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Ref. 36/11201707 of 15 April 2012
File n. 53/COT/D32
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Research project: Synthesis of SecA inhibitors

I worked on a project aimed at developing new SecA inhibitors as potential broad –spectrum antimicrobial agents.

Bacterial infection-related health problems, once thought of as declining importance, have become a major public health concern in recent years. A key reason for this is the wide –spread emergence of drug-resistant bacterial strains, such as methicillin resistant *S. aureus* (MRSA), which is presenting an especially challenging problem in hospital setting.

Therefore, the need for the development of new types of antimicrobial agents, especially those with a novel mechanism of action, is urgent.

So during my post-doctoral research at Georgia State University, I have been worked on the design, synthesis, and characterization of new SecA inhibitors.

In total, 44 new compounds SecA inhibitors have been synthesized which 39 compounds class B and 5 compounds class C. The syntheses of these final compounds require at least five steps.

All the synthesized compounds are undergoing biological tests. To day, 24 compounds have already been tested (in vitro) and some of which have shown potent activities. Subsequently in vitro biological tests will be carried to achieve this work.

I'm working on some papers now. As soon as, I will have, I will send you.