My name is Donald Davidson and I am an MRC senior research fellow with an interest in innate immunity and inflammation in the context of infectious diseases. I recently discovered the story of a relative who died at the age of 2 from an infection arising from a cut foot, and the idea that a little girl should lose her life to a cut foot is quite unacceptable for my generation, but this happened in 1897 before the discovery of antibiotics.

We are very used now to the concept that we are getting good at treating infectious diseases and, indeed, in 1967 the US Surgeon General reputedly told Congress that it was time to close the book on infectious diseases and to declare the war against pestilence was won. But we now face a swelling tide of pathogens resistant to our conventional antimicrobial therapeutics and it is with that context that my group study cationic host defence peptides. These are naturally occurring compounds that can kill bacteria and viruses but also enhance the natural defences in the body against infection. And by understanding the way these compounds work we aim to develop novel therapeutics for drug resistant infections in the future and avoid a return to the days when a cut foot might appear in a family tree as the cause of death for a 2 year old girl.