

5th National Congress of the Italian Society for Virology

One Virology One Health

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WEBINAR
5-6 JULY 2021

**Preliminary
Scientific Program**

FAD



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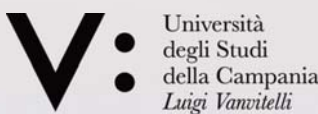
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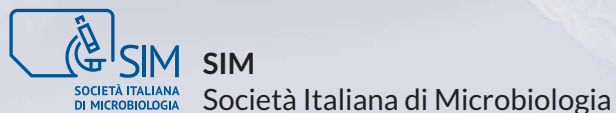
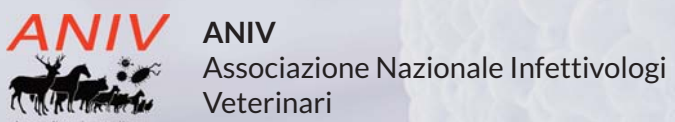
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PATRONAGE REQUESTED

MINISTERO DELLA SALUTE



UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II



SCIENTIFIC RATIONALE

The establishment of the germ theory and the identification of specific microbes as the causative agents of a wide variety of infectious diseases has led to enormous advances, particularly the development of vaccines and, ultimately, antimicrobials. Over 50 years ago, following the successes of the widespread use of penicillin, the development of polio vaccines and the discovery of drugs for tuberculosis, a general optimism pervaded many people with the famous urban legend describing the Surgeon General of the United States, William H. Stewart, declaring: "the war against infectious diseases has been won". Unfortunately, in the field of virology nothing is more wrong than that optimistic feeling, in fact, in an age of global air travel, climate change and ecological disturbances, we are constantly exposed to the threat of emerging infectious diseases. We are experiencing a viral pandemic with a devastating impact around the world that has changed our most basic rules of life. Due to the SARS-CoV-2 pandemic, the event was conceived as a digital version of the flagship annual meeting of the Italian Society of Virology SIV-ISV, whose symposia and activities are designed to achieve the same scientific and networking objectives.

The SARS-CoV-2 pandemic has obviously kept most of us very busy throughout 2020 and early 2021 and will continue to do so. The 2021 SIV-ISV Annual Meeting will therefore devote enough time to this topic for everyone to catch up with the latest developments and discuss burning issues with experts in this field. In fact, two specific sessions will be dedicated to analyzing different aspects of the pandemic: "COVID-19: evolution of a virus" and "COVID-19: pathogenesis, prevention and control".

Deepening the knowledge of SARS-CoV-2 will allow us to find effective 'weapons' against the COVID-19 disease. Clinical and scientific communities have made joint efforts to reduce the severe impact of the epidemic. However, it is important to generate new knowledge on the mechanisms of SARS-CoV-2 infection and the impact on its hosts, to guide the design of innovative therapies and specific vaccines for COVID-19. Understanding of individual and population immunity to SARS-CoV-2 remains incomplete and the development of reliable diagnostic has been the focus of the global scientific effort. Preventing new SARS-CoV-2 infections may be the most effective approach, not only to prevent COVID-19 but also to block the spread of the virus around the world.

The meeting will also feature sessions covering various aspects of general virology, from diagnostics to biotechnology as well as the latest research into innovative antiviral therapies and oncological virology. In addition, topics related to the virology of plants and the environment as well as veterinary virology are other topics of particular interest in the virological field and which deserve a dedicated space within the Congress.

Guido Antonelli (Rome, Italy)
Franco Buonaguro (Naples, Italy)
Arnaldo Caruso (Brescia, Italy)
Massimiliano Galdiero (Naples, Italy)
Giuseppe Portella (Naples, Italy)

MONDAY, JULY 5

OPENING OF POSTER SESSION AND SPONSOR EXHIBITION

08.00-08.30 Registration of participants (access and connection to web platform)

PLENARY SESSION

08.30-09.00 5th National SIV - ISV Congress - Welcome Address

SESSION 1: COVID-19: EVOLUTION OF A VIRUS

Chairs: **A. Caruso** (Brescia, Italy), **G. Palù** (Padua, Italy), **M. Tavio** (Ancona, Italy)

09.00-09.20 Lecture 1 - The crisis at the time of coronavirus: genomic evolution of SARS-CoV-2
M. Ciccozzi (Rome, Italy)

09.20-09.40 Lecture 2 - Intra-host evolution of SARS-CoV-2 during persistent infection
S. Fiorentini (Brescia, Italy)

09.40-10.00 Lecture 3 - Genetic variability of the SARS-CoV-2 genomes and its implications
F. Maggi (Varese, Italy)

10.00-10.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)

10.50-11.00 Discussion

PARALLEL SESSION

ROOM A

SESSION 2: VIRAL DIAGNOSIS

Chairs: **R. Cavallo** (Turin, Italy),
S. Menzo (Ancona, Italy)

11.00-11.20 Lecture 4 - A modern, integrated approach to molecular diagnostics of SARS-CoV-2
C.F. Perno (Rome, Italy)

11.20-11.40 Lecture 5 - Immunologic response to SARS-CoV2 infected patients and vaccinated subjects
F. Baldanti (Pavia, Italy)

11.40-12.00 Lecture 6 - Viral gastroenteritis: an overview of current diagnostic methods
G. Giammanco (Palermo, Italy)

12.00-12.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)

12.50-13.00 Discussion

13.00-14.00 Break

ROOM B

SESSION 3: ENVIRONMENTAL AND PLANT VIROLOGY

Chairs: **F. Di Serio** (Bari, Italy),
L. Rubino (Bari, Italy)

11.00-11.20 Lecture 7 - Metagenomics of plant-associated viromes
T. Candresse (Bordeaux, France)

11.20-11.40 Lecture 8 - Environmental surveillance for early pathogen identification, epidemic trends and genomic variability: a focus on SARS-CoV-2
G. La Rosa (Rome, Italy)

11.40-12.00 SELECTED ORAL COMUNICATION (2 O.C. per 10 minutes)

12.00-12.30 **SPONSORED SYMPOSIUM 1 with the unrestricted educational grant of QIAGEN Srl**
Chair: **T. Lazzarotto** (Bologna, Italy)
A changing respiratory infection diagnostic paradigm amidst the COVID-19 pandemic
D. Manissero (London, UK)

MONDAY, JULY 5

PARALLEL SESSION

ROOM A	ROOM B
<p>SESSION 4: GENETICS, BIOTECHNOLOGY AND BIOINFORMATICS Chairs: G. Portella (Naples, Italy), M.C. Parolin (Padua, Italy)</p> <p>14.00-14.20 Lecture 9 - Network medicine in infectious diseases G. Ippolito (Rome, Italy)</p> <p>14.20-14.40 Lecture 10 - CRISPR: diagnosis and treatment of viral infections M. Pistello (Pisa, Italy)</p> <p>14.40-15.00 Lecture 11 - Clinical applications of viral vectors for gene therapy N. Brunetti Perri (Naples, Italy)</p> <p>15.00-15.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)</p> <p>15.50-16.00 Discussion</p>	<p>SESSION 5: FRONTIERS IN GENERAL VIROLOGY 1 Chairs: A. Calistri (Padua, Italy), G. Franci (Salerno, Italy)</p> <p>14.00-14.20 Lecture 12 - Viral respiratory pathogens: direct and indirect mechanisms of lung injury N. Mancini (Milan, Italy)</p> <p>14.20-15.00 SELECTED ORAL COMUNICATION (4 O.C. per 10 minutes)</p> <p>15.00-16.00 SPONSORED SYMPOSIUM 2 Chairs: G. Scalia (Catania, Italy)</p>

PLENARY SESSION

SESSION 6: VIRUS-HOST INTERACTION

Chairs: **E. Affabris** (Rome, Italy), **G. Gribaudo** (Turin, Italy)

16.00-16.20 Lecture 13 - The SERINC enigma in viruses and cells
M. Pizzato (Trento, Italy)

16.20-16.40 Lecture 14 - ACE2: a key factor in regulating SARS-CoV2 and influenza virus infection
A.T. Palamara (Rome, Italy)

16.40-17.00 Lecture 15 - Identification of a novel gateway for SARS-CoV-2 entry into human endothelial cells
F. Caccuri (Brescia, Italy)

17.00-17.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)

17.50-18.00 Discussion

18.00-19.00 **SIV-ISV GENERAL MEMBER MEETING**

18.00-20.00 POSTER SESSION AND SPONSOR EXHIBITION

TUESDAY, JULY 6

OPENING OF POSTER SESSION AND SPONSOR EXHIBITION

PLENARY SESSION

SESSION 7: VIRAL ONCOLOGY

Chairs: **F.M. Buonaguro** (Naples, Italy), **P. Marconi** (Ferrara, Italy)

- 09.00-09.20 Lecture 16 - The oncogenic role of HPV in the pathogenesis of orofaryngeal and genital cancers
M.L. Tornesello (Naples, Italy)
- 09.20-09.40 Lecture 17 - Oncolytic viruses for cancer therapy
P. Malatesta (Genoa, Italy)
- 09.40-10.00 Lecture 18 - Therapeutic vaccines for virus-associated tumors
A. Venuti (Rome, Italy)
- 10.00-10.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)
10.50-11.00 Discussion

PARALLEL SESSION

ROOM A

SESSION 8: VETERINARY VIROLOGY

Chairs: **C. Buonavoglia** (Bari, Italy),
G. Vaccari (Rome, Italy)

- 11.00-11.20 Lecture 19 - SARS Cov-2, a threat to marine mammals: One Health, One Ocean, One Virology
C. Casalone (Turin, Italy)
- 11.20-11.40 Lecture 20 - Hepadnavirus in cats: the discovery of a human hepatitis B-like virus
G. Lanave (Bari, Italy)
- 11.40-12.30 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)
- 12.30-13.00 Discussion

ROOM B

SESSION 9: IMMUNITY AND VACCINES

Chairs: **D. Gibellini** (Verona, Italy),
M.G. Cusi (Siena, Italy)

- 11.00-11.20 Lecture 21 - Innate immune response: at the forefront of viral infections
R. Rizzo (Ferrara, Italy)
- 11.20-11.40 Lecture 22 - Caspase8-virus interplay and innate immunity to HSV-1 infection
A. Mastino (Messina, Italy)
- 11.40-12.00 SELECTED ORAL COMUNICATION (2 O.C. per 10 minutes)
- #### SESSION 10: UPDATES ON HIV
- Chair: **A. Manzin** (Cagliari, Italy)
- 12.00-12.30 Lecture 23 - New therapeutic strategies against HIV
A. Antinori (Rome, Italy)
- 12.30-12.40 Discussion
- 12.40-13.00 SELECTED ORAL COMUNICATION (2 O.C. per 10 minutes)

13.00-14.00 Break

TUESDAY, JULY 6

PARALLEL SESSION

ROOM A

SESSION 11: ANTIVIRAL THERAPY

Chairs: **M. Galdiero** (Naples, Italy),
E. Tramontano (Cagliari, Italy)

14.00-14.20 Lecture 24 - Oxysterols: a promising class of broad spectrum antivirals
D. Lembo (Turin, Italy)

14.20-14.40 Lecture 25 - Advanced development of filovirus medical countermeasures yields insights into viral pathogenesis
A. Griffiths (Boston, USA)

14.40-15.00 Lecture 26 - Intranasal fusion inhibitory lipopeptide prevents direct contact SARS-CoV-2 transmission in ferrets
M. Porotto (Naples, Italy)

15.00-15.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)

15.50-16.00 Discussion

ROOM B

SESSION 12: FRONTIERS IN GENERAL VIROLOGY 2

Chairs: **E. Riva** (Rome, Italy),
V. Martella (Bari, Italy)

14.00-14.20 Lecture 27 - MALDI-ToF mass spectrometry as innovative tool for viruses identification
A. Calderaro (Parma, Italy)

14.20-15.00 SELECTED ORAL COMUNICATION (4 O.C. per 10 minutes)

15.00-16.00 **SPONSORED SYMPOSIUM 3 with the unrestricted educational grant of ABBOTT MOLECULAR**

Chairs: **V. Svicher** (Rome, Italy)
Innovative approaches to control current and future viral diseases
J. Dhein (Wiesbaden, Germany)

PLENARY SESSION

SESSION 13: COVID-19: PATHOGENESIS, PREVENTION AND CONTROL

Chairs: **G. Antonelli** (Rome, Italy), **M. Clementi** (Milan, Italy), **A. Lazzarin** (Milan, Italy)

16.00-16.20 Lecture 28 - Clinical Characteristics and Treatment of COVID-19 patients: an update
M.C. Mastroianni (Rome, Italy)

16.20-16.40 Lecture 29 - SARS-CoV-2 diagnostics: a critical review of the current assays
M.R. Capobianchi (Rome, Italy)

16.40-17.00 Lecture 30 - SARS-CoV-2 and antiviral interferon response: who wins at tug-of-war?
C. Scagnolari (Rome, Italy)

17.00-17.50 SELECTED ORAL COMUNICATION (5 O.C. per 10 minutes)

17.50-18.00 Discussion

INTRODUCTION: **G. Antonelli** (Rome, Italy)

18.00-18.30 Closing Lecture 31 - SARS-CoV-2 and COVID-19: what has been done and what remains to do
G. Silvestri (Atlanta, USA)

18.30-19.00 **LURIA AWARDS** - Chair: **A. Caruso** (Brescia, Italy)

19.00-19.15 Closing Remarks

FACULTY

Elisabetta AFFABRIS (Rome, Italy)
Andrea ANTINORI (Rome, Italy)
Guido ANTONELLI (Rome, Italy)
Fausto BALDANTI (Pavia, Italy)
Nicola BRUNETTI PIERRI (Naples, Italy)
Franco BUONAGURO (Naples, Italy)
Canio BUONAVOGLIA (Bari, Italy)
Francesca CACCURI (Brescia, Italy)
Adriana CALDERARO (Parma, Italy)
Arianna CALISTRI (Padua, Italy)
Thierry Jean CANDRESSE (Bordeaux, France)
Maria Rosaria CAPOBIANCHI (Rome, Italy)
Arnaldo CARUSO (Brescia, Italy)
Cristina CASALONE (Turin, Italy)
Rossana CAVALLO (Turin, Italy)
Massimo CICCOCCHI (Rome, Italy)
Massimo CLEMENTI (Milan, Italy)
Maria Grazia CUSI (Siena, Italy)
Jens DHEIN (Wiesbaden, Germany)
Francesco DI SERIO (Bari, Italy)
Simona FIORENTINI (Brescia, Italy)
Gianluigi FRANCI (Salerno, Italy)
Massimiliano GALDIERO (Naples, Italy)
Giovanni GIAMMANCO (Palermo, Italy)
Davide GIBELLINI (Verona, Italy)
Giorgio GRIBAUDO (Turin, Italy)
Anthony GRIFFITHS (Boston, USA)
Giuseppe IPPOLITO (Rome, Italy)
Giuseppina LA ROSA (Rome, Italy)
Gianvito LANAVE (Bari, Italy)
Adriano LAZZARIN (Milan, Italy)
Tiziana LAZZAROTTO (Bologna, Italy)
David LEMBO (Turin, Italy)
Fabrizio MAGGI (Varese, Italy)
Paolo MALATESTA (Genoa, Italy)
Nicasio MANCINI (Milan, Italy)
Davide MANISSERO (London, UK)
Aldo MANZIN (Cagliari, Italy)
Peggy MARCONI (Ferrara, Italy)
Vito MARTELLA (Bari, Italy)
Antonio MASTINO (Messina, Italy)
Claudio MASTROIANNI (Rome, Italy)
Stefano MENZO (Ancona, Italy)
Anna Teresa PALAMARA (Rome, Italy)
Giorgio PALU' (Padua, Italy)
Maria Cristina PAROLIN (Padua, Italy)
Carlo Federico PERNO (Milan, Italy)
Mauro PISTELLO (Pisa, Italy)
Massimo PIZZATO (Trento, Italy)
Matteo POROTTO (Naples, Italy)
Giuseppe PORTELLA (Naples, Italy)
Elisabetta RIVA (Rome, Italy)
Roberta RIZZO (Ferrara, Italy)
Luisa RUBINO (Bari, Italy)
Carolina SCAGNOLARI (Rome, Italy)
Guido SCALIA (Catania, Italy)
Guido SILVESTRI (Atlanta, USA)
Valentina SVICHER (Rome, Italy)
Marcello TAVIO (Ancona, Italy)
Maria Lina TORNESELLO (Naples, Italy)
Enzo TRAMONTANO (Cagliari, Italy)
Gabriele VACCARI (Rome, Italy)
Aldo VENUTI (Rome, Italy)

GENERAL INFORMATIONS

DATE OF CONGRESS

Monday 5 July 2021 from 8.30 to 20.00

Tuesday 6 July 2021 from 9.00 to 19.15

ONLINE REGISTRATION:

www.congressosivisv.com

The registration is free but mandatory and includes:

- Participation at the webinar congress works
 - Attendance certificate
 - CME certificate
 - Post-event educational material (slides of the presentations)
 - Assistance of a technician before and during the webinar Congress
- **Accessing the Webinar** - You have to register in order to access the webinar. After you fill out the form, you will receive a mail with a link to confirm the activation of your account. After you activate your account, you will receive a message confirming registration, with instructions to access the live streaming on 5-6 July 2021. The webinar has a limited number of participants and is reserved to ECM-accredited professions and fields of study.
 - **E-learning typology:**
 - Live course on dedicated multimedia platform (virtual classroom, webinar) - synchronous e-learning

GUIDELINES FOR SPEAKERS AND CHAIRMEN

The Zoom room will be opened only for speakers and chairmen at:

Monday 5th July: 07.30 p.m.

Tuesday 6th July: 08.00 p.m.

(For participants room opens at the beginning time of the Congress)

ORGANIZING SECRETARIAT AND PROVIDER NR. 265



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GENERAL INFORMATIONS

- **CME Accreditation** - ECM accreditation will be required for the following professions:
 - Medical Doctor (Disciplines: all fields)
 - Nurse
 - Biologist
 - Pharmacist
 - Psychologist
 - Chemist
 - Veterinarian
 - Medical Laboratory Technician
- **Number of participants:** 800
- **Languages:** Italian/English
- **Assessment method** - To earn ECM credits from the e-learning event, you must:
 - Participate in at least 90% of the learning activities
 - Give correct answers to at least 75% of the multiple-choice questions (with double randomization) on the online learning questionnaire
 - a maximum of five attempts to pass the test are allowed
 - the questionnaire will be online for 3 (three) days after the event has ended.
 - Fill out the e-learning event perceived-quality form
 - Fill out the learning needs survey