

INTRODUCTION

Coronavirus disease (COVID-19) represents a public health crisis of global proportions. Caused by the severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), COVID-19 was first announced in December 2019 in Wuhan, the capital of China's Hubei province. The symptoms most commonly reported by COVID-19 patients include cough, fever, and shortness of breath. Other major clinical events generally observed in COVID-19 patients include hypertension, thromboembolism, kidney disease, diabetes mellitus, cerebrovascular and neurologic disorders. These systemic manifestations strongly suggest that the virus is targeting the endothelium. The recent cases of Kawasaki-like "multisystem inflammatory syndrome" reported especially in young COVID-19 patients support our view of a fundamental role of the endothelium in the pathogenesis of COVID-19.

To access host cells, SARS-CoV-2 uses a surface glycoprotein known as spike; ACE2 has been shown to be a crucial co-receptor for coronavirus entry. Other receptors on the surface of human cells have been suggested to mediate the entry of SARS-CoV-2, including transmembrane serine protease 2 (TMPRSS2), sialic acid receptors, and extracellular matrix metalloproteinase inducer (CD147, also known as basigin). Additionally, cathepsin B and L have been shown to be critical entry factors in the pathogenesis of COVID-19. Intriguingly, all these factors involved in the entry of SARS-CoV-2 in the host cell are expressed by endothelial cells (Sardu et al. J. Clin. Med. 2020, 9(5), 1417; doi: 10.3390/jcm9051417).

In this meeting, we will discuss the most recent advances in the research exploring the mechanistic phenomena linking endothelial (dys)function to COVID-19 outcome.

M. Galli & G. Santulli Chairmen



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CHAIRMEN

Massimo Galli

(Dipartimento di Scienze Biomediche e Cliniche "L. Sacco", Milan, Italy)

Gaetano Santulli

(Albert Einstein College of Medicine, New York City, NY and University "Federico II", ITME, Naples, Italy)

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TUESDAY, 29TH SEPTEMBER, AFTERNOON

SESSION I

Chairmen:	M. Galli (Milan, IT) G. Santulli (New York, NY, US / Naples, IT)
04.30 p.m. 04.50 p.m.	Z. Varga (Zurich, CH) COVID19, morphology, organ involvement and endothelial damage
04.50 p.m. 05.00 p.m.	Q&A
05.00 p.m. 05.20 p.m.	P. Brodin (Stockholm, SE) COVID19 and endothelial dysfunctions
05.20 p.m. 05.30 p.m.	Q&A
05.30 p.m. 05.50 p.m.	C. Almici (Brescia, IT) Circulating Endothelial Cells as a biomarker of endothelial damage
05.50 p.m. 06.00 p.m.	Q&A
06.00 p.m. 06.20 p.m.	G. Santulli (New York, NY, US / Naples, IT) Endothelial damage and clinical manifestations: understanding the pathophysiology of the disease
06.20 p.m. 06.30 p.m.	Q&A
06.30 p.m. 06.50 p.m.	P. Libby (Boston, US) Endothelial damage and clinical manifestations: COVID-19 Clinical Manifestations
06.50 p.m. 07.00 p.m.	Q&A
07.00 p.m. 07.20 p.m.	M. Ackermann (Mainz, DE) Vascular inflammation and Intussusceptive Angiogenesis in COVID-19
07.20 p.m. 07.30 p.m.	Q&A
07.30 p.m. 07.50 p.m.	A. Riva (Milan, IT) Importance of real-time monitoring of endothelial damage during COVID19
07.50 p.m. 08.00 p.m.	Q&A
08.00 p.m.	Conclusive remarks and take-home messages

FACULTY LIST

Maximilian Ackermann

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Petter Brodin

Associate professor of Immunology Science for Life Laboratory Dept of Women's and Children's Health Karolinska Institutet Stockholm, SE

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FONDAZIONE NTERNAZIONALE MENARINI

GENERAL INFORMATION

WEBINAR ONLINE ON:

29th September 2020 4.30 – 7.30 pm

OFFICIAL LANGUAGE

The official language of the Webinar will be English.

REGISTRATION

The Webinar is free to attend.

Please confirm the participation on Fondazione Menarini's website, following the direct link https://www.en.fondazione-menarini.it/Home/Events/Diagnostics-and-Covid-19/739/SEPTEMBER-29th-2020

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Prof. M. Sanguinetti

Department of Laboratory and Infectious Diseases Sciences
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Rome, Italy
President of ECCMID

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MONDAY, 5TH OCTOBER 2020, AFTERNOON

SESSION I

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Chairman:	M. Sanguinetti (Rome, IT)		
03.45 p.m. 04.00 p.m.	Welcome Addresses and Introduction Maurizio Sanguinetti President of the Virtual Meeting Giuseppe Caracciolo Fondazione Internazionale Menarini (Florence, IT)		
04.00 p.m. 04.15 p.m.	M. Ciccozzi (Rome, IT) Focus on the Epidemiology of SARS-CoV-2		
04.15 p.m. 04.25 p.m.	Q&A		
04.25 p.m. 04.40 p.m.	P. Roncada (Catanzaro, IT) Computational immune proteomics approach to target COVID-19		
04.40 p.m. 04.50 p.m.	Q&A		
04.50 p.m. 05.05 p.m.	G. Greub (Lausanne, CH) Molecular diagnostics of COVID-19: homemade or commercial methods?		
05.05 p.m. 05.15 p.m.	Q&A		
05.15 p.m. 05.30 p.m.	R. Canton (Madrid, ES) Antigenic tests versus molecular tests for the SARS-CoV-2 detection: different approaches for different clinical targets		
05.30 p.m. 05.40 p.m.	Q&A		
05.40 p.m. 05.55 p.m.	C. F. Perno (Milan, IT) Traditional vs. Fast PCR: the advent of POCT in Molecular Diagnostics		
05.55 p.m. 06.05 p.m.	Q&A		
06.05 p.m. 06.20 p.m.	M. Antonelli (Rome, IT) Managing Bacterial Co-infections in Covid-19 ICU patients		
06.20 p.m. 06.30 p.m.	Q&A		
06.30 p.m. 06.45 p.m.	S. Hober (Stockholm, SE) Development and usage of a high-performing diagnostic test of SARS-CoV-2 antibodies		
06.45 p.m. 06.55 p.m.	Q&A		
06.55 p.m. 07.10 p.m.	M. Sanguinetti (Rome, IT) Clinical applications of IgM-IgG antibody tests for SARS-CoV-2 infection diagnosis: rapid vs. laboratory based solutions		
07.10 p.m. 07.20 p.m.	Q&A		
07.20 p.m. 07.35 p.m.	C. C. Quattrocchi (Rome, IT) A deep-learning algorithm in the diagnosis of Covid-19		
07.35 p.m. 07.45 p.m.	Q&A		
07.45 p.m.	FINAL DISCUSSION AND CLOSING REMARKS		

FACULTY LIST

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GENERAL INFORMATION

WEBINAR ONLINE ON:

5th October 2020 04.00 – 07.45 pm

OFFICIAL LANGUAGE

The official language of the Webinar will be English.

REGISTRATION

The webinar is free to attend.

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