OMICS Group
Conferences
Accelerating Scientific Discovery

4th International Conference and Exhibition on
Analytical & Bioanalytical Techniques

October 15-17, 2013   Hampton Inn Tropicana, Las Vegas, NV, USA

Emerging practices of F19 & P31 NMR for drug discovery & development

Abhishek Gupta
Daiichi Sankyo India Pharma Private Limited, India

Phosphorus-31 & fluorine-19 NMR spectroscopies are analytical techniques based on the detection of 31P & 19F nucleus. Because of high natural isotopic abundance and a relatively high magnetogyric ratio, these nucleuses are highly responsive to NMR measurements and hence are being used as one of the more routine NMR techniques. The 31P & 19F nucleus also have a spin of ½, making spectra relatively easy to interpret. Phosphorus & fluorine both are commonly found in drugs, biological samples & prodrugs. Current poster reviews the few 31P & 19F applications which can be widely utilized in modern research. As a first example of 19F -NMR spectroscopy, its application to the identification of metabolites of fluorine containing drugs is discussed while 2nd example of 19F NMR presents the methodology of using this nucleus to study the structure & dynamics of DNA-carcinogen adducts.

As a first example of 31P-NMR spectroscopy, its usefulness to assign structures of phosphorus-containing prodrugs is discussed because these signals are well resolved and often occur at characteristic frequencies. 2nd example of 31P-NMR spectroscopy will display the use of 31P-NMR experiment for metabolite profiling of lipophilic compounds in human serum.

Biography

Abhishek Gupta is Master's in Biochemistry & Instrumentation and currently pursuing his doctoral thesis from Indian Institute of Technology (IIT), Delhi, India. He is the Senior Research Scientist of Daiichi Sankyo India Pharma Private Limited in India, a subsidiary of Daiichi Sankyo-Japan, a premier drug discovery research based organization. He is having more than 12 years of versatile experience in the field of NMR spectroscopy & published more than 6 papers in reputed journals.

abbiotechnmr@gmail.com

J Anal Bioanal Tech 2013
ISSN: 2155-9872, JABT an open access journal

Analytica Acta-2013
October 15-17, 2013

Volume 4 Issue 5

Page 169