

Drugs used to overcome cancer may also combat antibiotic resistance: researchers

December 22 2011, by Gerry Wright

Drugs used to overcome cancer may also combat antibiotic resistance, finds a new study led by Gerry Wright, scientific director of the Michael G. DeGroote Institute for Infectious Disease Research at McMaster University.

"Our study found that certain proteins, called [kinases](#), that confer antibiotic resistance are structurally related to proteins important in cancer," says Wright about the study published in *Chemistry & Biology*.

"The pharmaceutical sector has made a big investment in targeting these proteins, so there are a lot of compounds and drugs out there that, although they were designed to overcome cancer, they can in fact be looked at with fresh eyes and maybe repurposed to address the problem of antibiotic resistance."

The large-scale study involved screening 14 antibiotic resistant molecules against 80 chemically diverse protein kinase inhibitors.

Antibiotic resistance is a problem growing in global scope, as more viruses have overcome currently available antibiotics.

"As a result, new drugs and antibiotic strategies are urgently needed to fill the gap in infectious disease control," says Wright, adding he hopes future studies in combination therapies will provide new insight into [antibiotic resistance](#).

"One of the challenges facing the drug discovery community is the lack of new chemical scaffolds with antibiotic activity. This has led to the open question of whether all easily implementable antibiotic chemical scaffolds have already been exploited over the last 50 years: the so-called "low hanging fruit"."

Provided by McMaster University

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