

# 2023 Faculty Research Proposal for UAMS College of Pharmacy Summer Student Research Fellowship

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## **FACULTY INFORMATION:**

**NAME:** Rupak Pathak

**DEPARTMENT:**  Pharmacy Practice  
 Pharmaceutical Sciences

**LOCATION:** BioMed II, 4<sup>th</sup> floor, Rm# 411-2

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## **PROJECT INFORMATION:**

**TITLE:** Platelet glycoprotein Iba dysfunction suppresses intestinal epithelial cell regeneration in mice prior to and following irradiation

**LOCATION OF THE PROJECT:** BioMed II, 4th floor, Rm# 413-2

## **BRIEF DESCRIPTION OF THE PROJECT OR SPECIFIC AIMS:**

In addition to their well-established hemostatic functions, platelets are immune cells and thus contribute to maintaining homeostasis of various vital organs, including the intestine. We will investigate how the dysfunction of platelet glycoprotein Iba, which plays important role in immune function, alters intestinal growth. Wild type mice and mice with dysfunctional platelet glycoprotein Iba will be exposed to 12 Gy partial body irradiation with both hind legs shielded. Intestinal tissues will be collected 7 days following irradiation. Change in the expression of intestinal epithelial cell markers will be assessed by real-time PCR and western blots

## **STUDENT'S RESPONSIBILITIES/DUTIES FOR THE PROPOSED PROJECT:**

The student will participate in an ongoing research work. Radiation experiments have been performed and tissues have been collected. The student will be trained to perform real-time PCR assay and western blot analysis.

**ESTIMATED TIME FOR PROJECT COMPLETION:** 10 weeks (≥10 weeks required)

**DOES THE WORK INVOLVE ANIMAL RESEARCH?**  YES  
 NO

**ORAL/POSTER PRESENTATION OPPORTUNITY:**

Yes

## **MANUSCRIPT SUBMISSION:**

Student will get an opportunity to be a part of manuscript based on his/her contribution