

Australia corals to light up cancer cure fight

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Australian scientists have discovered a cluster of brilliant shallow-water corals that could help in the search for anti-cancer drugs and to understand global warming, a researcher said Saturday.

The vividly fluorescent cluster was found in waters off Lord Howe Island, 600 kilometres (400 miles) east of the Australian mainland, with some displaying rich reds that were difficult to find and in high demand for studies of cancer cells, researcher Anya Salih said.

"The underwater buttresses and caverns are densely inhabited by hundreds of corals, all deeply pigmented by the most intense green, blue and many with red fluorescence," she said.

Salih said she had never seen such an abundance of highly red fluorescent corals, nor such an extraordinarily vibrant site.

"We are using these pigments to light up the workings of living cells and to study what goes wrong in cancer cells," said Salih, from the University of Western Sydney.

The gene producing the particular pigment -- red, green, blue or yellow -- would be attached to a molecule in both healthy and [cancerous cells](#), and would enable scientists to track cell growth and change using a special fluorescent-sensitive laser microscope.

Salih is working with scientists from the University of California to explore how [cancer cells](#) differ from normal cells and how effective anti-

cancer drugs are. She said red pigments were especially valuable because they allowed researchers to see deeper into tissues.

"These fluorescent molecules are transforming cell science and biomedical research," said Salih.

The corals were discovered by scientists tracking the recovery of coral bleaching linked to [global warming](#) at Lord Howe Island, and Salih said they were invaluable not only for her research but for understanding climate change.

"Earlier this year, the [coral reefs](#) of Lord Howe Island experienced a sudden mass bleaching event caused by warming of seawater. It's a sign that global warming is beginning to be a threat to coral survival even to the most southern reefs in Australia," she said.

But the fluorescent corals had been much less damaged by the bleaching, lending "support to the hypothesis that fluorescence can provide some level of protection to corals from temperature stresses due to [climate change](#)."

"Coral fluorescence is proving to be incredibly important in the biology of [coral](#) reefs and their ability to survive stressful conditions," she said.

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