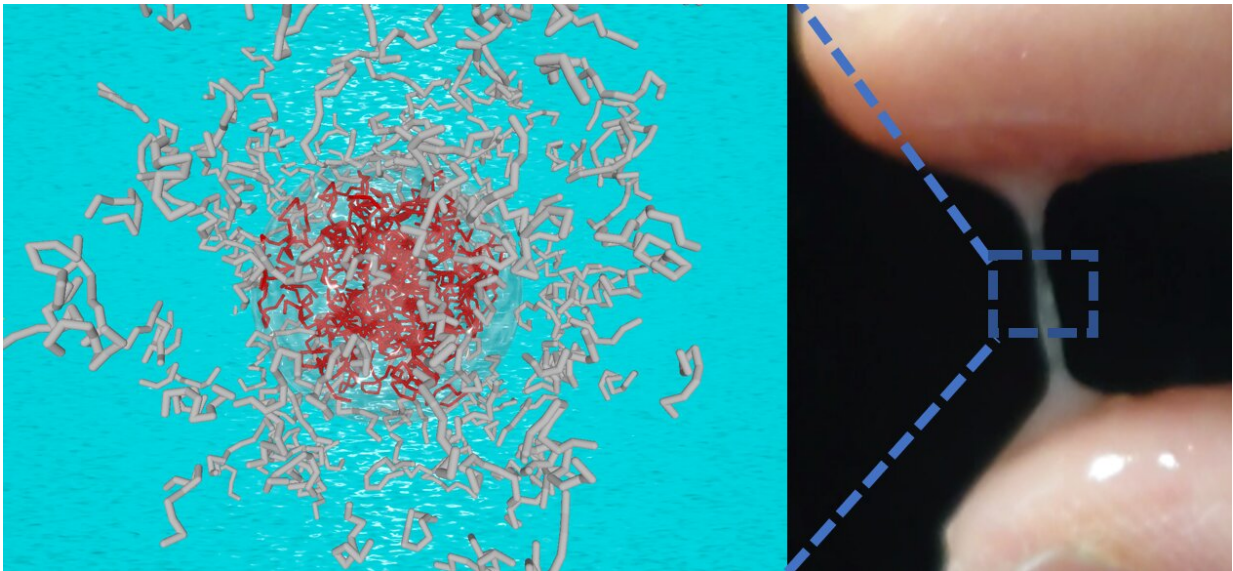


# A patented solution for dry mouth relief and food product development

November 17 2020

---



A new hydrogel has significant potential for oral care products that can help with dry mouth relief. Credit: Anwasha Sarkar/University of Leeds

A team of scientists from the University of Leeds have developed a new hydrogel that has significant potential for oral care products that can help with dry mouth relief.

The team developed this bio-inspired lubricant to act as an alternative to saliva without additional lipid content. For instance, dry [mouth](#) syndrome or xerostomia pose a limitation to the lubrication of oral

surfaces in absence of natural saliva, while extra lipid intake is undesirable for these patients especially for the [elderly population](#), where this syndrome is prevalent.

Additionally the developed formulation can be potentially used to replicate the lubricating properties of fat content in [food products](#), providing the possibility of decreasing caloric content, without sacrificing sensory related attributes.

The synergistic superlubricity of the novel microgel-reinforced hydrogel offers a unique prospective towards the fabrication of biocompatible aqueous lubricants for dry mouth therapy or design of non-obesogenic nutritional technologies.

Principal Investigator Anwesha Sarkar, Professor of Colloids and Surfaces at Leeds, said, "The excelling lubrication performance of this patented microgel-reinforced hydrogel is attributed to the synergistic interactions between the proteinaceous microgels and the biopolymeric [hydrogel](#) with benefits of both viscous and boundary lubrication."

"The development of this bio-inspired aqueous lubricant technology as alternative to saliva is a high priority. To date, such superlubricity is not achieved by any other commercial dry mouth therapies as they lack boundary lubrication properties.

"With the help of ERC Proof of Concept Funding, we are now collaborating with Nexus at the University of Leeds and expect to license this technology soon to industries to ultimately provide sustained relief to dry mouth patients."

**More information:** Jing Hu et al, Synergistic Microgel-Reinforced Hydrogels as High-Performance Lubricants, *ACS Macro Letters* (2020). [DOI: 10.1021/acsmacrolett.0c00689](https://doi.org/10.1021/acsmacrolett.0c00689)

Provided by University of Leeds

Citation: A patented solution for dry mouth relief and food product development (2020, November 17) retrieved 26 April 2024 from <https://phys.org/news/2020-11-patented-solution-mouth-relief-food.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.