## Description of past scientific research projects completed and research experience

• Brief overview of PhD Research work: The thesis title was Preclinical Pharmacological Evaluation of Metal and Metal Oxide Nanoparticles. It was based on evaluating the safety and efficacy of metal and metal oxide nanoparticles understanding the Pharmacokinetics and the Pharmacodynamics using healthy and diseased experimental animal models. For example, related to obstetrical conditions, a symptomatic animal model of Pre-eclampsia / Eclampsia was used to evaluate the safety and efficacy of Magnesium oxide nanoparticles and to evaluate their neuroprotective action. Zinc Oxide nanoparticles were tested for their Antidiabetic, and Anti-cholesterolemic activity. Reproductive and developmental toxicity of metal and metal oxide nanoparticles was evaluated using the Chick Embryo Model System.

## • Research work as a Young Investigator under PRERNA, India Fellowship

| Research Project                      | Role in Study    | Status    | Funding                   |
|---------------------------------------|------------------|-----------|---------------------------|
| Quadrivalent HPV vaccine Phase III    | Sub-investigator | Completed | Serum Institute of India  |
| clinical trial (SII – QHPV)           |                  |           |                           |
| RSV Mat 009 maternal influenza        | Sub-investigator | Completed |                           |
| vaccine clinical trial                |                  |           |                           |
| ARISE Network study to assess the     | Co-investigator  | Completed | Harward T Chan Institute  |
| impact of digital intervention        |                  |           | of Public Health          |
| Temporary Childbirth Migration        | Co-investigator  | Completed | Extramural, University of |
| RAP grant                             |                  |           | California, SanFransisco  |
| A systematic review on maternal       | Principal        | Completed | Intramural PRERNA         |
| acceptability of influenza vaccine in | Investigator     |           | platform activity         |
| LMIC                                  |                  |           |                           |
| COVID-19 Vaccine hesitancy            | Co-investigator  | Completed | Extramural BIRAC          |
| among adolescents and pregnant        |                  |           |                           |
| women in Semi-urban Areas:            |                  |           |                           |
| Qualitative Research                  |                  |           |                           |
| Health Demographic Surveillance       | Researcher       | Completed | Intramural KEMHRC,        |
| System, Vadu                          |                  |           | Pune                      |
| Proposal writing: Implementation      | Co-investigator  | Completed | Intramural PRERNA         |
| research on the effective utilization |                  |           | platform activity         |
| of interventions for maternal anemia  |                  |           |                           |

• Research endeavors in present appointment: As an Assistant Professor, in the Department of Obstetrics & Gynecology, the job profile is primarily clinical and academic. I am involved in diagnosing and treating antenatal patients and patients presented with gynecological conditions, UG / PG teaching. I am also selected as a Research Coordinator/ Research Champion of the department by the college. I am involved in guiding UG and PG students in their research projects and dissertations. I am the primary resource person for writing Research Proposals and Expression of Interest/Letter of Intent for various Research Schemes by ICMR, DBT, and DST. I am actively involved in clinical research, clinical trials, and public health research in the department.

As a success story, our LOI for conducting Systematic Review and Meta-Analysis is selected for funding by ICMR. The topic is Diagnostic Test Accuracy for the Vaginal Discharge of bacterial aetiology.