

Marine Extracts with Antiviral Activity

Researchers at the University of South Florida have identified a novel class of anti-influenza compounds from marine extracts.

With an estimated 3 to 5 million annual influenza infections resulting in as many as 500,00 deaths there lies a critical need to identify novel antiviral drugs. As natural products account for the origin of more than 60% of new small molecule drugs, more than 2,500 marine organisms from diverse habitats including Antarctica, the Caribbean, and continental and Hawaiian US, were screened for antiviral compounds.

The primary screening is done by microscopic evaluation of morphological changes caused by influenza virus induced cytopathic effect (CPE) and evaluated microscopically in combination with the MTT colorimetric viability method. The extracts found to reduce the CPE by 50% or more, were subjected to secondary screening which consists of dose response, plaque reduction, one step growth curve inhibition and cytotoxicity.

The extracts found to be active in the secondary assay have been fractionated and have shown significant anti-influenza activity. The bioactive component was determined to be a protein.

ADVANTAGES:

- Biologically active extracts from natural sources
- Robust screening procedures for potential antiviral properties
- Significant anti-influenza activity
- Novel class of molecules, never before synthesized

*Novel Anti-influenza
Compounds from Marine Extracts*



Tech ID # 08A045