

EDITORIAL

Regenerative medicine

According to Greek mythology, Prometheus' liver grew back nightly after it was removed each day by an eagle as punishment for giving fire to mankind. Hence, the concept of tissue and organ regeneration is not new. Combinations of the three major components of regenerative medicine: cells, biomaterials and bioactive molecules have created a new paradigm of future therapeutic options for most species. The field of tissue engineering and skeletal regeneration has progressed by development of novel biomaterials, devices, growth factor carriers and their use in treating patients (Pečina M., Vukičević S. *Int Orthop.* 2014;38(9): 1757).

We have entitled our editorial "Regenerative medicine", because this issue of our journal brings articles based on the lectures held at the 2nd International Scientific Symposium entitled "Regenerative procedures in dental medicine" organised on 3rd October 2017 by the School of Dental Medicine, University of Zagreb, and the Croatian Academy of Sciences and Arts, Department of Medical Sciences. The articles are based on the latest achievements in the field of regenerative dental medicine and medicine, and tackle the following three areas: the first one focused on tooth repair and regeneration, understanding stem cell heterogeneity – the key for successful dental regeneration and isolation, as well as the characterization and differentiation of potential of oral mucosa stem cells. The lecturers were Professor Paul T. Sharpe and Maja Sabalić DMD from King's College in London, and Professor Ivan Alajbeg from the School of Dental Medicine, University of Zagreb. The second part referred to new aspects in the field of regenerative medicine and Osteogrow: a novel drug for bone regeneration, and the speakers were Slobodan Vukičević, Fellow of the Croatian Academy of Sciences and Arts, and Professor Lovorka Grgurević from the School of Medicine, University of Zagreb. In the third section, Professor Zrinka Tarle from the School of Dental Medicine, University of Zagreb, who organised this successful symposium and composed a very useful Preface to this issue of our journal, covering the said topic, elaborated the area of bioactive composite materials.

We were in a dilemma whether to include in the title of our editorial also “Immunotherapy”, because this issue of RAD further offers articles based on the lectures held at the 4th Scientific Meeting entitled “Tumors of the gastrointestinal tract: immunotherapy and targeted therapy of colorectal cancer”, which was organised on 21st December 2017 by the Croatian Academy of Sciences and Arts, Department of Medical Sciences, and the School of Medicine of the University of Zagreb, Department of Clinical Oncology. The topics presented included colorectal cancer (CRC) molecular subtypes, pathohistological prognostic and predictive parameters, recommendations and algorithms, an overview of surgical approaches taking into account tumor sidedness, CRC immunotherapy approaches, and a brief overview of nutritive support recommendations and preparations available to CRC patients. On behalf of the Organising Committee of the 4th Scientific Meeting, Professors Antonio Juretić, Ana Fröbe and Nikola Đaković wrote in their Preface: “We hope that the papers presented will provide readers with sufficient information enabling them to better understand the recent findings on colorectal cancer pathogenesis, diagnosis and treatment options in the clinical setting.”

Following the line of the previous issues of our journal, we continue to publish abstracts from the scientific symposia held at our Academy. In this issue, abstracts of the International Scientific Symposium entitled “News in ophthalmology”, which was held on 1st December 2017 at the Palace of the Croatian Academy of Sciences and Arts in cooperation of the Department of Medical Sciences of the Croatian Academy of Sciences and Arts with the Special Eye Hospital “Svjetlost”, have been published as well. The symposium featured latest advances and scientific knowledge in the field of ophthalmology, and the treatment of all segments of the eye, including the anterior and posterior segment, as well as eye treatment in children. Invited speakers from several European countries presented novelties within the field of ophthalmology, and 17 more lectures were presented by ophthalmologists and scientists from Croatia and the Southeast European region. They have presented, among other topics, their results on novel treatments such as: transplantation of limbal stem cells cultured in vitro, use of “biological glues” to heal the cornea, etc. The President of the Organising Committee of this international symposium, as well as of all the previous ones, traditionally held at our Academy and covering ophthalmologic topics, was Professor Iva Dekaris, member of the Editorial Board of this journal.

Abstracts from another symposium traditionally held at our Academy – the 5th Symposium “Apoptosis and Neoplasms”, which took place on 27 March

2018, organised by Department of Medical Sciences, Committee on Genomics and Proteomics in Oncology, have also been published in this issue of RAD. President of the Organising Committee of the Symposium. Professor Mladen Belicza, wrote in his Preface as follows: “In an attempt to promote translational medicine, the goal of the 5th Symposium on Apoptosis and Neoplasms is to develop new research approaches into the complexity of biological systems and their regulation, especially in the field of apoptosis and oncogenesis. Thus, this symposium helps in reducing various barriers in order to establish better collaboration among all scientists and researchers, and improves the development of multidisciplinary research. In this sense, we hope to contribute to the redevelopment of translational and clinical science.”

Last but not least, our acknowledgement goes to Josip Madić, Fellow of the Croatian Academy of Sciences and Arts, and his collaborators for a very interesting review article entitled “Animal influenza outbreaks in Croatia: A review on the occasion of centenary of the 1918 influenza pandemic”. We further express our thanks to Professor Julije Meštrović for his article entitled “Scoring systems in paediatric intensive care units”. These two articles have substantially enriched the diversity of the content of this issue of RAD.

Dear readers, we hope you will be satisfied with this issue of RAD, not only by the quantity, but also by the quality of the published materials.

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