

Path Rich – Pathogen DNA enrichment from clinical samples

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100,000 people in the UK suffer from severe infections each year. These infections often cause people to be hospitalised and identifying what is causing the disease currently takes a long time. Whilst the tests are being done people are given antibiotics – these are sometimes too strong or not strong enough for the particular infection. This is resulting in bacteria becoming resistant to the treatment and in the future this will affect our ability to treat infections effectively.

Justin O'Grady is leading an NRP translational fund project to reduce the amount of time it takes to identify the bacteria causing infections. The technique being developed will enable clinical scientists to separate the small amount of bacterial DNA in clinical samples from the large amounts of human DNA. The bacterial DNA can then be used to identify which organism is causing the infection and which antibiotics will kill it. If successful, this will result in better treatment for people with severe infections and more sustainable use of antibiotics in the NHS.