

## Amy Hill

I am currently in the process of completing a Master of Science majoring in Cellular and Molecular Biology. My thesis focuses on how herbicides affect the antibiotic resistance of bacteria. It has previously been shown that herbicides can cause reversible increases and decreases to the antibiotic resistance of bacteria depending on the specific combination of herbicide, antibiotic and bacteria. My work will focus on the impacts these temporary, reversible changes in resistance can have on the development of permanent, mutational resistance of the bacteria to antibiotics. This work can help to increase our understating of how bacteria develop antibiotic resistance and the unintended effects of chemicals that are becoming increasingly common in the environment. It is important that we understand these alternative pathways through which resistance can develop, if we are to combat this serious problem and preserve the effectiveness of current antibiotics. In the future I hope to pursue a PhD, either in New Zealand or overseas, in the medical research field. I would like to make a difference to people's lives through developing treatments or cures for diseases that are causing an increasing amount of human suffering such as cancer or Alzheimer's disease.