

# Antimicrobials

We perform antimicrobial product formulation, preliminary analysis, EPA-compliant physical/chemical characterization (OPPTS 830 series including storage stability) and efficacy testing. We have developed, characterized and tested disinfectant products that are effective against bacteria, fungi and viruses under Good Laboratory Practices (GLP).

We also formulate traditional and novel antibiotics, antivirals and antifungals for prevention of infection with improved efficacy and reduced side effects. Experiences include

- colon-targeted delivery of drugs for treatment of diseases such as *C. difficile* infection and inflammatory bowel diseases (IBD);
- long circulating nanoparticles for increased circulation for better pharmacokinetics and pharmacodynamics (PK/PD); and
- sustainable and extended release formulations for diseases to the organs such as eyes, skin, joint, lung, etc.

We also design and develop antimicrobials that can be triggered release due to light, moisture, pH, enzymes, energy (e.g., NIR laser), etc.

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