Nafsika H. Georgopapadakou, J Bioequiv Availab 2011, 3:7
doi: http://dx.doi.org/10.4172/0975-0851.1000107

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference & Exhibition on
Pharmaceutical Regulatory Affairs
6-7 September 2011 Baltimore, USA

Antibacterials: Past, Present – and Future?

Nafsika H. Georgopapadakou
Independent Research Consultant, Canada

The last novel antibacterial class to win approval was discovered over 25 years ago. During the next decade, genomics, high-throughput screening and combinatorial chemistry dominated antibacterial drug discovery with little success. This, coupled with the intrinsic low return on investment of antibacterials, led most pharmaceutical companies to abandon the field out-licensing the few compounds still in development to small biotechnology companies. At the same time, the ready availability of antibacterials for human and animal health worldwide led to alarming levels of resistance in both gram-positive and gram-negative bacteria. The situation is certain to deteriorate in the coming years and has brought a sense of urgency to the discovery of new/improved antibacterials. The success of daptomycin, tigecycline and linezolid – and the resurgence of polymyxin – despite toxicity liabilities underscore the commercial viability of antibacterials. One approach likely to succeed is targeting bacterial enzymes using insights and compounds acquired from other therapeutic areas. Another approach is using PK/PD (or manipulating them via formulations) to reduce the toxicity of effective but toxic antibacterials to acceptable levels for their re-introduction in the clinic.

Biography

Nafsika Georgopapadakou received her Ph.D. from Yale University and postdoctoral training from Harvard University. For the next 25+ years, she worked in the area of Infectious Diseases at Big Pharma (BMS, Roche, DuPont), and Small Pharma (NewBiotics, MethylGene, NovaBay). She is presently a consultant focusing in anti-infective drug discovery and preclinical development. She has published close to 200 research papers, abstracts, reviews; two books; three patents; over 30 invited talks).