**Media Release**

# Dental community celebrates 20th anniversary of successful periodontal tissue regeneration with Straumann® Emdogain®

- *First marketed in Sweden in 1995, Straumann® Emdogain® is still the gold standard treatment in the regeneration of periodontal hard and soft tissue lost due to periodontitis*
- *Backed by more than 950 peer-reviewed publications and 500 human studies, Emdogain is one of the most extensively investigated products in dentistry*
- *Regenerative potential of EMD[1] still being explored; new formulation to support bone regeneration in development due to launch later this year*

**Basel, 4 June 2015** – At EuroPerio 8, the 2015 dental conference of the European Federation of Periodontology, in London, Straumann and leading clinicians from around the world are celebrating the twentieth anniversary of Emdogain, the company's cornerstone regenerative product. The protein-based gel is designed to promote predictable regeneration of periodontal hard and soft tissues, lost due to periodontitis; it thus helps to save and preserve endangered teeth.

**Still the gold standard after 20 years**

Improving patient comfort and treatment safety are priorities in periodontology and are reflected in the increasing trend toward minimally invasive procedures. Emdogain is particularly advantageous in this respect and is associated with less pain and swelling[2] and fewer complications[3] than treatment with membranes after surgery. Even after 20 years on the market, Emdogain has not been superseded by other technologies and remains the gold standard in periodontal tissue regeneration. While products like membranes work on a mechanical principle, Emdogain is a biologically active product that induces periodontal regeneration, re-initiating processes in adults that occur naturally in the human body during tooth development.

Over the years, more than 500 studies in humans have been conducted and over 950 peer-reviewed publications have appeared, making Emdogain one of the most extensively investigated dental products. Studies, including ten-year follow-ups and human histologies,

[1] Enamel matrix derivative, the active ingredient of Emdogain

[2] Hammarström L. The role of enamel matrix proteins in the development of cementum and periodontal tissues. Ciba Found Symp. 1997;205:246-55; discussion 255-60. Jepsen et al. A randomized clinical trial comparing enamel matrix derivative and membrane treatment of buccal class II furcation involvement in mandibular molars. Part I: Study design and results for primary outcomes. J Periodontol. 2004 Aug;75(8):1150-6.

[3] Sanz M, Tonetti MS, Zabalegui I, Sicilia A, Blanco J, Rebelo H, Rasperini G, Merli M, Cortellini P, Suvan JE. Treatment of intrabony defects with enamel matrix proteins or barrier membranes: results from a multicenter practice-based clinical trial. J Periodontol. 2004 May;75(5):726-33.

have demonstrated predictable results as well as safe and effective stimulation of new periodontal attachment formation (periodontal ligament, cementum and alveolar bone) [4,5,6,7]. This mechanism of action enables periodontists to maintain soft tissues and, importantly, to regenerate lost periodontal tissues, helping to prevent tooth loss. Based on volumes sold to date, more than two million patients have been treated worldwide with Emdogain.

**Lessons learned – how Emdogain works**

Until the 1980s, the best outcome of surgical periodontal treatment was merely to halt the progression of periodontal disease by means of open-flap debridement, which – instead of yielding a functional peridontium – produces scar-like tissue between teeth and the surrounding bone.

A breakthough came when a research team in Sweden led by Prof. Lars Hammarström investigated enamel matrix derivative (EMD), a protein extract from unerupted porcine tooth buds, in a preclinical periodontitis model. The team succeeded in recreating a fully functional periodontium and demonstrated that EMD mimicked the processes that occur during normal tooth development.

The success of this approach was due to the amelogenins in EMD. This family of proteins enables the formation of acellular cementum, which is a key to the subsequent recreation of periodontal ligament and alveolar bone – as in normal tooth development. This understanding was a true revolution in the field of periodontology and quickly led to clinical trials and a commercial product. Emdogain became the cornerstone of Straumann's regenerative business in 2003, when the company acquired Biora AB. In the meantime, Straumann has partnered with other companies to build an unparalleled portfolio of regenerative solutions, including the broad range of proven innovative products developed by botiss.

**Marco Gadola**, Chief Executive Officer, commented: "We are proud to have a product that has helped to restore the confidence of countless people who would have lost teeth because of periodontitis. Emdogain is unique and we believe that the most exciting chapter of its history is yet to be written. Recent findings have inspired further development in several indications, including enhanced bone healing and maturation. Here, we are working to launch Straumann® Osteogain™, a liquid formulation for combination with bone substitutes, later this year."

**20 years of Emdogain – the video**

To celebrate the 20th anniversary of Emdogain in London during EuroPerio, Straumann has brought together some of the most renowned clinicians to discuss its past, present and future

[4] Sculean A et al. Ten-year results following treatment of intra-bony defects with enamel matrix proteins and guided tissue regeneration. J Clin Periodontol 2008;35:817-824.

[5] Sculean A, et al. Clinical and histologic evaluation of human intrabony defects treated with an enamel matrix protein derivative (Emdogain). Int J Periodontics Restorative Dent. 2000;20:374–381.

[6] McGuire MK, et al. Evaluation of human recession defects treated with coronally advanced flaps and either enamel matrix derivative or connective tissue. Part 2: Histological evaluation. J Periodontol. 2003 Aug;74(8):1126-35.

[7] McGuire MK, et al. Evaluation of human recession defects treated with coronally advanced flaps and either enamel matrix derivative or connective tissue: comparison of clinical parameters at 10 years. J Periodontol. 2012;83(11):1353-62.

role in the field of periodontal regeneration. Hosted by Professor Bjarni Elvar Pjetursson, DDS, MAS, Head of Reconstructive Dentistry Faculty of Odontology University of Iceland, the podium discussion will be recorded on video and made available at www.youtube.com/StraumannGlobal.

**About Straumann**
Headquartered in Basel, Switzerland, the Straumann Group (SIX: STMN) is a global leader in implant, restorative and regenerative dentistry. In collaboration with leading clinics, research institutes and universities, Straumann researches, develops and manufactures dental implants, instruments, prosthetics and tissue regeneration products for use in tooth replacement and restoration solutions or to prevent tooth loss. Including its Neodent business, the Group currently employs approximately 3500 people worldwide and its products and services are available in more than 70 countries through its broad network of distribution subsidiaries and partners.

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