ANATOMICAL SOCIETY

Virtual Summer Meeting Programme

CUTTING EDGE ANATOMY

7th – 9th July 2021

WELCOME

Dear Colleagues,

On behalf of the University of Glasgow organising committee, it is my great pleasure to welcome you to the Anatomical Society Summer Meeting 2021. We are excited to hear from a diverse range of National and International speakers on "*Cutting Edge Anatomy*" across multiple anatomical themes.

Our ability to host online events has come a long way since the beginning of the COVID-19 pandemic, with this being the second virtual Anatomical Society meeting. We hope that you will enjoy the full schedule of invited presentations, young investigator talks, our special "*education in the time of COVID-19*" flash talk symposium, and broad range of posters across the course of the next few days. We understand the challenges of participating in conferences online from home, and so, all webinars will be available to view on-demand for 30 days following the meeting if you need to catch up in your own time.

This conference wouldn't be possible without the hard work and input of the many people involved in the conception, planning, and organisation of the main programme and associated social events. I would like to express my sincere thanks to everyone who has supported this conference, from the Anatomical Society, local organising committee, student volunteers, sponsors, speakers, and you, our delegates.

Although we cannot be in Glasgow to meet one another in person, we hope that you will engage in the Q&As with our speakers, participate in our virtual networking and social events, and take this opportunity to catch up with colleagues and friends, as well as forming new connections and potential future collaborations.

We hope to welcome you to Glasgow in the future and wish you an enjoyable and informative meeting.

Yours Sincerely,

Dr Eilidh Ferguson (Local Organising Committee Chair)

University and on anatomical preparations of 46 heads. The patterns of human eye drainage system embryogenesis were established: the location of the transition zone cornea - sclera in relation to the Schlemm's canal; topography of the Brucke muscle; the structure of inner wall and the lumen of the Schlemm's canal; scleral vessels. They reflected the sequence of Schlemm's canal structures formation. Their infringement (the iris-corneal angle closure with the persistent pectinate ligaments or with the not completely resolved mesoderm tissue; partial splitting iris, ciliary body and trabeculae; improper differentiation of trabecula tissue with the excessive collagen formation) can lead to the congenital glaucoma development. Diagnostic guidelines of the normal structure of human eye drainage system were determined: the location of the cornea-sclera zone relative to the Schlemm's canal; topography of the Brucke muscle; the severity of the Schlemm's canal inner wall and lumen and scleral vessels. The obtained data were considered to become crucial for the identification of their pathological changes in glaucoma, as well as for the interpretation of glaucoma formation and for the elaboration of the pathogenetically based treatment of this disease. The Committee on Biomedical Ethics (order №309 from 15.06.2012) of BSMU carried out ethical expertise of this research.

P34. The microscopical changes seen in rat's thymus and parathyroidglands after immunostimulation using a dark-field microscope.

Kuye A.J., Olga Avilova, Viktoriya Erokhina
Kharkiv National Medical University, Kharkiv, Ukraine,

Hundreds of risk factors are faced every day by the human body that weighs and disrupt the immune system significantly. Medical research indicates that alterations in the endocrine homeostasis are consistent with hematologic, oncological, and immunologically identified diseases known for their immune pathogenesis. 24 Matured male WAG rat's thymus and parathyroid glands were used. Two groups (G) were arranged, each randomly divided, and consisted of animal of the same age and size. A drug indication for an immune-deficient disorder, Imunofan was given to the experimental group (G1) in the prescription of 0.7mg/kg of body weight, on the 3rd and 30th day of experimental trials duration by the intramuscular route of administration. In contrast to the G2 (control group) which were administered 0.9% of Normal Saline. The gland samples were obtained by cervical dislodgment (dislocation) and histological methods of treatment were used. Then the following slides were examined using an EM-125 electron microscope at a total of X8000 magnification**.** The architecture of the parathyroid gland of experimental animals (G1) was found to be slightly different from those of control rats evidenced by microscopy and morphometric analysis (G2). The active chief cell count rises dramatically on the third day following inoculation of the immunomodulatory treatment. As a result of elevated secretory activities, the cells are joined by several interdigitates to expand the surface area involved in the metabolism control. On the 30th day after the administration of Imunofan has shown that the experimental rat glands have large numbers of active cells as opposed to when administered to the thymus on the 3rd day showing no significant increase in size, and this could be as a result of the pharmacokinetics of the drug or the time taken for thymus gland proliferation after invading pathogen. However, the thymus gland reveals the presence, at various levels of division, of substantial numbers of lymphocytes. The existence of active macrophages shows that the immunostimulating activity of Imunofan is highly lymphocytopoietic. Compared to control animals (G2) of the same size and age, the main change in the Parathyroid glands of experimental rats (G1) is the transition of the groups of inactive cells into action due to their stimulations. In that, substances such as low oestrogen infusion, isoproterenol, even calcitonin, activate the active stage in the chief cells. Phagocytized cells of the thymus were restored with 2-4 weeks of Immunostimulation, showing that immunostimulant drugs such as Imunofan could restore thymic structures**.**
The maintenance and manipulation of animals were carried out in compliance with the requirements of bioethics and the requirements of bioethics and the "General Ethical Principles of Animal Experiments" adopted by the First National Congress on Bioethics (Kyiv, 2001), the requirements of the "European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes" (Strasbourg, 1986).