

Inventors from MIT Selected as Finalists for the European Inventor Award 2023

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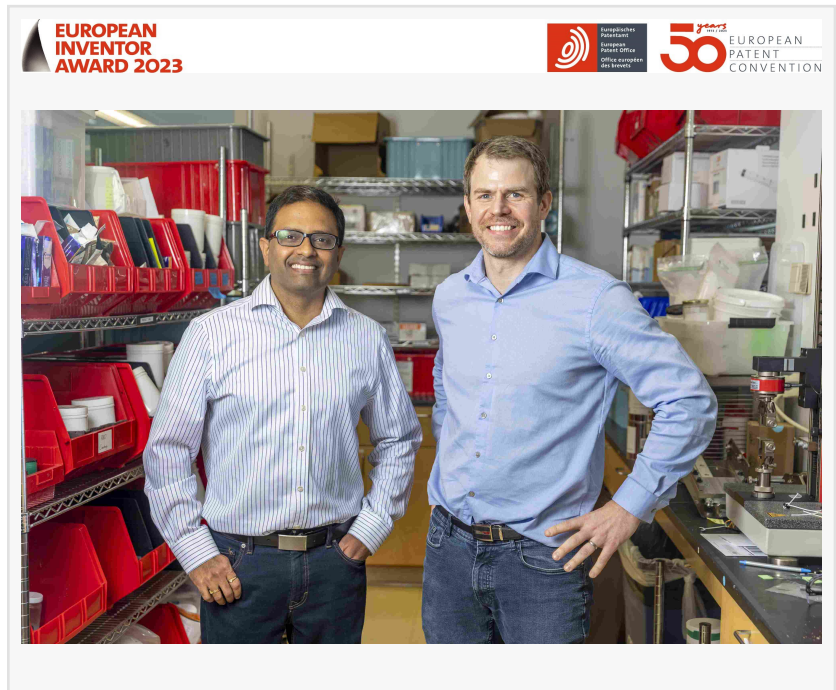
/EINPresswire.com/ -- The Indian-US duo Kripa Varanasi and David Smith's invention is a non-stick coating

Maximising product and minimising waste with innovative packaging: Inventors from MIT selected as finalists for the European Inventor Award 2023

- * The Indian-US duo Kripa Varanasi and David Smith's invention is a non-stick coating that allows thick, slow-moving liquids to flow with ease
- * The platform coating technology enables frictionless packaging to completely and easily dispense products such as mayonnaise, lotion or glue
- * The inventors have bought the technology to market for a wide range of toothpaste and skincare products
- * The company has also partnered with several biotech companies to customise its coatings for a wide range of medical products

The United Nations estimates that approximately 36% of all plastics produced are used in packaging, including single-use plastic products for food and beverage containers. Approximately 85% of these packages end up in landfills or as unregulated waste. Kripa Varanasi and David Smith have invented a customisable non-stick packaging solution that is set to disrupt the industry. This first-of-its-kind coating platform could change the way we package and consume various products, including food, paint, cosmetics, condiments, and more, by reducing waste and maximising product utilisation. The inventors' vision is for widespread applications of their customisable coatings to eliminate waste and reduce the CO2 and water footprint of the whole packaging industry and beyond.

Varanasi and Smith are finalists for the European Inventor Award in the 'Non-EPO Countries'



category for their promising work. They were selected from over 600 candidates for this year's edition.

A first-of-its kind coating that enables frictionless packaging

Varanasi and Smith invented liquid-based coatings that cling to packaging while repelling the products inside them, allowing substances as sticky as paint, glue, ketchup and toothpaste to glide over the coatings and flow effortlessly out of their container. All the products can be used while leaving a clean container that can be recycled. For industrial applications, such as manufacturing tanks and pipes, the liquid can be replenished as needed, thus giving it infinite life.

LiquiGlide™ coatings can eliminate waste in multiple industries, including consumer products, manufacturing, energy, and agrochemicals, saving billions of tonnes of product wastage and billions of euros in associated equipment cleaning costs. The invention is now being commercialised for use in a range of containers. In 2021, the company provided coatings for a new generation of recyclable toothpaste tubes. LiquiGlide partners with package designers within health and beauty, food and beverage, household products, etc. to use the technology, allowing customers to get every drop.

Inspired by a bottle of honey

Varanasi studied engineering at the Indian Institute of Technology in Madras, India, and the Massachusetts Institute of Technology (MIT) in the United States. He was the lead researcher at General Electric's Global Research Center before joining MIT's faculty as a professor of mechanical engineering in 2009. Smith was one of Varanasi's first graduate students at MIT when they created the invention. The two were working on reducing friction to the flow of substances in pipelines to lower the energy cost needed to pump fluids and invented the liquid-based coating to circumvent the "non-slip" boundary conditions that causes friction and sticking. Varanasi recounts, it was around then, his wife was struggling to get honey out of a bottle which prompted the idea to apply the invention to packaging. This was when the idea for a completely non-stick packaging solution was born.

Varanasi and Smith then participated in the MIT-\$100K business plan competition and won the Audience Choice award; the immense interest in their product was clear. Varanasi describes it as "a perfect storm of great things that came together: a big pull from the market, a technology that was great and couldn't be easily duplicated or replaced, we had IP protection for all these things, and an investment community which was excited about this."

The company has further expanded to biomedical applications, where the technology can enhance the performance of a range of medical products, including catheters, implantable devices, pharmaceutical packaging, and syringes.

Varanasi and Smith have been named among the three finalists in the 'Non-EPO Countries' category of this year's European Inventor Award, which recognises the work of outstanding

inventors from outside the EPO's 39 member states but who have been granted a European patent. The winners will be announced at a hybrid ceremony on 4 July 2023 in Valencia (Spain). This ceremony will be broadcast online [here](#) and is open to the public.

Find more information about the invention's impact, the technology and the inventors' stories [here](#).

About the European Inventor Award

The European Inventor Award is one of Europe's most prestigious innovation prizes. Launched by the EPO in 2006, the award honours individuals and teams, who have come up with solutions to some of the biggest challenges of our time. The finalists and winners are selected by an independent jury comprising former Award finalists. Together, they examine the proposals for their contribution towards technical progress, social and sustainable development, and economic prosperity. All inventors must have been granted a European patent for their invention. Read more here on the various categories, prizes, selection criteria and livestream ceremony to be held on 4 July 2023.

About the EPO

With 6,300 staff members, the [European Patent Office \(EPO\)](#) is one of the largest public service institutions in Europe. Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in up to 44 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.

Luis Berenguer Giménez

EPO

+49 89 23991833

press@epo.org

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