With new licence partners from Australia & New Zealand, South Korea and Vietnam having joined our publishing network in the last two months, DTI’s reach into the Asia Pacific region has been extended to markets comprising over 50,000 dental professionals. I would like to welcome our new friends on behalf of our worldwide readership and encourage you to follow their future efforts to provide the latest news from dentistry to their respective national dental communities.

We also announce our support to the Center for Advanced Professional Practices, our new partners from Dubai, who did not only recently agree to publish our Middle-East & Africa edition but successfully held their first ever CAAM/CAM and computerized dentistry congress for the Asia Pacific region in Singapore. If you want more information about this novel region in Singapore, if you want to be part of it, please read our review on page 10.

Yours sincerely,
Daniel Zimmermann
Group Editor
Dental Tribune International

Growing a tooth in the future?

Hopes of growing teeth have been supported by the occurrence of supernumerary teeth in the jaws, as well as fully developed teeth in teratomas. The issue of tooth bioengineering has been taken up again more recently, as scientific breakthroughs in the fields of genetics and developmental biology have led to a completely new level of understanding about how teeth develop. Basically, tooth formation is regulated by a chain of interactions between two different tissues, epithelium and mesenchyme. And importantly, we actually know that the language that cells and tissues use for communication consists of defined signalling molecules.

Currently, the most realistic scenarios for tooth regeneration involve the generation of teeth from stem cells with the capability to form teeth. The technology would be based on traditional experiments that demonstrated more than 40 years ago that proper tooth form when separated epithelial and mesenchymal tissues from mouse embryonic tooth germs are recombined and cultured as transplants.

The question of the origin of cells for human tooth bioengineering is still unanswered. Adult human teeth do contain stem cells but they may not provide a suitable source. Therefore, it is likely that non-dental cells will have to be reprogrammed for the purpose of clinical tooth regeneration. In addition, there are several other remaining challenges such as the issues of tooth size, tooth identity, crown shape, and composition of the mineralised tissues. The creation of functional roots presents perhaps the biggest challenge that needs to be addressed before bioengineering of teeth will be feasible.

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