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Salmonella Use Flagella to Attach to Leaves **Discovery could lead to ways to hinder process**

Researchers at Imperial College London in the United Kingdom have discovered how *Salmonella* can cause food poisoning by attaching to salad leaves.

Discovering that the flagella play a key role in *Salmonella's* ability to contaminate salad leaves gives us a better understanding then ever before of how this contamination process occurs.—Gadi Frankel, PhD, Imperial College London

The study, led by Gadi Frankel, PhD, a professor of molecular pathogenesis, shows how some *Salmonella* use their flagella to attach themselves to salad leaves and other vegetables.

The team's findings were presented September 3 at the 21st International ICFMH Symposium Food Micro 2008 conference in Aberdeen, Scotland.

The researchers uncovered the mechanism used by one particular form of *Salmonella*, *Salmonella enterica serovar Senftenberg*, to infect salad leaves. They found that *Salmonella enterica serovar Senftenberg* bacteria have a secondary use for their flagella. The flagella flatten out beneath the bacteria and cling to salad leaves and vegetables. To test this observation, the scientists genetically engineered *Salmonella* without flagella and found that the lab-altered bacteria could not attach themselves to the leaves.

"Discovering that the flagella play a key role in *Salmonella's* ability to contaminate salad leaves gives us a better understanding then ever before of how this contamination process occurs," Dr. Frankel said in a news release. "Once we understand it, we can begin to work on ways of fighting it."

The team's next steps will involve looking at the extent to which different types of salad leaves are affected by *Salmonella*, according to the news release.