

New sunscreen filters mimic coral UV protection

CSIRO, Australia's national science agency, in partnership with skincare company Larissa Bright Australia, has created the world's first UVA/UVB sunscreen filters which mimic the natural sun protection used by corals on the Great Barrier Reef.

The development builds on work by scientists at the Australian Institute of Marine Science (AIMS) who were the first to discover the natural sun screening ability of coral on the Great Barrier Reef. Natural skincare brand, Larissa Bright Australia, who studied the results of over 20 years of AIMS research into how shallow-water corals protect themselves from UV light then approached the Commonwealth Scientific and Industrial Research Organisation (CSIRO) with the aim to find a way to convert this natural method of coping with exposure to the intensive UV rays from Queensland's sunshine, into a safe and effective sunscreen for human use.

CSIRO scientists have spent the last two years adapting the coral's sunscreen code so that it can be s used in human sunscreen. Eventually, the coral's natural sunscreen was improved to create a suite of 48 new sunscreen filters that are resistant to both UVA and UVB rays and are clear and colourless.

"The molecular make up of the coral's natural sunscreen filter was quite complex, but the real challenge was modifying it so that it was resistant to both UVA and UVB radiation in one molecule which is what makes these filters so unique," explained CSIRO Research Scientist Dr Mark York, who led the research project in conjunction with Senior Research Scientist Dr Jack Ryan.



Larissa Bright, Company Director of Larissa Bright Australia, and Dr Mark York in the lab with a flask of UV filters.

According to the Australian science body, "the breakthrough paves the way for a new generation of sunscreens which harness the same protective barriers developed by Australia's Great Barrier Reef corals over millions of years to survive in the harsh Australian sun."

Larissa Bright Australia is now looking for a commercial partner to incorporate the new technology and bring the compounds into full scale production. The broad spectrum coral sunscreen filters are expected to be available to consumers across the globe within five years.

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