



**RAGHAV TRIPATHI**

**Westview High School, Portland, Oregon**

**HOMETOWN: Portland, Oregon**

**PROJECT: Design and Synthesis of Novel Fatty Acid Binding Protein Inhibitors for Analgesic and Anti-Inflammatory Effects through Increases in Endogenous Anandamide Concentrations**

**FIELD: Biochemistry**

**MENTOR: Professor Iwao Ojima, Institute of Chemical Biology and Drug Discovery, Stony Brook University**

*"I am drawn to the possibility of synthesizing dissimilar, wide-ranging pieces of information to help treat patients and make innovations in the field of medicine."*

"The day my mom broke her leg in a dreadful skiing accident, she refused to take any medication during her recovery," Raghav Tripathi recalls. "I wondered how someone could bear so much misery and refuse all medical help. As I investigated, I found that painkillers have countless unintended adverse effects. The irony of relieving pain using medication that causes more pain galvanized me to create a painless painkiller." Raghav tracked down a research paper on the discovery of a compound known as anandamide, naturally released within the body to slow pain. "I realized that if I could increase bodily anandamide levels, it wouldn't have the side effects of foreign medications." Investigating this compound, Raghav studied the design and synthesis of an anti-inflammatory medication that operates through a method that may potentially reduce the unintended side-effects and addiction associated with modern painkillers.

Raghav founded and serves as president of both the Westview Pre-Medical Association – with over 150 members, the largest youth pre-medical society in Oregon – and the Westview Science National Honors Society. For three years he has served as a state committee chair of Model United Nations, winning multiple nominations for best speaker and consensus builder. Captain of the speech and debate team and a four-year Varsity tennis player, this high school senior has volunteered at Legacy Hospital since the eighth grade and mentors other students in STEM as a coach for a robotics team. He is interested in studying biology, biochemistry, public health, and neuroscience on a pre-med track and aspires to be a practicing neurologist. Fluent in Hindi, Raghav won first place best in category in cellular and molecular biology at the 2012 Intel International Science and Engineering Fair and was selected to represent the United States at the European Union Contest for Young Scientists in Bratislava, Slovakia.