

RIH physician finds legalizing medical marijuana does not increase use among adolescents

Study reviewed data of self-reported marijuana use in high school students

PROVIDENCE – According to a new study at Rhode Island Hospital which compared 20 years worth of data from states with and without medical marijuana laws, legalizing the drug did not lead to increased use among adolescents. The study is published online in advance of print in the *Journal of Adolescent Health*.

“Any time a state considers legalizing medical marijuana, there are concerns from the public about an increase in drug use among teens,” said principal investigator **ESTHER CHOO, MD**, an attending physician in the department of emergency medicine at Rhode Island Hospital. “In this study, we examined

20 years worth of data, comparing trends in self-reported adolescent marijuana use between states with medical marijuana laws and neighboring states without the laws, and found no increase in marijuana use that could be attributed to the law.”

Dr. Choo continued, “This adds to a growing body of literature published over the past three years that is remarkably consistent in demonstrating that state medical marijuana policies do not have a downstream effect on adolescent drug use, as we feared they might.”

Currently, medical marijuana is legal in 21 states and the District of Columbia.

The study examined a nationally representative sample of high school students. The data showed that past-month marijuana use was common, at nearly 21 percent of the study population. However, there were no statistically significant differences in marijuana use before and after policy changes in any state pairing.

“Researchers should continue to monitor and measure marijuana use,” Dr. Choo said. “But we hope that this information will provide some level of reassurance to policymakers, physicians, and parents about medical marijuana laws.” ❖

RI scientists, collaborators closer to designing vaccine for H. pylori pathogen

PROVIDENCE – Researchers from the University of Rhode Island are championing a recent breakthrough in the laboratory with hopes it could lead to a vaccine against the pathogen responsible for stomach cancer and to therapeutics for inflammatory diseases.

The results were published in April in the journal PLOS ONE in an article titled, “Human Immune Response to H. pylori HLA Class II Epitopes Identified by Immunoinformatic Methods.” This is the first time that human immune responses to the H. pylori pathogen have been described in such detail, and the researchers believe that a vaccine against the pathogen is within reach.

Helicobacter pylori, or H. pylori, is a bacterium that infects the stomach of half of the human population, leading to chronic gastric inflammation in all of those infected while also causing other adverse health effects. It is the most common cause of peptic ulcers, and its persistence in the stomach also gradually promotes gastric cancer development.

Recently, H. pylori infection has also been found to have some beneficial effects. It has been linked to protection against unrestrained inflammation in conditions such as asthma, inflammatory bowel disease, esophageal reflux and esophageal adenocarcinoma.

“The dual personality of H. pylori is a novel, unexpected finding,” said URI Assistant Research Professor **LENNY**

MOISE, PhD. Dr. Moise is one of the leaders on the project, working alongside URI Research Professor **ANNIE DE GROOT, MD**, and Brown Alpert Medical School Professor **STEVEN MOSS, MD**.

To investigate how H. pylori stimulates both harmful and beneficial human immune responses, the research team used the recent availability of multiple H. pylori genome sequences coupled with advances in computerized algorithms (provided to the researchers by local biotech company EpiVax, Inc.) to identify 90 H. pylori-derived peptide sequences considered as potential immune epitopes. Testing them against human immune cells, the researchers found that these sequences elicited significantly higher inflammatory and immunosuppressive responses in those patients already infected by H. pylori.

“These experiments demonstrate the utility of immunoinformatics to identify vaccine and immunotherapeutic candidates,” said Dr. De Groot, director of the Institute for Immunology and Informatics located on the URI Providence campus.

The research program is funded by a \$13 million National Institutes of Health award entitled “Translational Immunology Research and Accelerated [Vaccine] Development,” also known as the TRIAD program headed by Dr. De Groot. ❖