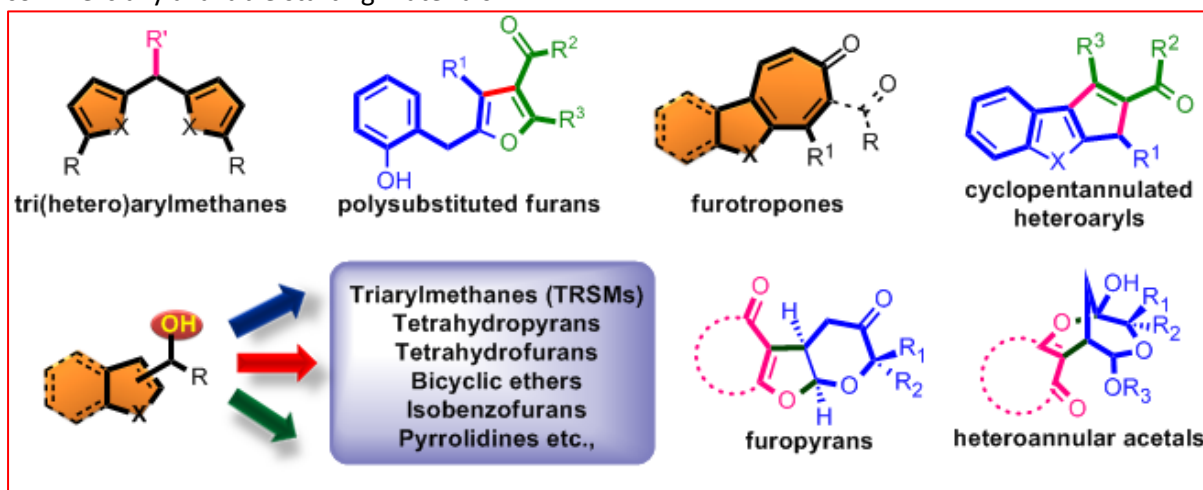


Harnessing Sustainable Chemistry for New Drug Leads

Heterocycles are common structural motifs present in over 80% of the currently marketed small-molecule drugs in market. Artificially mimicking the natural products present in biological systems such as nucleic acids, amino acids, carbohydrates, vitamins and alkaloids in a subtle manner leads to new drug candidates. Potency and selectivity of a drug molecule can be modulated by strategic inclusion of heterocyclic moieties.

Towards this, Dr. Ramasastry's research group is actively involved in developing sustainable methods for the synthesis of novel heterocyclic scaffolds. For example, his group recently developed environmentally friendly approaches to rapidly access tri(hetero)arylmethanes, polysubstituted furans, furotropones, complex mono-, bi-, tri-, tetra- and spirocyclic acetals, etc., from readily and commercially available starting materials.



In quick time, Dr. Ramasastry's research work has been recognized, for example by MolBank at IICT, Hyderabad invited his group to contribute compounds for screening towards new programs aimed at developing clinical candidates for the antibacterial, antitubercular, anticancer and Central Nervous System (CNS) disorders. Further, his research group is pursuing a model with Open Source Drug Discovery (OSDD) for developing similar programs.

Dr. Ramasastry's research work during last three years has been published in the following high impact factor international journals.

1. Kasare, S.; Bankar, S. K.; **Ramasastry, S. S. V.** *Communicated*.
2. Satpathi, B.; Dhiman, S.; **Ramasastry, S. S. V.** *Eur. J. Org. Chem.*, **2014**, 2022.
3. Dhiman, S.; **Ramasastry, S. S. V.** *Org. Biomol. Chem.*, **2013**, *11*, 8030.
4. Dhiman, S.; **Ramasastry, S. S. V.** *J. Org. Chem.*, **2013**, *78*, 10427.
5. Dhiman, S.; **Ramasastry, S. S. V.** *Org. Biomol. Chem.*, **2013**, *11*, 4299.
6. Dhiman, S.; **Ramasastry, S. S. V.** *Ind. J. Chem.*, **2013**, *52A*, 1103. [Invited article]
7. Babu, S. A.; Anand, R. V.; **Ramasastry, S. S. V.** *Recent Patents on Catalysis*, **2013**, *47*. [Invited review article]

Dr. Sripada S. V. Rama Sastry, Department of Chemical Sciences, IISER Mohali
Research Area: Organic Synthesis & Catalysis

<http://www.iisermohali.ac.in/html/faculty/sastry.html>

<http://14.139.227.202/faculty/sastry/>

e-mail: ramsastry@iisermohali.ac.in

Mobile: +91 96461-73747