

CORNEAL TRANSPLANTATION AND EYE BANKING

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Scientific Symposium "Corneal Transplantation and Eye Banking" has been organized by The Department of Medical Sciences of the Croatian Academy of Sciences and Arts and Special Eye Hospital "Svjetlost" of the School of Medicine in Rijeka, University of Rijeka, in the Palace of the Academy in January 2013. Just after this symposium, and under the Auspices of the Croatian Academy of Sciences and Arts, Special Eye Hospital "Svjetlost" and Croatian Society for Cataract and Refractive Surgery organized the XXV Annual Meeting of the European Eye Bank Association (EEBA).

The symposium in the Academy and the Annual EEBA Meeting were dedicated to the latest developments in the field of corneal transplantation and eye banking. The invited lectures were presented by the most prominent experts around the globe: President and Past-President of the Eye Bank Association of America (K. Corcoran and prof. M. Macsai), the President of the Association of Eye Banks of Asia (prof. D. Tan), the President of the European Eye Bank Association (prof. I. Dekaris), the President of the Italian Society for Corneal Transplantation (prof. M. Busin), Chairman of the Eye Hospital of the University in Freiburg (prof. T. Reinhard), the member of the Bulgarian Academy of Sciences (prof. P. Vassileva) and Chair of the Cornea Section of the European Association for Vision and Research (dr. T. Fuchsluger). The topics that were covered were: new trends in corneal transplantation in USA, innovations in lamellar corneal transplantation, strategies of limbal stem cell transplantation, gene and cell therapy to protect corneal cells, new surgical approach in high-risk corneal grafts and novel treatments for herpetic eye disease.

The importance of the Symposium and Annual Meeting lays in the fact that approximately 20 million people are blind due to some kind of corneal disease, and most of those patients can be cured by corneal transplantation. The major step forward in the quality and quantity of corneal transplantations came with a foun-

dation of eye banks. Eye banks are in fact specialized laboratories in which donor corneal tissue can be tested for its safety and examined under the microscope for its quality. In all countries where eye bankers and corneal surgeons had good collaboration, waiting lists for corneal transplantation were "cleaned" and corneal blindness is nowadays successfully treated. However, although corneal transplantation is the most commonly performed transplantation procedure with over 100 000 procedures performed yearly, and in western countries it is a planned surgery; there are many regions in the world with significant lack of donor corneal tissue for transplantation and very long waiting lists. Like every other field of medicine, corneal surgical procedures and eye banking methods had continuously developed, bringing us to a completely new era of corneal transplantation. Penetrating or full-thickness corneal transplantation was a gold surgical standard for over 100 years, but in a last decade novel surgical techniques were adopted by corneal surgeons, and number of so-called lamellar transplantation is rapidly increasing. In lamellar transplantation only the diseased part of the cornea is grafted, instead of a full-thickness cornea. It has the advantage that it is a safer surgery for patient's eye, it brings much quicker visual rehabilitation, and theoretically one donor cornea can be used for two surgeries. These changes in surgical technique had a great impact on the everyday work of eye-bankers as well, since the preparation of lamellar corneal grafts can be made by eye-bank staff and not only by the surgeon in the operating room. Therefore, the "old" role of eye bankers, which was to take care of the quality and safety of a donor tissue, has been expanded to tissue preparation for the surgery. The Annual EEBA Meeting which is organized each year in a different European country, is the main scientific event for the exchange of knowledge and gathering of different specialists involved in eye banking and corneal transplantation. Today, European Eye Bank Association (EEBA) unites more than 80 eye banks from 24 European countries and 10 international eye-banks. In a last 5 years, European eye banks were processing over 30 000 donor corneas yearly (both those for penetrating and lamellar transplantation), providing enough donor corneal tissue for European needs and helping patients with corneal diseases to regain their sight. During Meetings in Zagreb, they have exchanged their knowledge through 12 invited lectures and 40 scientific and professional papers organized in 5 scientific sessions. Over 200 attendees from more than 20 countries have participated at Symposium and EEBA Meeting, and many of them could benefit not only from a scientific sessions, but also from the "wet-lab" which was organized to train younger colleagues on a real-eye models on how to perform lamellar corneal transplantation.



Figure 1. President of the Croatian Academy of Sciences and Arts, Zvonko Kusić, is addressing the audience at the Opening of the Scientific Symposium „Corneal Transplantation and Eye Banking“ in the Palace of the Academy in January 2013. Speakers at Symposium are sitting in the first row (from right to left): prof. M. Macsai (USA), prof. D. Tan (Singapore), dr. T. Fuchsluger and prof. T. Reinhard (Germany), prof. I. Dekaris (Croatia); together with Secretary of the Department of Medical Sciences, Marko Pećina and Secretary General of the Academy, Pavao Rudan.



Figure 2. Opening ceremony of the XXV EEBA Meeting on January 2013 in Zagreb. From left to right: prof. Nikica Gabrić, Head of Special Eye Hospital “Svjetlost”, prof. Rajko Ostojić, Croatian Minister of Health. and Zvonko Kusić – President of the Croatian Academy of Sciences and Arts



Figure 3. Closing ceremony of XXV EEBA Meeting – transfer of the flag to the organizer of the next EEBA Meeting in Lausanne in 2014 (prof. Iva Dekaris - left and assoc. prof. Francois Majo - right).