Columbia University announces breakthrough in tooth regeneration
Stem-cell-infused scaffold holds potential for replacing dental implants

Daniel Zimmermann

NEW YORK, USA/LEIPZIG, Germany: Dental implants could soon become a secondary choice for replacing natural teeth. According to new research from the College of Dental Medicine at Columbia University in New York, three-dimensional scaffolds infused with stem cells yield an anatomically correct tooth in as soon as nine weeks once implan-
ted. The new technique, de-
voped by Columbia University Prof. Jeremy Mao, has also dem-
strated the potential to regen-
erate periodontal ligaments and alveolar bone, which could pave the way for re-growing natural teeth that are able to integrate into the surrounding tissue.

Previous research on tooth regeneration has focused on culti-
tivating stem cells directly on den-
tal implants to improve osseoin-
regeneration has focused on cul-
tivating periodontal ligaments and alveolar bone, which could pave the way for re-growing natural teeth that are able to integrate into the surrounding tissue.

“A key consideration in tooth regeneration is finding a cost-effectuve approach that can trans-
late into therapies for patients who cannot afford or who aren’t good candidates for dental im-
plants,” Dr Mao told Dental Trib-
one Asia Pacific. “Our findings represent the first report of regen-
eration of anatomically shaped tooth-like structures in vivo.”

Latest studies from Sweden have demonstrated that bone loss, one of the main reasons for dental implant failure, remains a challenge for dental clinicians.

Dr Mao’s study was published in the recent edition of the Jour-
nal of Dental Research and will be presented at this year’s Inter-
national Association of Dental Research congress in Barcelona.

Columbia has announced that it has patient applications on file regarding the engineered tooth and is actively seeking part-
ners to help commercialise the technology through its tech-
ology transfer office, Columbia Technology Ventures.

Filipinos claim salary upgrade

The Filipino government has been called on to include public school dentists and assistants in the next update of the Salary Standardization Law III in July. The legislation, signed by Presi-
dent Gloria Macapagal-Arroyo last year, aims to standardise ba-
sic salaries, allowances, benefits and incentives for 1.5 million government employees. It also se-
ures the annual increase of public salaries until 2013.

Currently, more than 700 pub-
lic school dentists and assistants work in the Philippines, treating a population of 21 million, ac-
cording to the Department of Education Dentists’ Association. The Association says that because dental workers have to undergo regular continuing education programmes and purchase nec-
essary dental equipment such a

Europe defies economic gloom

Most major dental markets in Europe achieved growth rates above 7 per cent last year, a new re-
port by the Association of Den-
tal Dealers in Europe in Switzer-
land has revealed. France had the highest growth rates in 2009 with 26 per cent, followed by the United Kingdom (7.4 per cent) and Germany (5.2 per cent).

Sniff your dental pain away

US clinicians have found that intranasal drugs travel through the main nerve in the face and collect in high concentrations in the main nerve in the face and structures of the mouth. The discovery could lead to a more effective and tar-
ged method for treating dental pain, trigeminal neuralgia and other conditions.

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