Purchase of RP-HPLC column for fractionating marine microbial extracts

Andrew P. Desbois, University of Stirling

Partial funding from the MASTS Small Grant Scheme was allocated to the purchase a Phenomenex C18 semi-preparative column for reverse-phase high-performance liquid chromatography (RP-HPLC). This equipment is used in the separation of extracts derived from marine microbes to determine the compounds responsible for important biological activities, including antimicrobial action or signalling functions.

The new equipment has expanded the HPLC capability available to researchers in the University of Stirling and it now permits approaches such as bioassay-guided fractionation. After fractionation, the compounds in purified samples can be tested to determine their activity and ultimately their structural identity. Such an approach is used commonly to find antibacterial compounds, pigments and signalling molecules.

The column is available for a range of on-going research projects including at undergraduate and postgraduate, such as a recent investigation into novel antibiotics produced by marine actinomycetes and eukaryotic algae isolated in Scotland. Importantly, new and ongoing collaborative projects with MASTS partners have resulted from this increased capability.