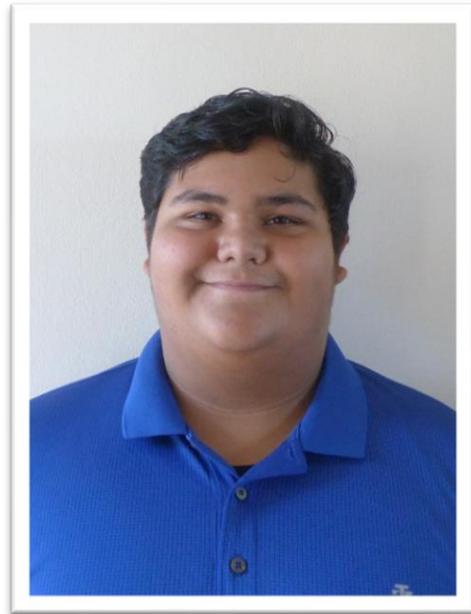


## Seven Questions with an RCM Scholar

RCM Scholar Juan Padilla-Mendez, a biology major, will begin his junior year at UW-Milwaukee in September after transferring from UW-Oshkosh. During his time in the Scholarship Program, Juan has been mentored by Rotarians Dr. John Ridley and Patrick Fennelly.



### 1. What did you do over the summer?

This summer I got the opportunity to be a part of a research opportunity at the Medical College of Wisconsin. The program was called DSHREP and allowed me to join a lab team that was researching Heparin-Induced Thrombocytopenia (HIT). HIT is a syndrome induced by the patient getting a heparin treatment where activated platelets tend to form clots to blot the blood circulation, a process termed thrombosis. I got to work on a project that surfaced in the midst of the COVID-19 pandemic. The research team studied platelet-activating antibodies induced by the SARS-CoV-2 infection. The lab noticed that platelet-activating antibodies from HIT patients contained two sequence motifs— RKH(RX1-2/KX1-2R/H) and Y5(YYYYY) in the PF4/Heparin interaction site of the antibodies. It was found that thrombotic complications are associated with severe COVID-19 cases and contribute to morbidity and mortality. In the lab it was observed that some of the anti-SARS-CoV-2 antibodies isolated from COVID-19 patients contain the RKH and Y5 motif. This led to the thought that the virus infection can induce platelet-activating antibodies similar to those that can cause HIT.

This is where my summer project came in - I was involved in testing whether some of the anti-SARS-CoV-2 antibodies, also possessing an RKH or Y5 motif, could activate platelets. We obtained the expression plasmid of the anti-virus antibody clones possessing an RKH or Y5 motif from a collaborator and worked to determine whether this activates platelets. Our hypothesis was supported, meaning that the virus can induce platelet activating antibodies which contribute to a prothrombotic state or to thrombosis in Covid-19 patients.

### 2. What are you most looking forward to in the fall semester?

This fall semester I would really like to find shadowing opportunities since the virus prevented me from doing so last year. I am also looking forward to starting a new journey at UW-Milwaukee since transferring from UW-Oshkosh. I anticipate being involved with the campus PALMAS clubs which offers pre-med students assistance and support through their undergrad career. I also look forward to doing research with the university to increase my knowledge further.

**3. What's the most recent book you read?**

One of my favorite books that I read over and over is *The Great Gatsby*. The book is very touching to me. The line "tomorrow we will run faster, stretch out our arms further" is important to me as it symbolizes hope hidden behind the green light. The quote inspires my dream of stretching my arms like Gatsby did. I hope that unlike Gatsby I will be able to reach that light and be who I am destined to be in this world.

**4. How do you relax?**

For me doing anything that involves me being outdoors is what recharges me. I love kayaking, mountain biking, hiking, being able to smell, hear, and see the amazing art the world has.

**5. Where do you want to be in 5 years?**

I hope that in five years from now I will be attending medical school to further my interest in medicine, especially emergency medicine. Also, I hope to get my residency in a hospital in Wisconsin and hopefully have a small house in the countryside with some goats and chickens which has always been my dream.

**6. What motivates you?**

One of my greatest motivations has always been to be part of something bigger than myself. I want to not only make a difference and have an impact on myself and my family, but to also make an impact in my neighborhood and community. I want people to have someone who can understand them and support them in their most vulnerable times.

**7. Where do you want to visit someday?**

One of my dream destinations to visit has always been Palawan Island. I love the crystal-clear water and the mountain scapes. I have always imagined myself kayaking around the island and through the sea caves.

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