



DETAILS OF POST-MOU ACTIVITIES

Department of Chemistry

1. MoU with Ciencia Life Sciences, Hyderabad	
Date of MoU: 2nd February 2019 (renewed on 28.01.2021)	


Post MoU Activities:

- **Provided Biological services for the publication of three (3) SCOPUS (Elsevier & Springer) Journals (CARE LIST).**
 1. Synthesis of Novel Functionalized PyranoAnnulated/OxazolonePendent Chromone Derivatives as Potent Anti-Diabetic Agents(*ISSN 1070-3632, Russian Journal of General Chemistry, 2020, Vol. 90, No. 6, pp. 1074–1082. © Pleiades Publishing, Ltd., 2020.*)
 2. Design and synthesis of novel benzyloxy-tethered-chromone-carboxamide derivatives as potent and selective human monoamine oxidase-b inhibitors (*Chemical Papers, 2021, 75, 703-716*).
 3. Rational design, synthesis, biological evaluation and molecular docking studies of chromone-pyrimidine derivatives as potent anti-cancer agents.(*Journal of Molecular Structure, 2021, 1239, 130502*).
- **Provided Biological services to the JIGNASA Student project titled “Antimicrobial Silver Nanoparticle coating on Currency notes and Mobile phones using Eco-friendly Tollens process for prevention of infectious diseases” which Won State level 2nd Prize.**
- **Provided academic inputs in designing certificate course “Concepts and Analytical techniques in Pharmaceutical chemistry and Organic Synthesis”.**
- **Extension lecture on Molecular docking by Dr.Sabitha.Y, Managing Director & Chief Scientist from Ciencia Life Sciences, Hyderabad on 15.02.19.**

2. Qstatix Private Limited, Hyderabad	
Date of MoU: 23rd March 2019	

Post MoU Activities:

- **Provided Molecular Docking services for the publication of two (2) SCOPUS Journals (CARE LIST).**
 1. Synthesis of Novel Functionalized PyranoAnnulated/OxazolonePendent Chromone Derivatives as Potent Anti-Diabetic Agents(ISSN 1070-3632, *Russian Journal of General Chemistry*, 2020, Vol. 90, No. 6, pp. 1074–1082. © Pleiades Publishing, Ltd., 2020.)
 2. Design and synthesis of novel benzyloxy-tethered-chromone-carboxamide derivatives as potent and selective human monoamine oxidase-b inhibitors (*Chemical Papers*, 2021, 75, 703-716).
- Academic inputs in designing the Certificate course “**Concepts and Analytical techniques in Pharmaceutical chemistry and Organic Synthesis**”.

3. Department of Chemistry, Girraj Govt. College(A), Nizamabad	
Date of MoU: 1st April 2021	

Post MoU Activities:

Collaborative events organized such as:

1. National Webinar on “**Entrepreneurship-Opportunities through Research in Science**”.
2. International Invited Lecture & Interactive Talk “**Small Is Big: The Big Impact of Small Ribonucleic Acids in Biomedical Research**”.
3. **Certificate Course in Water Analysis (VIRTUAL MODE)**.
4. Academic inputs in Syllabus designing and in Certificate courses by Dr.M.Sunitha, Asst.Professor of Chemistry, Girraj Govt. College(A), Nizamabad, as an external University (TU) member of BOS.
5. Extension Lecture on “Research Methodology in Chemistry” by Dr.Abhijit.K, Head, Department of Chemistry, Tara Govt. College, Sangareddy (A) was delivered on 29.03.2022 as part of faculty exchange.
6. Joint Student research project conducted as a Collaborative research initiative on ”Impact of ASA and APAP on *Oryza Sativa*. ”
7. Three (3) Joint Publications in UGC-CARE Listed Journals by the Students and the Faculty members;
 - *Impact of Paracetamol and Aspirin on Germination of Paddy Seeds (Oryza Sativa L.) (Madhya Bharti, 2022)*
 - *Impact of Pharmaceutical Effluents on Agroecosystem. (Madhya Bharti, 2022)*
 - *Electro Kinetic Enhanced Phytoremediation of ASA and APAP by Oryza sativa L. Plants (Shodhasamhita : Journal of Fundamental & Comparative Research, 2022)*

**4. MART Specialities Lab
LLP, Hyderabad****MART Specialities
Lab LLP****Date of MoU: 31st December 2021****Post MoU Activities:**

- MART Specialities Lab collaborated with Department of Chemistry and provided the Technical and Analytical support in following Student Research projects:


Completed Projects:

1. Solar Cell Induced Electro-Kinetic Enhanced Phyto-Remediation of Toxic Heavy Metal Pollutants from Water using Hydrophytic Plants.
2. Adsorption Studies of Fe[III] on Celite in The Presence of D-Ribose as Chelating Agent.
3. Adsorption Studies of Fe[III] on Activated Charcoal in the presence of Lactic Acid as Chelating Agent.
4. Adsorption of Fe[III] on Cellulose using D-Valine as Facilitating Agent.
5. Analysis of Adsorption of Fe[III] on Cellulose using D-Ribose as a Chelating Agent.
6. Adsorption Studies of Fe[III] on Bentonite in the presence of D-Ribose as Chelating Agent.
7. Adsorption Studies of Fe[III] on Bentonite in the presence of D-Valine as Chelating Agent.

On Going Projects:


1. Development of Strategy for Remediation of Cr (VI) using Organic acid infused adsorbents.
2. Adsorption studies of Cr (III) from aqueous samples using Natural carboxylic acids assisted adsorbents.
3. Innovative approach for designing and developing eco-friendly bricks from Demolition waste using Clay Chemistry.
4. Impact of Natural carboxylic acid infusion on adsorbents for effective adsorption procedure for Mn (VII) ions.

5. Absorption studies of Fe⁺² on carboxylic acid infused adsorbents.
 6. Study of absorption capacity of Fe⁺³ on natural carboxylic acid permeated adsorbents.
 7. Absorption studies of metal ions on active carbons prepared from pyrolysis of Almond shell.
- MART Specialities Lab provided the Technical and Analytical support to the Research project, **Novel Approach for Adsorption of Fe(III) using Natural Bioorganic Ligands as Facilitating agents on Selected Adsorbents** which is in the communication stage of Publication in SCOPUS.

5. MoU with MSN Labs, Hyderabad	
Date of MoU: 31st December 2021	


Post MoU Activities:

- Department of chemistry has organized On-Campus Job Drive in collaboration with **MSN Labs Pvt. Ltd., Hyderabad** for the students of B.Sc. Chemistry and M.Sc. Organic Chemistry on **25.03.2022** for the Jobs in the Research &Development Cell and Production Units of MSN Labs.
- **More than 170 students of different Colleges have registered for the Job drive. Among them 20 students were provisionally selected in R&D and Production Units.**

6. MoU with Department of Chemistry, Govt. Degree College, Narayankhed	
Date of MoU: 20th March 2022	

Post MoU Activities:

- **K.Venkateshwarlu**, Head, Department of Chemistry, Govt. Degree College, Narayankhed has acted as resource person for the Lecture on the “**Career with Chemistry**” on 27th July 2022 as a part MoU.

7. MoU with Department of Chemistry, Kakatiya Government College, Hanumakonda	
Date of MoU: 25th March 2022	

Post MoU Activities:

- Department of Chemistry, Kakatiya Government College, Hanumakonda has provided e-content resources of Youtube-Video Lessons.
- Under the MoU **Dr. K. Abhijit** and **K. Sreedhar** have given Extension lectures on 27th August 2022 at Kakatiya Government College, Hanumakonda for the B.Sc. Chemistry students.