Taking Barrier reef coral sunscreen to the world

Together with skincare company Larissa Bright Australia, we have created the world's first UVA/UVB sunscreen filters which mimic the natural sun protection used by corals on the Great Barrier Reef.

THE CHALLENGE

Mimicking corals' natural sun protection

Larissa Bright and CSIRO's Dr Mark York working with UV filters in the lab.

Scientists at the Australian Institute of Marine Science (AIMS) were the first to discover the natural sun screening ability of coral on the Great Barrier Reef.

Larissa Bright Australia, in partnership with AIMS, studied the results of over 20 years of AIMS research into how shallow-water corals protect themselves from UV light before approaching us.

Larissa Bright Australia wanted 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.

OUR RESPONSE

Creating safe, stable UV filters

We spent two years adapting the coral's sunscreen code so that it can be safely used as an ingredient in human sunscreen.

The molecular make up of the coral's natural sunscreen filter is quite complex, but the real challenge for us was modifying it so that it was resistant to both UVA and UVB radiation in one molecule, creating unique filters that are clear in colour, virtually odourless and very stable.

The research was undertaken through a Department of Industry grant program, which places scientists into industry to assist Australian research and development projects.

THE RESULTS

A new wave of sunscreens

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.

The new UV filters are resistant to both UVA and UVB rays and are clear and colourless which means they can be used in any cream emulsion.

The broad spectrum coral sunscreen filters are expected to be available to consumers across the globe within five years.

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