Invention Summary: Rutgers scientists have discovered a series of nitrobenzyl phosphoramide mustard compounds that have improved antitrypanosomal activity than nifurtimox, the current standard of care. Trypanosomiasis (African sleeping sickness) is caused by parasites of the Trypanosoma brucei species complex and left untreated, patients develop irreversible neurological damage and invariably die. The novel compounds are very potent and inhibit the enzyme T. brucei nitroreductase with 100-fold higher efficiency that nifurtimox and have IC50 values less than 10nM. These compounds may find unique utility for the treatment of trypanosomiasis and Chagas diseases and other diseases caused by pathogenic organisms.

Market Applications: Target, therapeutics, drug discovery, trypanosomiasis, African sleeping sickness, Chagas Disease, nitroreductase, infection.

Advantages: Highly efficient drug against enzyme target, low IC50, inactive as pro-drug.


Recent Publications

Contact: Reza Razavi, Ph.D.
Life Sciences Licensing and Business Development Manager
Office of Technology Commercialization
Rutgers, The State University of New Jersey
3 Rutgers Plaza, ASB III, 3rd Floor
New Brunswick, NJ 08901
Tel: 732-932-0115 x3028 Fax: 732-932-0146
email: razavir@otc.rutgers.edu

Rutgers Inventor:
Longqin Hu, Ph.D.
Department of Medicinal Chemistry

Rutgers Technology #: 10-026

Nitrobenzyl Phosphoramido Mustards as Novel Microbial Agents