





POSTER SESSION

Basic and clinical research

- 4** **Histamine H3 receptor (H3R) ligands-Nitric Oxide (NO) donor hybrid compounds as a new therapeutic strategy for the treatment of glaucoma**
Silvia Sgambellone¹, Laura Lucarini¹, Annika Frank², David Reiner², Mohammad A. Khanfar², Emanuela Masini¹, Holger Stark² (¹Firenze; ²Düsseldorf - Germany)
- 13** **Drug delivery approach based on selective integrin ligands: targeted pro-apoptotic effect of 5-fluoruracil-integrin ligand conjugates**
Monica Baiula, Martina Cirillo, Giulia Martelli, Daria Giacomini, Santi Spampinato (Bologna)
- 65** **Characterization of Carbonic Anhydrase IX inhibitors on human endothelial cells**
Shirley Genah¹, Andrea Angeli², Claudiu Supuran², Lucia Morbidelli¹ (¹Siena; ²Sesto Fiorentino)
- 74** **Natalizumab dosing in multiple sclerosis: *in silico* assessment of dosing strategies**
Lara Basso, Arianna Carolina Rosa, Elisa Benetti, Gianluca Miglio (Torino)
- 88** **The novel finding of the mesoglycan fibrinolytic action: the Annexin A2 is the key player**
Raffaella Belvedere¹, Elva Morretta¹, Mauro Perretti², Maria Chiara Monti¹, Amelia Filippelli³, Antonello Petrella¹ (¹Fisciano; ²Londra - UK; ³Baronissi)
- 133** **GILZ controls hematopoietic stem cell and progenitor proliferation in experimental model of sepsis**
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- 149** **The unique amino-acid formula $\alpha 5$ prevents mitochondrial dysfunction and oxidative stress caused by doxorubicin in mouse cardiomyocytes**
Laura Tedesco¹, Fabio Rossi¹, Maurizio Ragni¹, Chiara Ruocco¹, Michele O. Carruba¹, Alessandra Valerio², Enzo Nisoli¹ (¹Milano; ²Brescia)



- 153 **Mechanosensitive and pharmacological properties of piezo1 channel in embryonic mesencephalic immortalized neurons**
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- 161 **Neuroregenerative and neuroprotective properties of dopamine D3 receptor agonists in human dopaminergic neurons derived from iPSC**
Laura Cavalleri^{1,2}, Mark J. Millan³, Michele Zoli², Ginetta Collo¹ (¹Brescia; ²Modena e Reggio Emilia; ³Croissy-Sur-Seine - France)
- 192 **Targeting the chloride intracellular channel 1 activity pinpoints a molecular vulnerability in human glioblastoma stem cells: antitumor effects of novel linear and cyclic biguanides**
Alessia Bosio, Adriana Bajetto, Alessandra Pattarozzi, Stefano Thellung, Tullio Florio, Federica Barbieri (Genova)
- 198 **Biased agonism at nociceptin/orphanin FQ receptors – a structure activity study on N/OFQ(1-13)-NH2**
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- 200 **Early alteration of diaphragm echodensity and function in mdx mice by non-invasive ultrasonography: a correlation with *in vivo* and *ex vivo* functional readouts**
Antonietta Mele¹, Paola Mantuano¹, Adriano Fonzino¹, Francesco Rana¹, Roberta F. Capogrosso¹, Francesca Sanarica¹, Jean-Francois Rolland², Ornella Cappellari², Annamaria De Luca¹ (¹Bari; ²Bresso)
- 203 **Proprotein Convertase Subtilisin/Kexin 9 (PCSK9) association to serum lipoproteins, effect of anti PCSK9 monoclonal antibodies**
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- 253 **Deletion of calcineurin from astrocytes reproduces proteome signature of Alzheimer's disease and epilepsy and predisposes to seizures**
Laura Tapella¹, Giulia Dematteis¹, Federico Alessandro Ruffinatti¹, Luisa Ponzone², Fabio Fiordaliso², Alessandro Corbelli², Enrico Albanese¹, Beatrice Pistolato¹, Jessica Pagano², Elettra Barberis^{1,3}, Emilio Marengo³, Claudia Balducci², Gianluigi Forloni², Chiara Verpelli², Carlo Sala², Carla Distasi¹, Mariaelvina Sala², Armando A. Genazzani¹, Marcello Manfredi¹, Dmitry Lim¹ (¹Novara; ²Milano; ³Alessandria)
- 257 **Effects of protein-protein interface disruptors at the ligand of the glucocorticoid-induced tumor necrosis factor receptor-related gene (GITR)**
Chiara Bianca Maria Platania¹, Simona Ronchetti², Carlo Riccardi², Graziella Migliorati², Maria Cristina Marchetti², Luisa Di Paola³, Francesca Lazzara¹, Filippo Drago¹, Salvatore Salomone¹, Claudio Bucolo¹ (¹Catania; ²Perugia; ³Roma)
- 261 **Chronic treatment with the antipsychotic blonanserin ameliorates the behavioral and molecular alterations produced in the prenatal immune activation model of schizophrenia**
Kerstin Creutzberg¹, Francesca Marchisella¹, Kenta Deriha², Emi Nishimura², Yoshiyasu Kigawa², Takao Ishii², Eri Hashimoto², Chiaki Kawanishi², Wataru Ukai², Marco Riva¹ (¹Milano; ²Sapporo - Japan)
- 269 **Calcineurin controls expression of EAAT1/GLAST in mouse and human cultured astrocytes through dynamic regulation of protein synthesis and degradation**
Giulia Dematteis¹, Elena Restelli², Roberto Chiesa², Eleonora Aronica^{3,4}, Armando A. Genazzani¹, Dmitry Lim¹, Laura Tapella¹ (¹Novara; ²Milano; ³Heemstede - The Netherlands)
- 282 **PACSIN2 as a modulator of autophagy and thiopurine sensitivity: *in vitro* evaluations in lymphoid and intestinal cells**
Giulia Zudeh, Raffaella Franca, Marianna Lucafò, Matteo Bramuzzo, Gabriele Stocco, Giuliana Decorti (Trieste)
- 336 **Correlation between tryptophan catabolism and the intrauterine renin-angiotensin system in human placenta**
Angela Silvano, Marta Cecchi, Viola Serravalli, Mariarosaria Di Tommaso, Astrid Parenti (Firenze)



- 345 **The marine compounds, Pelorol and 5-Epi-ilimaquinone, inhibit the PI3K/ Akt pathway and related regulatory-miRNAs in human melanoma cells**
Beatrice Polini¹, Sara Carpi¹, Ebda Sheriff², Simone Brogi¹, Graziano di Giuseppe¹, Antonella Romanini¹, Peter Proksch³, Vincenzo Calderone¹, Paola Nieri¹ (¹Pisa; ²Il Cairo - Egitto; ³Düsseldorf - Germany)
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