

Pipeline for the discovery of new antibiotics

Barrie Wilkinson (JIC)

Matt Hutchings (UEA)

Matt Clark (TGAC)

Mervyn Bibb (JIC)

Andrew Truman (JIC)

Govind Chandra (JIC)

Over the last 70 years antibiotics have revolutionised human health and how diseases are treated. Many antibiotics we use in medicine today are made by soil organisms called actinomycetes and were discovered over 40 years ago. As bacteria become resistant to current antibiotics, scientists are looking back to actinomycetes to develop new drugs to fight the superbugs.

Scientists on the Norwich Research Park are using NRP translational funding to develop a pipeline to discover new antibiotics from actinomycetes isolated from challenging environments and unique ecological niches which have not previously been investigated. They will use the latest genome sequencing technology to identify which microbes have the potential to produce the highest numbers of novel natural products that may be useful in tackling multidrug resistant bacteria. They will then grow these bacteria under many different conditions to induce them to produce the full repertoire of antibiotics and other compounds encoded by their genes and which may treat different diseases.