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## XXVII INTERNATIONAL SYMPOSIUM ON MORPHOLOGICAL SCIENCES «CELL, TISSUE, ORGANS – EXPERIENCE, INNOVATION AND PROGRESS»

(Post-release based on the materials of the XXVII International Symposium  
of Morphological Sciences, held in Kazakhstan)

Modern science is developing at a rapid pace and today, especially during the epidemic situation, scientific events are in demand, which allow us to consider topical issues that interest participants from different areas, individual ways to solve the same problem, listen to lectures by invited experts, and establish valuable contacts. On May 27-31, 2021 in Almaty, Kazakhstan, on the premises of the al-Farabi Kazakh National University, Higher School of Medicine, the Department of Fundamental Medicine, and the Eurasian Association of Morphologists held the XXVII International Symposium of Morphological Sciences ISMS 2021. This Morphological Congress was held, the first time, in 1971, in Mexico City, with the subsequent editions organized every two years in Argentina, Israel, the USA, Brazil, Portugal, Italy, Japan and many other countries (<https://www.symposiamorphologica.com/>).

The decision to hold the Symposium in 2020 in Kazakhstan was made at the meeting of the International Committee of Symposia on Morphological Sciences (ICSMS) on June 5, 2018 in Prague (Czech Republic) as a part of the XXVI International Symposium of Morphological Sciences. The advantage of votes over other candidate countries (South Africa, Argentina) allowed Kazakhstan to take a huge responsibility for holding this Forum.

**Key words:** cell, tissue, organs.

### Introduction

The main purpose and objectives of the Congress: to broadcast the latest achievements of morphological science in the world, to discuss global problems and prospects for the development of morphological research and to develop ways to unite and find collaborative opportunities between the CIS countries, Europe and Central Asia.

ISMS 2021 was a platform for broadcasting lectures, reports, and round tables dedicated to current issues and the latest achievements of medical science based on accurate morphological evidence of research. ISMS 2021 was held for the first time on the territory of the Commonwealth of Independent States (CIS), marking a new way of collaboration of scientists in the conditions of the emerging (epidemic) situation in the search for new methods and generation of ideas (Picture 1).

ISMS 2021, for the first time in Kazakhstan, brought together scientists from all continents, more than 500 participants, scientists from 40 countries of the world, opening up new prospects for cooperation. Moreover, the platform has united

several countries in scientific teams that contribute to the fruitful exchange of scientific ideas and strengthen ties that will serve as a basis for Kazakhstan's scientific research to enter the scientific world.

The Congress, in view of the current pandemic situation, was held in an online format, so only Kazakh (local) academic authorities and anatomists and the representative of the Italian Embassy in Kazakhstan, Martino Castellani (Picture 2,3), Director of the Almaty Office of the Italian Trade Agency ICE, were present face-to-face at the congress venue. At the opening of the Congress, Mr. Castellani conveyed the congratulations from the Italian Ambassador in Kazakhstan, Mr. Pasquale D'Avino: «...I am extremely happy to send my congratulatory message to the participants of the XXVII International Symposium of Morphological Sciences, which will be held at the al-Farabi Kazakh National University, one of the most prominent and well-known institutions of higher education in the country and throughout Central Asia... I would like to express my gratitude for the opportunity to share this welcome address with the entire



**Picture 1-**Kazakh (local) academic authorities and anatomists

Scientific Committee and the community of participants of the International Symposium, and in particular with the Coordinator for Scientific Relations, Professor Guido Macchiarelli from the University

of L'Aquila, as well as with all Italian academicians and scientists for their contribution to maintaining a lively and dynamic cooperation between Italy and Kazakhstan...» (transcribed with permission).



**Picture 2-**Martino Castellani, the representative of the Italian Embassy in Kazakhstan, Director of the Almaty Office of the Italian Trade Agency ICE

The work of the Symposium began with a welcome speech by the rector of the al-Farabi Kazakh National University, Professor Zhanseit-

Tuymebayev. The coordinator and main host of the Symposium was the President of ISMS 2021, Assoc. Professor Gulmira Zhurabekova.



**Picture 3**-Kazakh (local) academic authorities and anatomists

The Forum was attended by scientists from far abroad: President of ICSMS, Professor Guido Macchiarelli, Professor of Anatomy, Director of the Department of Life, Health and Environmental Sciences of the University of L'Aquila (L'Aquila, Italy) (Picture 4); [1]



**Picture 4**-Guido Macchiarelli, President of ICSMS, Professor of Anatomy, Director of the Department of Life, Health and

IFAA President, Emeritus Professor Beverley Kramer, Faculty of Health Sciences, University of the Witwatersrand, South Africa; [2] Professor Sherif Karam, Department of Anatomy, College

of Medicine and Health Sciences, University of the United Arab Emirates (United Arab Emirates); [3] [4] Serena Bianchi, MD, PhD, Associate Professor of Human Anatomy, Department of Life, Health and Environmental Sciences, University of L'Aquila, Italy; [5] [6] Professor Mahmoud Farid Mahrous Bathalla, Al-Azhar Medical University Hospitals, Department of Neurosurgery, (Cairo, Egypt); Professor Zhanna Mussazhanova, (Nagasaki, Japan); Hendrik Mathijs Jozef Frencken, Senior Education Consultant, ICLO Graduate School of Teaching, Leiden University (Leiden, the Netherlands); Masahiro Nakashima, MD, PhD, Professor and Head of the Department of Diagnostic and Tumor Pathology, Head of Tissue and Histopathology section, Department of Data Registry, Atomic Bomb Diseases Institute, Nagasaki University, (Nagasaki, Japan); Stefania A. Nottola, MD, PhD, Professor, Department of Anatomy, Histology, Forensic Medicine and Orthopedics, Section of Human Anatomy, Electron Microscopy Unit, Faculty of Pharmacy and Medicine, University of La Sapienza, Italy; [7] [8] Professor Diogo Pais, MD, MSc, PhD, Professor and Chairman of the Department of Anatomy, NOVA Medical School, NOVA University of Lisbon, Portugal; Dr. Nuno Domingues, MD, Urologist, Member of the European Council of Urology, Human Cadaveric

Course Coordinator, NOVA Medical School, NOVA University of Lisbon, Portugal; Dr. Mohamed Mahmoud Farghali, Consultant of Obstetrics and Gynecology, Maternity Hospital, Sabah area, Shuwaikh, Kuwait; Maria Grazia Palmerini, PhD, Associate Professor, Department of Life, Health and Environmental Sciences, University of L'Aquila (L'Aquila, Italy); Professor Jose Sanudo, Department of Human Anatomy, Complutense University, (Madrid, Spain); Dr. Erin Hutchinson, Faculty of Health Sciences, University of the Witwatersrand, South Africa; Dr. Carol Hartmann, Faculty of Health Sciences, University of the Witwatersrand, South Africa. [9] [10] Lectures, round tables, mini-symposia, master classes on current topics and, naturally, breakout sessions were organized <http://www.isms2020.kz/index.php/final-program>.

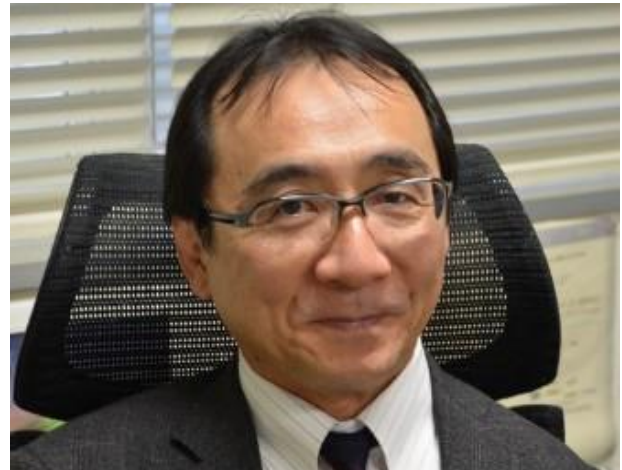
The lectures of the invited speakers were welcomed and applauded. For anatomists, histologists, biologists, pathomorphologists, physiologists (**May 28 at 12.00, Nur-Sultan time**), a lecture was offered by a leading scientist, Professor Sherif Karam of the University of the UAE (United Arab Emirates) on the topic:»- **Gastric stem cell biology in health disease**«.



**Picture 5**-Professor Sherif Karam, Department of Anatomy, College of Medicine and Health Sciences, UAE University

Professor Sherif Karam, Department of Anatomy, College of Medicine and Health Sciences, UAE University (United Arab Emirates) (Picture 5). Professor Sherif Karam deserves to be thanked for constantly updating the data on the study

of the stomach and transmitting this knowledge. Especially for pathomorphologists (May 29 at 12.00, Nur-Sultan time) Professor Masahiro Nakashima, PhD, a leading scientist from Japan, offered a lecture on the topic: «Molecular pathology of nodule in nodule type thyroid follicular tumors»



**Picture 6**-Masahiro Nakashima, MD, PhD, Professor and Head of the Department of Diagnostic and Tumor Pathology, Head of Tissue and Histopathology section, Department of Data Registry, Atomic Bomb Diseases Institute, Nagasaki University

Professor Masahiro Nakashima (Picture 6), Head of Department of Tumor and Diagnostic Pathology, Head of Tissue and Histopathology Section, Division of Data Registry, Atomic Bomb Disease Institute, Nagasaki University, Nagasaki, Japan. Professor Masahiro Nakashima gave interesting fresh data on the study of thyroid cancer, which was of utmost interest for the large number of specialists in this field, which attended his lecture. [11] [12]

Professor Hendrik Mathijs Jozef Frencken (Picture 7), Senior educational consultant. ICLON, graduate school of teaching (retired), Leiden University (Leiden, Netherlands) delivered a very interesting lecture on the topic' «Professional development for teachers in the medical faculty: the use of educational models». The problems of teaching, the organization of our usual duties in the educational process has significantly undergone difficulties in connection with the transition to the online system. Professor Hendrik Frencken's lecture on the educational process in medicine provoked an active response from the audience.



**Picture 7**-Hendrik Mathijs Jozef Frencken, Senior Education Consultant, ICLON, Graduate School of Teaching, Leiden University

Scientific reports were presented at 6 sections, traditionally held within the framework of the congress, including new directions.

The topic: «Organ and system; tissue and cell morphology; cardiovascular science; neuroscience» with the preliminary lecture: «Gastric stem cell biology in health disease» should be noted (section 1, 4 reports). A unique tandem of two scientists from different countries, moderator of the section Professor Serena Bianchi and guest lecturer Professor Sherif Karam, were able to attract about 200 students to the section, which was applauded with large participation of the audience.

A large number of speakers (12) and listeners (40) were united in the topic: «Clinical anatomy; morphological aspects of the somatic pathology; cell biology and biochemistry in the modern clinical research» (section 2).

The topic «Biology of reproduction» was developed in section 3 (6 speakers, 40 listeners). Reproductive morphology is one of the most interesting and inexhaustible scientific areas, so this section was very informative. Professor Ibrahim Abdelazim started by giving a very interesting lecture on the surgical anatomy of the female genital tract, and Professor Dr Mohamed Mahmoud Farghali moderated the section very efficiently, despite being busy at the clinic.

Poster presentations (section 4-9 speakers, 25 listeners and section 5-13 speakers, 40 listeners)

were received with great interest. The team of moderators of the poster sections, scientists of various fields Professors Gaziza Smagulova, Mahmoud Farid and Sergey Liashchenko, were able, with their expertise, to make the poster sections very useful and informative.

The section «Medical Education» was created at the request of scientists in view of the relevance of the topic and the need for exchange. Due to the high interest of representatives of different universities in participating, this section on «Problems and solutions of online teaching in the pandemic situation in the Medical schools in the World» was converted into the category of «round table». Five speakers, representatives of six medical universities and 50 students participated in the discussion. We thank the moderator, Professor Gulmira Derbissalina, for a very stimulating discussion.

For the first time, the ISMS Congress also included meetings of young scientists (section 6, Young scientists contest and the Student poster section). Thanks to the active participation and moderation of Professor Maria Grazia Palmerini in the student sections, the communication turned out to be very fruitful. As part of the student events, a master class was held on the topic «Immunofluorescence analysis of DNA damage response protein p53-binding protein 1: molecular indicator of genomic instability in human carcinogenesis» by Professor Zhanna Mussazhanova. The topic of the master class was of great interest for young scientists. The international jury of the International Student Contest determined the two best student reports: Abdul Razaq Imran Khan (Dubai, United Arab Emirates) and Valeriy Ignatyev (Aktobe, Kazakhstan).

Another debut in International Symposia of Morphological Sciences was a round table on the topic «Body donation: a global perspective in a round table discussion» with information from 10 distinguished anatomists from different countries about the problems of providing human cadavers to the educational process, bringing together 35 participants. We thank Professor Beverley Kramer (Picture 8) and the participants of the round table Umit S. Sehirlı, Sagimova Gulzira, Brendon Billing, Francesco Cappello, Susana N. Biasutto, Sapargali Rakhmanov, Hong-Jin Sui, [13] [14] [15] Stefania A. Notola, Diogo Pais, Tamara Abayeva.



**Picture 8-**Beverley Kramer, Emeritus Professor, School of Anatomical Sciences, faculty of Health Sciences, University of the Witwatersrand



**Picture 9-**Diogo Pais, Full Professor of Anatomy and Medical Ethics, NOVA Medical School - Universidade NOVA de Lisboa

Within the framework of the symposium, a unique **Workshop** was also held by Portuguese scientists from the NOVA University (Lisbon) on «Laparoscopic minimally invasive surgery-hands-on courses on human cadavers». The Portuguese scientists demonstrated the high importance of practicing surgical skills on cadavers to reduce technical errors and prevent complications of work in the clinical practice as a surgeon. Special thanks to Professor Diogo Pais (Picture 9) and his colleague Dr. Nuno Domingues for the opportunity to listen, observe and learn a lot!

All scientific abstracts are published in the journal «Annals of Anatomy», indexed in the databases Science Citation Index, Scopus, PubMed/Medline, providing students with a unique opportunity to publish their research in a rating publication <http://www.isms2020.kz/index.php/call-for-abstracts>.

We express our gratitude to the scientists, members of two major international organizations ICSMS and IFAA headed by the scientists Professor Guido Macchiarelli and Emeritus Professor Beverley Kramer for their help in organizing all scientific events within the framework of the Congress.

Sincere words of gratitude to the Honorary President of ISMS 2021, Professor Yerbol Bekhumbetov, Chairman of the Board of the United Association of Individual Entrepreneurs and Legal Entities «National Chamber of Health» (Nur-Sultan, Kazakhstan) for supporting the idea of holding the congress in Kazakhstan, Honorary President, Professor Raushan Issayeva for assistance and advice in organizing the congress, and the main coordinator and host of the Symposium, President of ISMS 2021, Professor Gulmira Zhurabekova.

### **Conclusion**

The XXVII International Symposium on Morphological Sciences, held in Almaty, Kazakhstan, from 27-31 May, 2021, provided five eventful days of presentations by experts from different fields in morphology, the opportunities to exchange experiences, to develop new friendships and professional network, with a very special atmosphere of the world of science, demonstrating that communication between scientists in the modern world is a real necessity, contributing to the development of solid morphological scientific foundations in Kazakhstan as in the world of Anatomy.

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