Title: Anti-virulence Factors: Alternatives to Antibiotics

Research emphasis:
We identify metabolic pathways in pathogenic bacteria that are required for virulence factor production. These pathways provide uniquely bacterial targets for antivirulence factors (small molecule inhibitors of an enzymatic step in the pathway). Antivirulence factors are sought as replacements for antibiotics. With an antivirulence factor, the infecting bacterium is simply and specifically rendered attenuated, permitting host clearance. There is no selection for antibiotic resistance in commensal populations—the main factor in maintaining reservoirs of antibiotic resistant microorganisms.

Application:
- Antibiotic replacement
- Rational drug design

Collaboration potential:
- Chemistry, pharmaceutical development

Selected publications: (limit 4)

