Dr AKSHATA NAYAK

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Employment

Full Time Guest-Faculty (June 2022 - August 2025)
Bangalore University, Jnanabharati Campus

Scientist, Biocon BMS Research Center [BBRC],
Syngene International Ltd, Bangalore, Karnataka |
Jun 2008 - Jun 2010

Scientist, Biocon BMS Research Center [BBRC],
Syngene International Ltd, Bangalore, Karnataka |
Jun 2008 - Jun 2010

Research Associate, GE Plastics, General Electric (GE) India Technology Center Pvt.Ltd, Bangalore, India |
Sep 2007 - May 2008

Education

Ph.D in Pharmaceutical Chemistry (Synthesis of Carbocyclic Nucleosides)

Title of the Thesis:"Synthesis and Biological Evaluation of Novel Carbocyclic Nucleosides"

Research Description: Involved in the Academic Medicinal Chemistry Research (Synthesis and Biological Evaluation of modified nucleosides as antiviral agents.)

Master of Science (Organic Chemistry)

Publications

- Structure–Activity Relationship of Truncated 4′-Selenonucleosides: A3 Adenosine Receptor Activity and Binding Selectivity. **ACS Med. Chem. Lett. 2024, 15, 9, 1620–1626.**
- Subtle Chemical Changes Cross the Boundary between Agonist and Antagonists: New A3 Adenosine Receptor Homology Models and Structural Network Analysis Can Predict This Boundary. ***J. Med. Chem.*, 2021.**
- Design, synthesis and anticancer activity of fluorocyclopentenyl-purines and pyrimidines. ***E. J. Med. Chem., 2018, 155,* 406-417.**
- Synthesis of Acyclic Selenonucleoside Phosphonates as Potential Antiviral Agents. ***Asian. J. Org. Chem*., 2016,*5,* 183-186.**
- Synthesis of Acyclic Selenonucleoside Phosphonates as Potential Antiviral Agents. ***Asian. J. Org. Chem*., 2016,*5,* 183-186.**
- Selenoacyclovir and Selenoganciclovir: Discovery of a New Template for Antiviral Agents. ***J. Med. Chem.*, 2015, *58,* 8734–8738.**
- Regio and sterioselective synthesis of 2′-β- Substituted Fluoroneplanocin A Analogues as Potential Anticancer Agents. Org. Biomol. Chem., 2015, 9236-9248.
- Structure–Activity Relationships of Neplanocin A Analogues as S-Adenosylhomocycteine Hydrolase Inhibitors and Their Antiviral Activities. ***J. Med.Chem.*, 2015, *58,* 5108-5120.**
- Synthesis and Anti-Renal Fibrosis Activity of Conformationally Locked Truncated -2-Hexynyl-N6-Substituted (*N*) -Methanocarbanucleosides as A3 Adenosine Receptor Antagonists and Partial Agonists. ***J. Med. Chem.*, 2014, *57,* 1344-1354.**
- Recent Advances in the Synthesis of Carbocyclic Nucleosides via Ring-Closing Metathesis. ***Asian. J. Org. Chem*., 2014, *3,* 748-761.**
- Fluorocyclopentenyl-cytosine with Broad Spectrum and Potent Antitumor Activity. ***J. Med. Chem*.,2012,*55,* 4521-4525.**
- Design,synthesis and anticancer activity of C8-substituted-4'-thionucleosides Bioorg.**Med.Chem.,2016, 24, 3418-3428.**

AWARDS

- Best Thesis Award for the Doctoral Thesis Submitted to Ewha Womans University in August 2014, Seoul, South Korea.
- Internship programme award, Selected from the department to pursue internship at Kyoto University iCeMS department whose director was Nobel Prize recipient Prof. Shinya Yamanaka.
- Two of the publications were featured as Journal Cover File in Journal of Medicinal Chemistry (Impact.Factor-8.06) and Asian Journal of Organic Chemistry.
- Best Poster Presentation, 9th PSK Medicinal Chemistry Workshop, South Korea, June 2013.
- Best Poster Presentation, 8th PSK Medicinal Chemistry Workshop, South Korea, June 2012.

Posters

- **Poster presentation at 10th AFMC International Medicinal Chemistry Symposium** held at Jeju International Convention Centre, South Korea(2015/10)(Stereo selective Synthesis and Biological Evaluation of 2'-β-Substituted-fluoroneplanocin A Analogues as Potential Antiviral and Anticancer Agents).
- **Poster presentation** at **10th Medicinal Chemistry Workshop** held at Mungyeong, South Korea(2014/06)(Synthesis, Anti-Renal Fibrosis Activity and Binding Affinity of Truncated 2-Hexynyl-N6-Substituted-(N)-Methanocarba-nucleosides as A3 Adenosine Receptor Ligands)
- **Poster presentation** at **9th Medicinal Chemistry Workshop** held at Suanbo, South Korea(2013/06) Synthesis and Binding Affinity of Truncated 2-Hexynyl-N6-substituted-(N)-methanocarbanucleosides as A3 Adenosine Receptor Ligands.
- **Poster presentation in International Round table Conference on nucleosides, nucleotides and nucleic acids at Montreal, Canada(Aug 5th- Aug 9th 2012)** Synthesis and Binding Affinity of Truncated 2-Hexynyl-N6-Substituted-(N)-Methanocarbanucleosides as A3 Adenosine Receptor Ligands.)
- **Oral presentation at8th Medicinal Chemistry Workshop** held at Buyeo, South Korea (2012/06)(Stereoselective Synthesis of Fluoro-Homoneplanocin A as a Potential Antiviral Agent)
- **Poster presentation** at **8th Medicinal Chemistry Workshop** held at Buyeo, South Korea(2012/06)(Synthesis and Binding Affinity of Truncated 2-Hexynyl- N6-Substituted-(N)-Methanocarbanucleosides As A3 Adenosine Receptor Ligands)
- **Poster presentation in International Round table Conference on nucleosides, nucleotides and nucleic acids at Montreal, Canada (Aug 5th- Aug 9th 2012)** (Stereoselective Synthesis of Fluoro-homoneplanocin A as a Potential Antiviral Agent)
- **Poster presentation at Organic Chemistry Workshop** held at KAIST, Daejon, Seoul (2011/12) (Highly Efficient and Improved Synthesis of MLN4924 as an NAE Inhibitor)
- **Poster presentation at 7th Medicinal Chemistry Workshop** held at Muju, South Korea(2011/06) (Synthesis of 3-deazaneplanocin A (DZNep) as Potential Antiviral and Antitumor Agent, and its Fluoro-derivatives)
- **Poster presentation at 7th Medicinal Chemistry Workshop** held at Muju, South Korea(2011/06) (Synthesis of 3-deazaneplanocin A (DZNep) as Potential Antiviral and Antitumor Agent, and its Fluoro-derivatives)