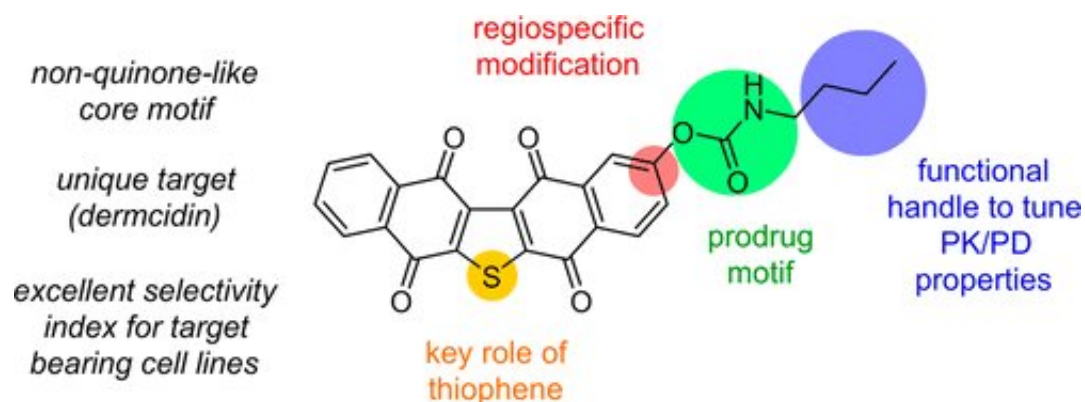


Seawater bacteria provides leads to fight melanoma

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Credit: American Chemical Society

Malignant melanoma can be a particularly dangerous form of cancer, and more therapeutic options are needed. Now, researchers report in *ACS Medicinal Chemistry Letters* that a bacteria from seawater has inspired promising leads for an entirely new way to treat the disease.

In melanoma, [cancer cells](#) form in melanocytes, the cells that color the skin. While new cases of most types of [cancer](#) are declining, those of melanoma—the deadliest form of skin cancer—continue to climb, according to the U.S. Centers for Disease Control and Prevention. If melanoma metastasizes, or migrates to other locations in the body, prognosis is poor and treatment options are limited. New chemotherapy agents were recently approved that target melanomas with so-called

"BRAF" mutations, but some of these tumors are already showing resistance to these therapies. William Fenical, James J. La Clair, Leticia Costa-Lotufo and colleagues decided the best solution would be to take aim at a completely different biochemical pathway in melanoma.

In 2014, the researchers discovered that seriniquinone, a natural product isolated from a rare marine bacteria, showed potent and selective activity against melanoma cells in a test tube. Even better, it was the first small molecule ever shown to target a particular protein involved in cancer proliferation. In their new work, the team identified the structural components of the natural product that were key to its activity, and then modified other parts of the molecule to make it more water soluble and easier to purify. Both these steps are necessary to make it more suitable as a drug. The researchers are now further refining these seriniquinone derivatives to optimize activity against [melanoma](#).

More information: Justin C. Hammons et al. Advance of Seriniquinone Analogues as Melanoma Agents, *ACS Medicinal Chemistry Letters* (2019). [DOI: 10.1021/acsmmedchemlett.8b00391](https://doi.org/10.1021/acsmmedchemlett.8b00391)

Provided by American Chemical Society

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