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International Conference: „The subchondral bone in articular cartilage repair“

Articular cartilage, the tissue that forms the gliding surface of joints, is a highly organized tissue composed of articular chondrocytes embedded within an extracellular matrix of collagens, proteoglycans, and noncollagenous proteins. Focal defects of articular cartilage may, if untreated, lead to osteoarthritis. While promising results have been achieved to treat full-thickness cartilage defects, the problem of cartilage defects that extend deep in the underlying bone has neither received much attention nor therapeutic strategies have been elaborated to solve this problem. To address this problem, an international conference with the title: „The subchondral bone in articular cartilage repair“ has been organized jointly by Henning Madry, Professor and Chair, Institut für Experimentelle Orthopädie and Department of Orthopaedics Surgery, Saarland University, Germany and Romain Seil, Professor and Chairman of the Service de Chirurgie Orthopédique du Centre Hospitalier de Luxembourg in Luxembourg. The conference solely focused on the subchondral bone, reflecting the growing concern among the cartilage repair community about its role in failing articular cartilage repair procedures. The conference took place in Mondorf-les-Bains, Luxembourg from October 8 to 10.

Originally intended as an focused expert meeting, the event quickly grew into a conference in it's own right. The organizers successfully acquired peer-reviewed funding from the major research funding organizations of their respective country - the “Deutsche Forschungsgemeinschaft” (DFG) and the “Fonds National de la Recherche du Luxembourg” (FNR).

The faculty represented recognised leaders in the field, including Fredrik Almqvist (Gent, Belgium), Iwan Van Breuseghem (Gent, Belgium), Niek van Dijk (Amsterdam, The Netherlands), Andreas Gomoll (Boston, USA), Gunnar Knutsen (Tromsø, Norway), Dieter Kohn (Homburg, Germany), Elisaveta Kon (Bologna, Italy), Didier Mainard (Nancy, France), Henning Madry (Homburg, Germany), Jacques Menetrey (Genève, Switzerland), Magdalena Müller-Gerbl (Basel, Switzerland), Dietrich Pape (Luxembourg, Luxembourg), James Richardson (Oswestry, United Kingdom) and Romain Seil (Luxembourg, Luxembourg). In addition, Mats Brittberg (Kungsbacka, Sweden) and Ernst Hunziker (Bern, Switzerland) were invited but unable to attend. Details of the program can be found on the ESSKA website.

To initiate the workshop with a brainstorming session, Henning Madry, the Program Chair, asked each of the participants to deliver a short presentation

with the topic “*The subchondral bone: a new frontier in articular cartilage repair*“. Speakers shared their view of the field, including unsolved problems and possible solutions. Patrick Djian (Paris, France) gave an overview of ESSKA Educational Activities.

On the second day, the meeting was held in splendid *Orangerie* situated in the park of Mondorf Domaine – being open to the researchers and clinicians. Basic scientific and clinical reports were delivered by a number of members of the faculty. Because this conference was thought to have the style of an “European” Gordon Conference, there were intensive discussions in the afternoon during a long walk in the beautiful gardens of Mondorf Domaine.

During the conference, a number of key themes were identified relating to the unsolved problem of the subchondral bone. In general these seemed to arise from apparent lack of a precise anatomical definition of the subchondral bone and the many different cartilage pathologies in which the subchondral bone is involved, such as trauma, OCD, osteonecrosis and OA. However they also involved questions about specific surgical treatment options. The scientific results of this conference will be published in the journal “Knee Surgery, Sports Traumatology, Arthroscopy” (KSSTA).

The conference concluded after a prioritization session on Saturday noon, in which the participants discussed and summarized the major findings of the conference and suggested future areas of clinical research.

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Figure 1: Conference Group Photo

Figure 2: Conference Session