Activities details of the MOU

Title of the Collaborative Activity: Research Collaboration

The Collaboration is in between **Ahmednagar College, Ahmednagar** and **Dattatray Govindrao Walse Patil Mahavidyalaya, Pargaon** Tarfe Awsari Tal. Ambegaon Dist. Pune

Teachers Involved: Dr. Rameshwar Dongare (Ahmednagar College, Ahmednagar) and Dr. Shaukatali Inamdar (**Dattatray Govindrao Walse Patil Mahavidyalaya, Pargaon**)

1.0 Introduction:

Dr. Rameshwar Dongare, Associate Professor at our college and Dr. ShaukataliInamdar, Head, Department of Chemistry, Dattatray Govindrao Walse Patil Mahavidyalaya, Pargaon had been carrying out research activities together since last three years (from 2020 to till date). And they have published about two plus research papers in UGC Care listed and Scopus Indexed journals at the international level. It is more fruitful and beneficial as they have mutually agreed to extend the research collaboration and research activities.

2.0 Nature of MOU

Research collaboration and research activities as a joint effort to get good quality publications

3.0 Activities details

Dr. Rameshwar Dongare

The DFT calculations were carried out with B3LYP/6-31G (*d*,*p*) method in GAMESS package. The geometry parameter viz. calculated bond distances; bond angles of biologically active compounds were evaluated.

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Dr. Shaukatali Inamdar

Quantitative Structure Activity Relationship (QSAR) was carried out in order to bring about common set of electronic characteristics responsible for the biological activity.

4.0 Outcome

4.1 PhD students

4.2 Publications

The collaboration have resulted in two plus research articles. The details are as followed

1. DFT Studies and Quantum Chemical Calculations of Benzoyl Thiourea Derivatives Linked with Morpholine and Piperidine for the Evaluation of Antifungal Activity, *Rameshwar K. Dongare, Shaukatali N. Inamdar, Radhakrishnan M. Tigote*, **Current Physical Chemistry**, 12 (1), **2022**, 29-36. https://www.ingentaconnect.com/content/ben/cpc/2022/00000012/00000001/art00006
2. DFT-based theoretical model for predicting the loading and release of pH-responsive paracetamol drug, *Rameshwar K Dongare, Radhakrishnan M Tigote, Mahadev P Shinde, Adam A Skelton, Shashikant P Patole, Shaukatali N Inamdar*, Materials Today: Proceedings, Available online 28 April 2023. (Citations: 02, Impact Factor: 2.59) https://www.sciencedirect.com/science/article/abs/pii/S2214785323022654

4.3 Articles read in conference

Paper presented at International Conference

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6th International Conferenceon Nanomaterials for Energy & Environment@ Kolhapur during December 21 - 23, 2023

Title of the paper: Recent Progress in Supercapacitor Applications of Nickel Oxide Nanomaterials

4.4 Published articles reviewed

The article "DFT-based theoretical model for predicting the loading and release of pH-responsive paracetamol drug by*Rameshwar K Dongare, Radhakrishnan M Tigote, Mahadev P Shinde, Adam A Skelton, Shashikant P Patole, Shaukatali N Inamdar* published in Scopus indexed journal Materials Today: Proceedings (Impact Factor: 2.59) which is Available online since 28 April 2023 have been got 02 citations till date.

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