

## **Hebrew U researchers develop environmentally friendly method to prevent biofilm**

Researchers at the Hebrew University of Jerusalem have developed an environmentally friendly method to prevent biofilm that uses heterocyclic compounds to disrupt cell-to-cell communication, interfering with biofilm formation. Unlike the use of antibiotics, which often induce formation of resistant strains, the compounds do not need to kill the microorganisms that cause the biofilms. “Just a few weeks ago, a study published by researchers from the University of Colorado showed that showerheads may be dangerous for our health due to contamination with biofilms — or aggregates of bacteria or fungi,” says Yaacov Michlin, CEO of Yissum Research Development Company, the university’s TTO. “This invention is exactly the solution for such problems as well as many other problems related to home and industrial use that affect us daily.”

Biofilm-related problems cost industry tens of billions of dollars annually by corroding pipes, reducing heat transfer or hydraulic pressure in industrial cooling systems, plugging water injection jets, and clogging water filter and pipes. The compounds developed by Doron Steinberg, a professor in the Faculty of Dental Medicine, and Morris Srebnik, a professor in the Institute of Drug Research, and colleagues will be used to coat pipes, filters, membranes, air conditioning ducts, and other surfaces in contact with water that are prone to biofilm formation. The coating is environmentally friendly and effective against both fungal and bacterial biofilms. The technology can be used for industrial water treatment, prevention of biofilm formation on filtration membranes, paints and coatings, irrigation pipelines, and swimming pools — applications where it’s expected to lower costs of desalination and water recycling processes by reducing energy consumption due to corroded or clogged pipes. The technology also can be used in simple household cleaners.

Source: [Earth Times](#)