



VIRTUAL CONFERENCE

# CRITICAL ROLE OF CLINICAL LABORATORIES IN THE COVID-19 PANDEMIC

IFCC GLOBAL CONFERENCE ON COVID-19  
(PRELIMINARY PROGRAMME)

FEBRUARY 15-17, 2021

IFCC Scientific Symposia will be presented in the morning.  
Afternoon will be mostly dedicated to industry Educational Workshops.

**TIME SCHEDULE: PROGRAMME WILL START AT 08.00 AM, US EASTERN TIME  
(CORRESPONDING TO: 14.00 ROME; 21.00 BEIJING)**

All sessions will be recorded and fully available for registered people.



Professor Khosrow Adeli  
IFCC President

## WELCOME LETTER

It is my great pleasure to present this welcoming message to all attendees, speakers, and industry sponsors of the IFCC Global Conference on COVID-19. This virtual conference will bring leading experts around the world together to present the latest advances in COVID-19 diagnostics and therapeutics. The theme of this conference will be the Critical Role of Clinical Laboratories in the COVID-19 Pandemic. It will be a truly international event with presentations from all regions across the globe.

At the beginning of the pandemic, the IFCC established a Taskforce on COVID-19 to provide updates on epidemiology, pathogenesis, and diagnostics of COVID-19, as well as to develop practical recommendations for diagnostic testing and patient monitoring. Since establishment, the Taskforce has maintained an online Information Guide on COVID-19, which can be found on the IFCC website. This guide is updated biweekly, presenting the latest evidence on COVID-19. The Taskforce has now also published interim guidelines in the November 2020 issue of Clin Chem Lab Med to provide practical recommendations on the intended use, selection, evaluation, and implementation of laboratory tests used in the diagnosis of SARS-CoV-2 infection and monitoring of COVID-19 patients.

There is no doubt that the current pandemic has highlighted the critical role of clinical laboratory medicine, which until now has not been widely recognized within healthcare organizations or by the public. Clinical laboratory professionals continue to play a vital role in the diagnosis of SARS-CoV-2 infection, serological monitoring of individuals with past SARS-CoV-2 infection, and biochemical monitoring of hospitalized patients with COVID-19. Scientists, other medical professionals, industry leaders, and public health authorities have also been working diligently to understand, diagnose, treat, and prevent COVID-19, providing invaluable information and service.

Now, the IFCC feels it is more crucial than ever to virtually bring us all together on a global platform to present the most up to date evidence in the field of COVID-19, with a specific focus on innovations in diagnostics and laboratory management of hospitalized patients. This conference also provides the opportunity for us all to work towards a more collaborative clinical care model in diagnosing and treating COVID-19. Specifically, you will have access to:

- Plenary sessions delivered by leading scientists, physicians, and public health authorities.
- Ten scientific symposia, covering physiology, diagnostics, therapeutics, and technology
- Special presentations on the global response to COVID-19 in Africa, Asia-Pacific, Europe, Latin America, Arab Federation, and North America
- An industry panel with presentations from industry leaders on the latest IVD innovations
- Twelve educational industry workshops
- A young investigator forum with presentations from young scientists worldwide
- Scientific e-posters and virtual industry exhibits

I look forward to seeing many of you (virtually!) at this important and timely scientific event in February.

Professor Khosrow Adeli  
IFCC President



## CONFERENCE ORGANIZING COMMITTEE

Khosrow Adeli, Canada (Chair)  
Sergio Bernardini, Italy  
Andrea Horvath, Australia  
David Koch, USA  
Giuseppe Lippi, Italy  
Tomris Ozben, Turkey  
Cheng-Bin Wang, China

### Corporate Representatives:

-Rolf Hinzmann, Roche Diagnostics  
-Patricia Ravalico, Abbott Diagnostics

### Regional Federation Representatives:

-Rosa Sierra-Amor (Latin America)  
-Ana-Maria Simundic (Europe)  
-Ann Gronowski (North America)  
-Rajiv Erasmus (Africa)  
-Sunil Kumar Sethi (Asia-Pacific)  
-Osama Najjar (Arab Federation)

### Conference Organizing Secretariat (MZ Congressi):

-Stefano Montalbetti



## SPEAKERS & CHAIRS

Abderrazek Hedhili  
Aleksi Tikhonov  
Allan Njau  
Ana-Maria Simundic  
Andrea Horvath  
Ann Gronowski  
Annalise Zemlin  
Antonio Buño Soto  
Ashish Agravatt  
Benjamin Pinsky  
Bernard Gouget  
Brandon M. Henry  
Camilla Mattiuzzi  
Cao Bin  
Carl J. Lavie  
Chris Farnsworth  
Clara Benavent  
Corrado Di Natale  
Damien Gruson  
Daniel Satchkov  
Emmanuel J. Favalaro  
Fabian Sanchis-Gomar  
Federico Remes-Lenicov

Fernando Goldbaum  
Giuseppe Lippi  
Graciela Russomando  
Jac Dinnes  
James Nichols  
Jenny Doust  
Job Harenberg  
Jon Deeks  
Joseph Passarelli  
Marco Perrone  
María Belén García Fabiani  
Martina Montagnana  
Mary Kathryn Bohn  
Massimo Ciccozzi  
Meheri Emna  
Mette Christophersen Tollånes  
Michael Neumaier  
Miswar Fattah  
Mohamed Ben Moussa  
Muhittin Serdar  
Myrna Germanos  
Nevan Krogan  
Nicolene Steyn

Nqobile Ndlovu  
Osama Najjar  
Patricia Ravalico  
Patrick Bossuyt  
Prasenjit Mitra  
Rajiv Erasmus  
Ronda Greaves  
Rosa Sierra Amor  
Sam Schulman  
Santiago Fares Taie  
Sergio Bernardini  
Sibtain Ahmed  
Situmbeko Mwangala  
Sunil Kumar Sethi  
Susan Matthews  
Sverre Sandberg  
Tahir Pillay  
Tan Wenjie  
Tom Hope  
William Blake



## WEEK AGENDA (EASTERN STANDARD TIME / NEW YORK)

### MONDAY 15 FEBRUARY

	ROOM 1	ROOM 2	POSTER AREA	EXHIBITION AREA
08.00 - 09.30	<b>OPENING AND PLENARY SESSION</b> Critical Role of Laboratory Medicine in Public Health			
09.45 - 11.45	<b>SYM1</b> Pathophysiology of COVID-19	<b>SYM2</b> Emerging Tools in Fighting COVID-19		
12.00 - 13.00	Industry EduW 1	Industry EduW 2		
13.15 - 15.15	<b>SYM3</b> Global Response to COVID-19 Pandemic (Europe)	<b>SYM4</b> Global Response to COVID-19 Pandemic (Africa)	ePosters Open	eExhibits Open
15.30 - 16.30	Industry EduW 3	Industry EduW 4		
16.45 - 17.45	Industry EduW 5	Industry EduW 6		
18.00 - 19.00	Industry EduW 7	Industry EduW 8		

## TUESDAY 16 FEBRUARY

	ROOM 1	ROOM 2	POSTER AREA	EXHIBITION AREA
08.00 - 09.15	<b>PLENARY SESSION</b> Cardio-renal Involvement in COVID-19		ePosters Open	eExhibits Open
09.30 - 12.00	<b>Industry Panel</b> Technological Innovations for Today and Tomorrow	<b>Young Scientist Forum</b> Oral Presentations by Young Scientists from Around the World		
12.15 - 14.15	<b>SYM5</b> Global Response to COVID-19 Pandemic (Latin America)	<b>SYM6</b> Global Response to COVID-19 Pandemic (North America)		
14.30 - 15.30	Industry EduW 9	Industry EduW 10		
15.45 - 16.45	Industry EduW 11	Industry EduW 12		

## WEDNESDAY 17 FEBRUARY

	ROOM 1	ROOM 2	POSTER AREA	EXHIBITION AREA
08.00 - 09.30	<b>PLENARY SESSION</b> Clinical Evaluation of Tests for SARS-CoV-2 Infection		ePosters Open	eExhibits Open
09.45 - 11.45	<b>SYM7</b> Global Response to COVID-19 Pandemic (Asia-Pacific)	<b>SYM8</b> Global Response to COVID-19 Pandemic (Middle East/Arab Federation)		
12.00 - 14.00	<b>SYM9</b> Hemostasis and COVID-19	<b>SYM10</b> Technological Developments in Fighting COVID-19 Pandemic		
14.15 - 14.45	<b>CLOSING</b>			



## SCIENTIFIC PROGRAMME

### MONDAY 15 FEBRUARY (EASTERN STANDARD TIME/NEW YORK)

#### 8:00–9:30 AM

##### OPENING & PLENARY SESSION

Critical Role of Laboratory Medicine in Public Health  
Scientific presentations from Infectious Disease Experts at WHO, NIH, CDC, CAP  
IFCC Executive Board  
IFCC Taskforce on COVID-19

Break (15 min)

#### 9:45–11:45 ROOM 1

##### Symposium 1: Pathophysiology of COVID-19

Chair: Khosrow Adeli

- Giuseppe Lippi, Verona, Italy  
Pathophysiology of COVID-19 (30 min)
- Camilla Mattiuzzi, Trento, Italy  
Demographical, environmental and social predictors (30 min)
- Martina Montagnana, Verona, Italy  
Clinical risk factors for severe COVID-19 illness (30 min)
- Q&A (30 min)

Break (15 min)

#### 12:00–13:00

Industry Workshops

Break (15 min)

#### 9:45–11:45 ROOM 2

##### Symposium 2: Emerging Tools in Fighting COVID-19

Chair: Bernard Gouget

- William Blake, Boston, USA  
CRISPR and synthetic biology-based solutions applied to COVID-19 diagnosis (20 min)
- Corrado Di Natale, Rome, Italy  
Volatile compounds array for COVID-19 (20 min)
- Daniel Satchkov, Sheridan, USA  
Comprehending hundreds of thousands of COVID-19: Studies using mathematical models of language and AI (20 min)
- Tom Hope, USA  
Accelerating scientific search and exploration by mining and visualizing COVID-19 literature (20 min)
- Damien Gruson, Brussels, Belgium  
Telemedicine and Health at the Time of COVID-19 (20 min)
- Q&A (20 min)

### 13:15–15:15 ROOM 1

#### Symposium 3: Global Response to COVID-19 Pandemic (Europe)

Chair: Ana-Maria Simundic

- Antonio Buño Soto, Madrid, Spain  
Experience of the organization of laboratory medicine in Madrid's IFEMA field hospital during the first wave of the pandemic (30 min)
- Sverre Sandberg, Bergen, Norway  
How the government and the national quality improvement organisation of laboratory examinations (Noklus) cooperate in the pandemic (30 min)
- Muhittin Serdar, Istanbul, Turkey  
COVID-19 challenges and laboratory perspective from Turkey: Limitations and competences (30 min)
- Q&A (30 min)

Break (15 min)

### 15:30–16:30

Industry Workshops

Break (15 min)

### 16:45–17:45

Industry Workshops

Break (15 min)

### 18:00–19:00

Industry Workshops

### 13:15–15:15 ROOM 2

#### Symposium 4: Global Response to COVID-19 Pandemic (Africa)

Chair: Rajiv Erasmus

- Annalise Zemlin, Cape Town, South Africa  
Biochemical changes in COVID-19: Experience from Africa (20 min)
- Tahir Pillay, Durban, South Africa  
The promise of single domain antibodies (nanobodies) in COVID-19: Applications in diagnosis and therapy (20 min)
- Rajiv Erasmus, Cape Town, South Africa  
Unfolding the reasons and the theories for COVID-19 being less deadly in Africa (20 min)
- Ngobile Ndlovu, Zimbabwe  
COVID-19 diagnostic response: The Africa experience (15 min)
- Situmbeko Mwangala, Zambia  
Investigation of SARS-CoV-2 infections among health care workers in Lusaka District, Zambia (15 min)
- Allan Njau, Kenya  
Quality management for SARS-CoV-2 testing: Key indicators for starting small and medium size molecular laboratories in Kenya (15 min)
- Q&A (15 min)

**8:00–9:15**

## **PLENARY SESSION**

Cardio-renal Involvement in COVID-19

Chair: Carl J. Lavie

- Carl J. Lavie, New Orleans, USA  
Pathophysiology of cardio-renal involvement in COVID-19 (25 min)
- Brandon M. Henry, Cincinnati, USA  
The renin-angiotensin system in COVID-19 (25 min)
- Fabian Sanchis-Gomar, Valencia, Spain  
Cardiac biomarkers in COVID-19 (25 min)

**9:30–12:00 ROOM 1**

## **COVID-19 Industry Panel: Technological Innovations for Today and Tomorrow**

Co-Chairs:

Patricia Ravalico, Abbott (Chair, IFCC Taskforce on Corporate Members)

Joseph Passarelli, Roche (Corporate Representative to the IFCC Executive Board)

- Scientific presentations by industry scientists representing IFCC corporate members
- Panel discussion (30 min)

Break (15 min)

**12:15–14:15 ROOM 1**

## **Symposium 5: Global Response to COVID-19 Pandemic (Latin America)**

Chair: Rosa Sierra Amor

- Graciela Russomando, Asuncion, Paraguay  
COVID-19 infection and community transmission: Lessons learned from a public molecular Dx laboratory (20 min)

**9:30–12:00 ROOM 2**

## **Young Scientist Forum**

Chair: Santiago Fares Taie

- Ashish Agravatt, India  
Rapid tests: Antibody & antigen tests (15 min)
- María Belén García Fabian, Argentina  
CRISPR: Disrupting technology (15 min)
- Sibtain Ahmed, Pakistan  
Utility of prognostic biomarkers in COVID-19 (15 min)
- Marco Perrone, Italy  
Clinical management & drugs (15 min)
- Nicolene Steyn, South Africa  
COVID in children (15 min)
- Ashlin Rampul, South Africa  
Nanobodies for COVID (15 min)
- Clara Benavent, Spain  
PCR targets and sensitivity (15 min)
- Aleksei Tikhonov, Russia  
Antibody test development (15 min)
- Mary Kathryn Bohn, Canada  
Pediatric evaluation of COVID-19 serology assays (15 min)

**12:15–14:15 ROOM 2**

## **Symposium 6: Global Response to COVID-19 Pandemic (North America)**

Chair: Ann Gronowski

- Benjamin Pinsky, Stanford, USA  
Method validation for COVID-19 testing (20 min)



- Fernando Goldbaum, Buenos Aires, Argentina  
Equine polyclonal neutralizing antibodies (Epabs) for the treatment of severe COVID-19 patients (20 min)
- Cecilia Tapia  
Diagnostic approach in networked laboratories, Chilean experience (20 min)
- Federico Remes-Lenicov, Buenos Aires, Argentina  
Emergency establishment of a SARS-CoV-2 test center at an academic lab in the University of Buenos Aires, Argentina (20 min)
- Maria-Elizabeth Menezes, Rio de Janeiro, Brazil  
The coronavirus storm: The pandemic situation at the bench (20 min)
- Q&A (20 min)

Break (15 min)

**14:30-15:30**

Industry Workshops

Break (15 min)

**15:45-16:45**

Industry Workshops

- Victoria Zhang, Rochester, USA  
AACC Taskforce COVID-19 Serology Guidelines (20 min)
- Chris Farnsworth, St. Louis, USA  
SARS-CoV-2 serology: Utilization and outstanding questions (20 min)
- Nevan Krogan, San Francisco, USA  
Multi-omics/systems approach to COVID investigation (20 min)
- Q&A (20 min)

**8:00–9:30**

## **PLENARY SESSION**

Clinical Evaluation of Tests for SARS-CoV-2 Infection

Chair: Andrea Horvath

- Patrick Bossuyt, Amsterdam, Netherlands  
When disaster strikes: How to balance unmet needs with imperfect tests in an emergency situation of a pandemic? (20 min)
- Jac Dinnes and Jon Deeks, Birmingham, UK  
State-of-the-art of diagnostic tests: What did we learn from the Cochrane systematic reviews of existing test evaluations? (20 min)
- Jenny Doust, Brisbane, Australia  
Can we do better? Framework for the evaluation of SARS-CoV-2 tests (20 min)
- Q&A (30 min)
- Break (15 min)

**9:45–11:45 ROOM 1**

## **Symposium 7: Global Response to COVID-19 Pandemic (Asia-Pacific)**

Chair: Sunil Kumar Sethi

- Tan Wenjie, China  
Discovery of COVID-19 (20 min)
- Miswar Fattah, Indonesia  
Variability of molecular testing for SARS CoV-2 (20 min)
- Prasenjit Mitra, India  
COVID-19 pandemic: Perspectives from India (20 min)
- Susan Matthews, Australia  
SARS-CoV-2 molecular-based testing – experience from the Aboriginal and Torres Strait Islander COVID-19 point-of-care testing program in rural and remote Australia (20 min)
- Cao Bin, China  
Atypical pneumonia to COVID-19 (20 min)
- Q&A (20 min)

Break (15 min)

**12:00–14:00 ROOM 1**

## **Symposium 9: Hemostasis and COVID-19**

Chair: Giuseppe Lippi

- Emmanuel J. Favaloro, Sydney, Australia  
ADAMTS13 and Von Willebrand Factor testing in COVID-19 and beyond (30 min)

**9:45–11:45 ROOM 2**

## **Symposium 8: Global Response to COVID-19 Pandemic (Middle East/Arab Federation)**

Co-Chairs: Osama Najjar  
Abderrazek Hedhili

- Mehiri Emna, Tunisia  
Impact of COVID-19 in the Middle East (25 min)
- Myrna Germanos, Lebanon  
Impact of COVID-19 (25 min)
- Osama Najjar, Palestine  
AFCB Response to COVID-19 crisis (25 min)
- Mohamed Ben Moussa, Tunisia  
Tunisian Mobile Military Laboratory and COVID-19 management (25 min)
- Q&A (20 min)

**12:00–14:00 ROOM 2**

## **Symposium 10: Emerging Technologies in Fighting COVID-19**

Chair: Sergio Bernardini

- Mette Christophersen Tollånes, Bergen, Norway  
Quality and clinical use of rapid tests for COVID-19 (20 min)

- Job Harenberg, Heidelberg, Germany  
Laboratory diagnostics of COVID-19 related thromboembolism (30 min)
- Sam Schulman, Hamilton, Canada  
Anticoagulation and laboratory monitoring in COVID-19 (30 min)
- Q&A (30 min)

- James Nichols, Nashville, USA  
CLSI COVID testing resources to assist labs with their validations and implementation of new COVID tests as well as quality management of the testing after implementation (20 min)
- Ronda Greaves, Sydney, Australia  
Managing rapid changes in LC/MS during the COVID pandemic: State-of-art (20 min)
- Michael Neumaier, Heidelberg, Germany  
Innate and adaptive immunological response to SARS-CoV-2: Implications for vaccine (20 min)
- Massimo Ciccozzi, Rome, Italy  
COVID-19 phylogenesis and mutations: Implications for vaccine (20 min)
- Q&A (20 min)

**14:00-14:30**

**CLOSING**

IFCC Executive Board

IFCC Taskforce on Covid-19



## ABSTRACTS

[PLEASE CLICK HERE TO SUBMIT YOUR ABSTRACT](#)

**DEADLINE TO SUBMIT YOUR PAPERS: 5 JANUARY 2021**  
(Abstracts are limited to 3250 characters, spaces included)

### YOUNG INVESTIGATOR ORAL PRESENTATIONS

Call for submissions for COVID-19 related oral presentations. Diverse and high ranking proposals will be selected (can be data-driven or content-based)

**VIRTUAL E-POSTER SESSION:** for presentation by IFCC members and young scientists

Congress delegates are cordially invited to submit abstracts of their scientific work for presentation as a free communication at the IFCC Global Conference on COVID-19 in February 2021. An unlimited number of abstracts may be submitted provided the presenting author applies for “full registration”.

Abstracts are welcome in all fields of clinical chemistry, hematology, clinical molecular biology and laboratory medicine, in the broader sense. Free communications are primarily presented via poster. A limited number of abstracts will be selected for oral presentation during symposia. Authors wishing to compete for these oral communication slots should mark the appropriate field on the on-line abstract-submission form. Abstracts are limited to 3250 characters, spaces included.

### ABSTRACT TOPICS

- COVID-19: innovations in In vitro diagnostics
- Molecular diagnosis of SARS-CoV-2 Infection
- Advances & challenges in viral antigen testing
- Advances in serological assays to monitor viral exposure
- Rapid testing and POCT diagnostics
- Antigen testing: Point of care and lab-based assays
- Analytical and clinical assay validation
- Serology testing and immunity
- Molecular testing and infectivity
- External quality assessment and assay standardization
- Orthogonal testing strategies
- Biochemical/hematological markers in patient monitoring
- Clinical risk scores and their global application
- Pediatric management of SARS-CoV-2 viral infection or exposure
- Multisystem inflammatory syndrome in children (MIS-C)
- Laboratory biosafety management
- COVID-19: Clinical/Public Health
- Preventive Medicine, Public Health and COVID-19
- COVID-19 treatment & future perspectives:
- Emerging treatments and clinical practice paradigms
- Clinical value of Remdesivir
- Pharmacology and TDM
- Prognosis, pre/post exposure prophylaxis and antiviral treatment
- Convalescent plasma, selection of recipient and donor
- COVID-19 and multisystem organ Involvement
- Progression from respiratory infection to systemic disease
- Hematology and thrombotic complications
- Cardiovascular implications
- Gastrointestinal complications
- Dermatological manifestations
- Rheumatic diseases and COVID-19 susceptibility
- Pulmonary fibrosis and lung function
- Neurological associations
- Nephrology & the vasculature
- Pathological anatomy and cytology
- Key risk factors and role in pathophysiology
- Mental health in the face of the COVID-19 pandemic



## REGISTRATIONS

[PLEASE CLICK HERE TO REGISTER](#)

Online registrations available with the following fees:

**EARLY REGISTRATION FEE** – valid within 20 January 2021:

IFCC NATIONAL SOCIETY MEMBERS AND NON-MEMBERS	€ 100
CORPORATE/INDUSTRY REPRESENTATIVES	€ 100
YOUNG SCIENTISTS/TRAINEES (=/ $<$ 40 YEARS)	FREE OF CHARGE

**AFTER 20 JANUARY 2021:**

IFCC NATIONAL SOCIETY MEMBERS AND NON-MEMBERS	€ 150
CORPORATE/INDUSTRY REPRESENTATIVES	€ 150
YOUNG SCIENTISTS/TRAINEES (=/ $<$ 40 YEARS)	€ 50

Registration will allow you to:

- enter all sessions of the programme (both plenary and parallel)
- ask “live” questions and interact with the speakers
- visit industry virtual booths and attend educational workshops
- get a Certificate of Attendance
- enter the recorded sessions for 12 months after the conference date



## VIRTUAL INDUSTRY EXHIBITS AND WORKSHOPS

Opportunities for both live and recorded exhibits and workshops by corporate members, IVD manufacturers as well as other member and non-member industry partners.

More information will be sent soon directly to companies’ representatives.



**VIRTUAL NETWORKING  
ONLINE CHAT ROOM**



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