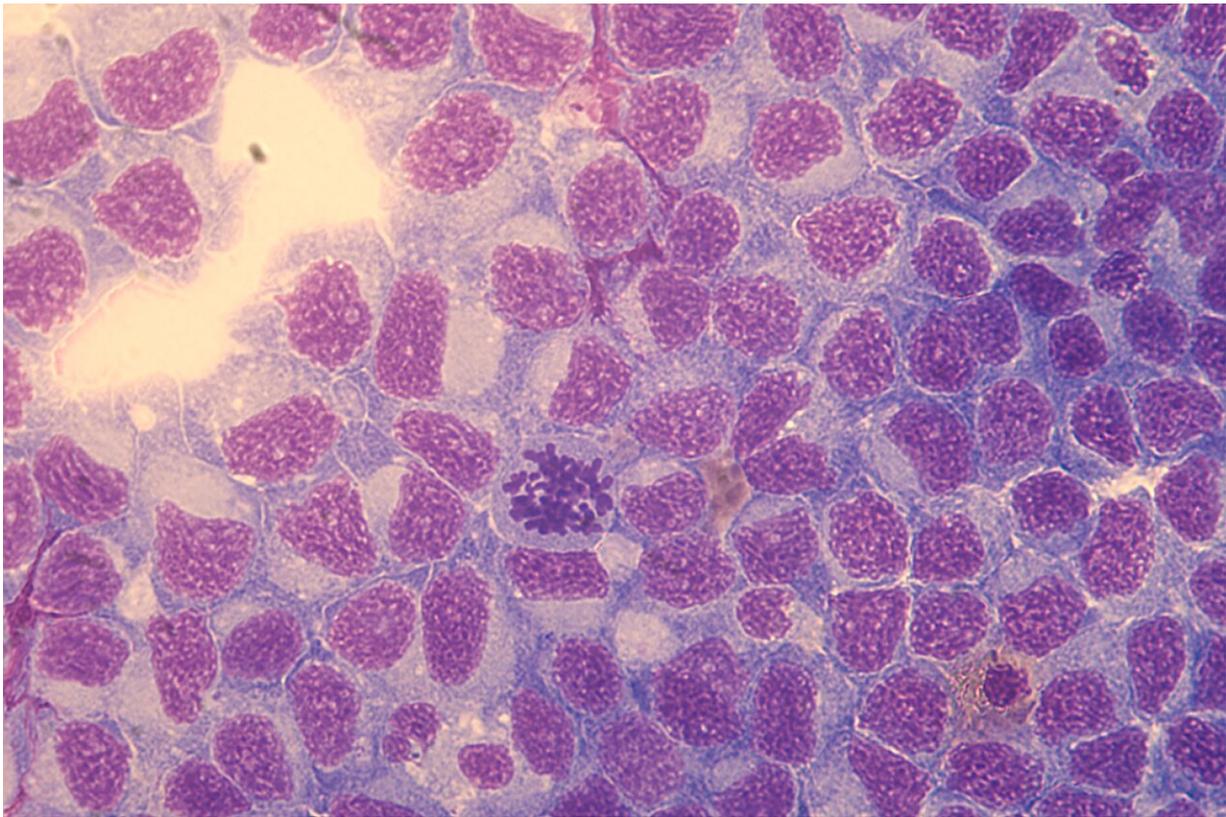


Seaports found to be hotspots of contagious cancer in mussels

February 21 2024



MtBTN2 cells under microscope ($\times 100$ magnification). They are characterized by their large size, prominent nucleus, and scarce cytoplasm. In contrast, a healthy cell—a haemocyte of smaller size with more abundant cytoplasm—is visible on the bottom right. Credit: Maurine Hammel

Seaports act as hubs for the global spread of MtrBTN2, a rare contagious

cancer affecting mussels. In this disease, cancer cells can be transmitted, like parasites, from one mussel to another nearby.

While, in nature, such contagion mainly occurs between mussels in the same bed, ports and maritime transport facilitate the spread of MtrBTN2 to other locations, through biofouling, whereby diseased [mussels](#) attach themselves to ship hulls.

This finding, the fruit of research by a team led by scientists from the CNRS and the University of Montpellier, was [published](#) in *Proceedings of the Royal Society B* on February 21.



Mytilus edulis mussels on floating dock pile in French port of Croisic. Credit: Nicolas Bierne

Higher incidence of the disease in [ports](#) was noted after studying 76 mussel populations along the coast of southern Brittany and the Vendée, within both natural and artificial habitats.

The research team asserts that their discovery argues in favor of biofouling mitigation policies, to stem the spread of the disease and preserve coastal ecosystems.

More information: M. Hammel et al, Marine transmissible cancer navigates urbanized waters, threatening spillover, *Proceedings of the Royal Society B: Biological Sciences* (2024). [DOI: 10.1098/rspb.2023.2541](#)

Provided by CNRS

Citation: Seaports found to be hotspots of contagious cancer in mussels (2024, February 21) retrieved 21 May 2024 from <https://phys.org/news/2024-02-seaports-hotspots-contagious-cancer-mussels.html>

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