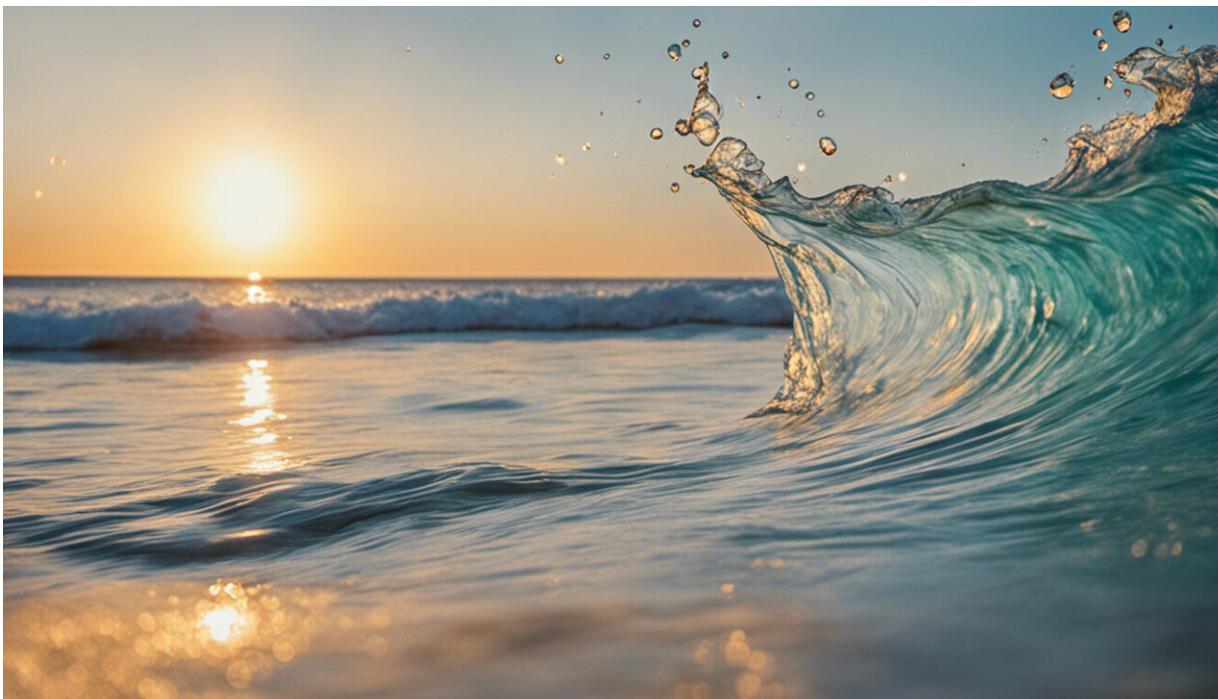


# Sucking the Ocean Through a Straw

July 12 2010

---



Credit: AI-generated image ([disclaimer](#))

(PhysOrg.com) -- Scientists are reporting an advance toward the next big treatment revolution in dentistry — the era in which root canal therapy brings diseased teeth back to life, rather than leaving a “non-vital” or dead tooth in the mouth. In a report in the monthly journal *ACS Nano*: “Nanostructured Assemblies for Dental Application,” they describe a first-of-its-kind, nano-sized dental film that shows early promise for achieving this long-sought goal.

Nadia Benkirane-Jessel and colleagues note that root canal procedures help prevent tooth loss in millions of people each year. During the procedure, a dentist removes the painful, inflamed pulp, the soft tissue inside the diseased or injured tooth that contains nerves and [blood vessels](#).

Regenerative endodontics, the development and delivery of tissues to replace diseased or damaged dental pulp, has the potential to provide a revolutionary alternative to pulp removal.

The scientists are reporting development of a multilayered, nano-sized film — only 1/50,000th the thickness of a human hair containing a substance that could help regenerate dental pulp. Previous studies show that the substance, called alpha melanocyte stimulating hormone, or alpha-MSH, has anti-inflammatory properties.

The scientists showed in laboratory tests alpha-MSH combined with a widely-used [polymer](#) produced a material that fights inflammation in dental pulp fibroblasts. Fibroblasts are the main type of cell found in [dental pulp](#).

Nano-films containing alpha-MSH also increased the number of these cells. This could help revitalize damaged teeth and reduce the need for a root canal procedure, the scientists suggest.

Provided by American Chemical Society

Citation: Sucking the Ocean Through a Straw (2010, July 12) retrieved 27 April 2024 from <https://phys.org/news/2010-07-ocean-straw.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is

provided for information purposes only.