Conférence
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Société Chimique de France
Bourgogne-Franche-Comté

Journey of Tetraazamacrocycles from Dijon to Delhi Toward Theragnostics and Radioligands CNS Disorder

Dr. Anil Kumar Mishra, Vendredi 15 décembre, 10 h 30

To develop smart and specific tracers to investigate *in vivo* topography, and connections and titration of biochemical's non-invasively using imaging techniques are essence of time in diagnosis and therapy or to use it in the combination as theragnostic. Our ongoing efforts are to innovate and translate multimodal molecular pharmaceuticals of broad interest in health care through state of art construction of chemical chaperons.

Imaging probes are a special class of tracers that are used in conjunction with imaging techniques such as MRI, CT, and nuclear imaging (PET and SPECT), allowing healthcare practitioners to see disease and injuries in a non-invasive way. In the post genomics era, there is the opportunity to advance probes to the point where they can target specific biochemical signatures associated with disease. Because changes in biochemistry occur before diseases reach an advanced stage, molecular imaging probes will foster earlier and more personalized diagnosis of disease that covers oncology, neurology and infection. Our Lab is focused on bringing the power of modern synthesis to bear on the development of molecular imaging probes and agents.

These probes and agents are being developed to visualize specific molecular targets and pathways in live cells, tissues and organism (from plants, mouse to human). The specific aim is to 1) design and synthesize new imaging probes/agents, 2) develop and use novel amplification schemes for the development of 'next generation' imaging probes, 3) optimize pharmacokinetics and 'imagability', 4) efficiently synthesize and produce complex and diverse small molecules, and test their ability as imaging agents. To design and synthesis the next generation of imaging probes/agents for MRI, PET and SPECT, and optical imaging is the core mandate of our research lab.

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