



IZS

TERAMO
/

ISTITUTO
ZOOFILATTICO
SPERIMENTALE
DELL'ABRUZZO
E DEL MOLISE
"G. CAPORALE"

ONE HEALTH AWARD

Teramo, 14-16 October 2022

OHA



14 October - Opening of the conference

The Covid-19 pandemic has brought to the attention of world public opinion a concept well known to international experts: the need to look at our planet, its environment and its living species in a new and innovation vision.

Deforestation, climate change, demographic growth of the human population, globalization and continuous contact between human, domestic and wild animals were elements mentioned in the words of welcome by the Director General of the IZS of Teramo, **Nicola D'Alterio**, the political authorities and **Monsignor Parolin** who talked of a new awareness acquired even among "non-experts" with the Covid-19 pandemic: human health is inextricably linked to that of the environment and of all beings that populate the earth. The "One Health, One Earth" principle, the subject of the event, clearly summed up this important concept.



LECTIO MAGISTRALIS

Stefano Bertuzzi – CEO, American Society for Microbiology, USA



The increase of the frequency of contacts between human and wild animals has been the focus of the speech of Prof. Bertuzzi by highlighting, therefore, the increased risk that pathogens, usually circulating in the wild, can overcome species barriers, even infecting humans. At the same time, globalization increases the pandemic potential. Veterinary surveillance is crucial in facing this new challenge, especially in wild animals, in order to understand what is circulating in the environment before its possible passage to humans. But, as Bertuzzi points out, there is another major challenge for 21st century society: antimicrobial resistance (AMR), increasingly becoming one of the leading causes of death in the human population.



One Health One Earth

A new understanding of the world

Edward C. Holmes – Professor of Evolutionary Biology at the University of Sydney. Prof. Holmes presents the intense and detailed work that led to demonstrating that Wuhan was the epicenter of the Covid-19 pandemic, and that animals sold in Wuhan market between November and December 2019 were susceptible to SARS-CoV-infection 2.

Stacey Schultz-Cherry – Virologist at St. Jude Children's Research Hospital, Memphis, Tennessee, USA and Deputy Director of the World Health Organization's Collaborating Center for Ecological Studies on Influenza in Animals. Focus of her speech is the danger posed by avian flu virus to the world population.

Janice Ciacci-Zanella – Veterinarian, researcher in the Area of Animal Virology and General Director of the Embrapa Pig and Poultry Research Center, Brazil. Member of the One Health High Level Expert Panel (OHHLEP, WHO / FAO / WOAH / UN). Her speech focuses on emerging viruses of animals and humans.



OHA

15 October

PANEL DISCUSSION

One Health and the Italian National Health System

Moderator: **Paolo Castignani**, Journalist

Gianni Rezza – General Director – General Direction of Health Prevention, Ministry of Health

Doctor Rezza presents a series of human diseases with a clear zoonotic origin (Ebola, HIV, plague ...), focusing on the three coronaviruses responsible for serious human disease (SARS-CoV, MERS-CoV, SARS-CoV-2). His speech underlines how constant contact between humans and wild environment can establish the right conditions for the emergence of pathogens mainly hosted by rodents and bats.

Stefano Vella – Professor of Global Health, Catholic University of the Sacred Heart of Rome

Professor Vella stresses the importance of an integrated surveillance for the implementation of pre-pandemic plans. Animals host a huge number of pathogens, some still partially unknown. Of them, 60% are potentially pathogenic for humans. Vaccination – when available – remains a fundamental prevention strategy, and the new RNA technology makes it possible to create new vaccines in a short time when compared with other technologies. Thanks to this innovation, Covid-19 vaccines were developed in a very short time, and they can be quickly modified and adapted to the new circulating variants. Constant adaptation is a need already underlined by the anti-flu vaccines, updated every year on the basis of viral circulation data. Surely, underlines Vella, the ideal solution would be a vaccine able to cover all the variants of SARS-CoV-2 and flu viruses. Unfortunately, at the moment it seems a difficult result to achieve, so in its conclusions Vella addresses the importance of adopting shared preparation and intervention strategies, common to all Countries, in order to ensure a systematic and worldwide approach. Pandemics always happened in human history, but in recent years the interval between one event and another has been considerably reduced, so it is necessary to maintain a constant level of preparation, enabling us to promptly deal with the next one.

Antonio Sorice – Head of Veterinary Department ATS Bergamo

Doctor Sorice leads the public to the very Italian epicenter of the pandemic: Bergamo. His speech narrates the experience of March 2020, when, as substitute of the Medical Director of the Bergamo ATS in the coordination of the Medical and Health Area departments, he faced the emergency with

limited resources and a growing number of patients. Thanks to his knowledge of the territory and to the emergency plans usually activated in veterinary medicine, he was able to implement a series of interventions, such as telephone service for home assistance of positive patients and the establishment of "Covid- Hotel" for recovered but still positive patients. These initiatives allowed to free up hospital beds while maintaining infected patients in isolation. Then, as Sorice underlines, there was a great example of collaboration and solidarity: the shipping of oxygen from the Marche region, the collaboration with the IZS of Teramo and of the Venezie for the analysis of swabs, the transfer of swabs to the receiving facilities for free by private transporters. These, and many other things, made it possible to thoroughly test all the patients of the RSA (Health Care Residences), allowing monitoring of the most fragile people. This strategy ensured the isolation of infected patients and the protection of people who had not yet come into contact with the virus. A clear lesson emerges from the intervention of the Head of the Veterinary Department of the Bergamo ATS: the importance of adopting shared and comprehensive intervention strategies, without barriers or distinctions between countries and between professional figures. Only collaboration can bring better results.

Americo Cicchetti – Director of ALTEMS, High School of Economics and Management of Health Systems, Catholic University of "Sacro Cuore" of Milan

When talking about public health, prevention is still considered just a cost. Not so, according to Professor Cicchetti, who propose the concept of investment, accompanied by a fundamental change: the transition from a current state of resilience to a more useful state of antifragility. Antifragility is the ability to learn from mistakes in order to be able to resist future "shocks" and unexpected events thanks to the tools already acquired from previous experience. A vision that could guarantee better answers in the future, both at economic and health level, already put in practice by Croatia and Bosnia Herzegovina. The two countries were able to better cope with the Covid-19 pandemic thanks to the acquisition of the concept of antifragility and the overcoming of the concept of resilience: their health system was already used to managing health emergencies in times of war or natural disasters, so it was able to deal promptly and appropriately with the pandemic emergency by adopting already consolidated tools.

OHA TALK

Bringing science to the general public

Valerio Rossi Albertini – CNR physicist and academic



In his speech "A shrimp will save us", Professor Rossi Albertini explains the "new" idea of circular economy, a strategy always applied by nature, where concepts like waste and garbage, exclusively human, do not exist. Everything becomes an element for the survival of the Earth macrosystem's components. The shrimp of the title belongs to a very clear example: a hermetically sealed microsystem made up of only 3 elements: algae, bacteria and shrimp. Rossi Albertini demonstrates how this system, in which nothing enters and nothing leaves, is totally self-sufficient. Each species is interdependent on the other two, using a single source of energy: sunlight. Solar energy becomes the focus: unlike the energy obtained from gas and oil, not only it is infinite and clean, but it could lead to the end of many "energy conflicts" in the world. A change, perhaps difficult, but nevertheless achievable. And, just to demonstrate that change is possible, Rossi Albertini concludes by recalling how many environmental mistakes of the past have been remedied..

One Health One Earth

Global health

Institutions and politics facing the biggest challenge



Dibattito sostenuto da:

Maurizio Martina – FAO Deputy General Director

Jean-Philippe Dop – Deputy Director of the World Organization of Animal Health (WOAH)

Francesco Branca – Director of the Nutrition and Food Safety Department of the World Health Organization (WHO)

Ibrahim El-Ziq – Representative of the World Health Organization (WHO) in Tunisia

Moderator: **Francesco Cancellato**, Director of “Fanpage”



The debate focuses mainly on the readiness of countries, both for future pandemics and for the current health and food security crises. Panel's participants address the importance of multilateralism, inviting the adoption of common and coordinated policies between the various countries in order to find common solutions. In other words, a re-reading of the concept of

globalisation, to be seen not as a negative phenomenon, but as a tool to guarantee cooperation between states in order to face global problems, as demonstrated by the Covid-19 pandemic. Afterwards, the debate moves towards the development of alternative agricultural strategies, resistant to drought and capable of satisfying the food needs of the ever-increasing human population, opposed to the ones used today, insufficient and contributing to environmental crises. Furthermore, the One Health framework must encompass climate change. The 2022 summer was the driest in recent decades, underlining once again the need to develop innovative agricultural methods. The urgency of innovative solutions is underlined by examples such as Somalia, hit by a very serious drought in 2022, or the malnutrition of so many children in different parts of the world.

In this complex framework, the speakers highlighted the role that International Organizations (WHO-FAO-WOAH-UNEP) and current international initiatives (e.g. One Health High-Level Expert Panel) play in placing, at the center of Governments' approach, "One Health" concept as an integrated and unifying method, able to balance and optimize the health of people, animals and ecosystems in a sustainable way. Finally, the discussion addresses a solid collaboration existing between Tunisia (Ministry of Health) and Italy (IZS of Teramo). A project aiming at increasing the capabilities of genomic surveillance and characterization of pathogens (endemic and emerging) through new-generation technologies, continuous exchange of information and reciprocal knowledge.

The conference hosted the intervention of **David Quammen**, author of "*Spillover-The evolution of pandemics*". He recalled that the human being is an animal species, inextricably linked to the others, and all part of an ecosystem where there is interaction of multiple elements (including bacteria and viruses). He also recalled the reasons why it is essential to approach global health with a multi-sectoral approach with the aim of preventing, or at least mitigating, spillover phenomena and pandemics. David Quammen praised the IZS of Teramo for the One Health Award because initiatives of this kind help to keep the attention high on Global Health issues and on the prevention of future pandemics.



AWARDS

Italian scientist: **Giuseppe Lippi**

Physician, specialized in Clinical Biology, Professor of Clinical Biochemistry and Clinical Molecular Biology at the University of Verona, Director of the Analytical laboratory of the Integrated University Hospital of Verona and Dean of the Faculty of Medicine and Surgery at University of Verona. Professor Lippi is the third author in the world (first in Europe) by number of publications on Covid-19. His researches provided an extraordinary contribution to the understanding of the mechanisms regulating pathogenesis and diagnosis of SARS-CoV-2, as well as the immune and inflammatory response. These are fundamental pillars for prevention and research strategies in the One Health field..

Non-Italian scientist: **Polly Roy**



Professor of Virology at the London School of Hygiene and Tropical Medicine in London, Polly Roy, originally from Calcutta, leads a prestigious research group active in structural virology and applied research for the development of innovative vaccines. Professor Roy is an expert in the molecular biology processes regulating the evolutionary and replicative systems of some RNA viruses with a significant impact on human and animal health. The prize is assigned to her because she perfectly embodies the transversality necessary for the development of knowledge, and for her extraordinary career in the field of virology.

Popularizer: **Chiara Sabelli**



Journalist with a PhD in Particle Physics at the Sapienza University of Rome and a master's degree in science communication from SISSA in Trieste. She is part of the editorial staff of the scientific news journal “Scienza in rete” and collaborate with various publications including “Nature Italy” and the newspaper “Domani”. During the years of the pandemic, she stood out for her scientific rigor, the transversality of the issues addressed in her articles, her emphasis to One Health, her focus on environmental sustainability, her attention to the contamination of the various sectors of science, to data sharing and to gender equality.

Story: **CIHEAM di Bari**, Mediterranean Agronomic Institute of Bari



Post-graduate center for training, applied scientific research, planning of interventions and research programs and international cooperation in favor of Mediterranean countries. Since 2015 CIHEAM has been committed in Raqqa, Syria, to increase the resilience of rural communities by strengthening agricultural and livestock production, thus increasing the availability and healthiness of food in areas marked by years of conflict. The precious work of CIHEAM made it possible to create veterinary laboratories and clinics, as well as create business opportunities generating income for women. Activities always carried out in close collaboration with local administrations and associations, promoting reconciliation between populations of different ethnic and religious origins, favoring dialogue and economic exchanges. To date, 5 women's associations have been established in Raqqa and approximately € 9.2 million have been distributed. This makes CIHEAM a real example of the collaboration of different sectors of knowledge for the sustenance and development of society.



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