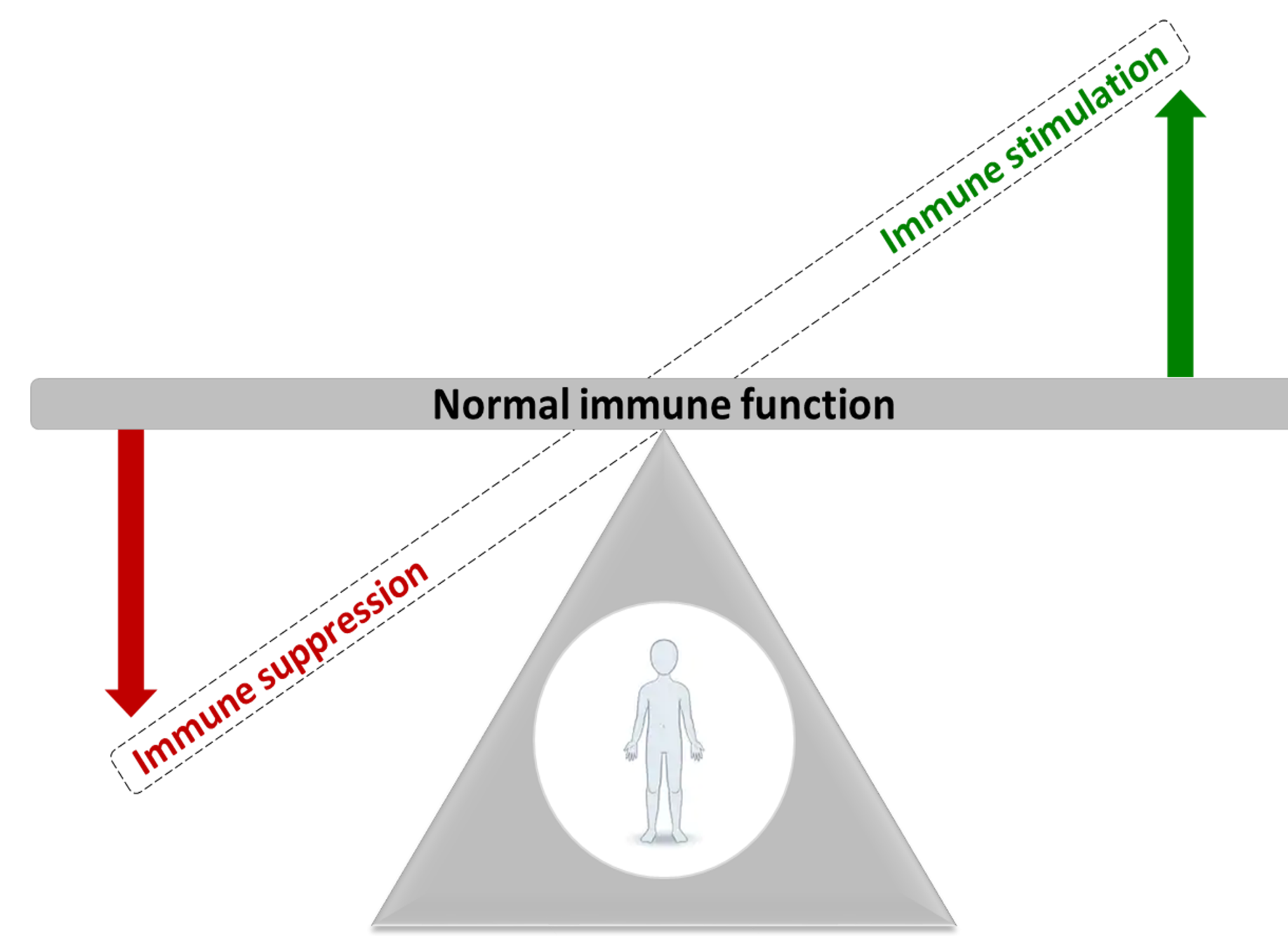


# Practical engagement through PFAS and preying mantis poop



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## Research in the DeWitt Lab



Our lab describes and tries to understand how environmental pollutants affect the immune system. We are especially interested in an *adaptive immune function* that relies on B cells to make antibodies and a big focus of our current research is on a class of persistent chemicals known as per- and polyfluoroalkyl substances or “PFAS.”

## Sharing research



Future Dr. Krystal Taylor (right) presenting her dissertation research at the most recent annual Society of Toxicology meeting!

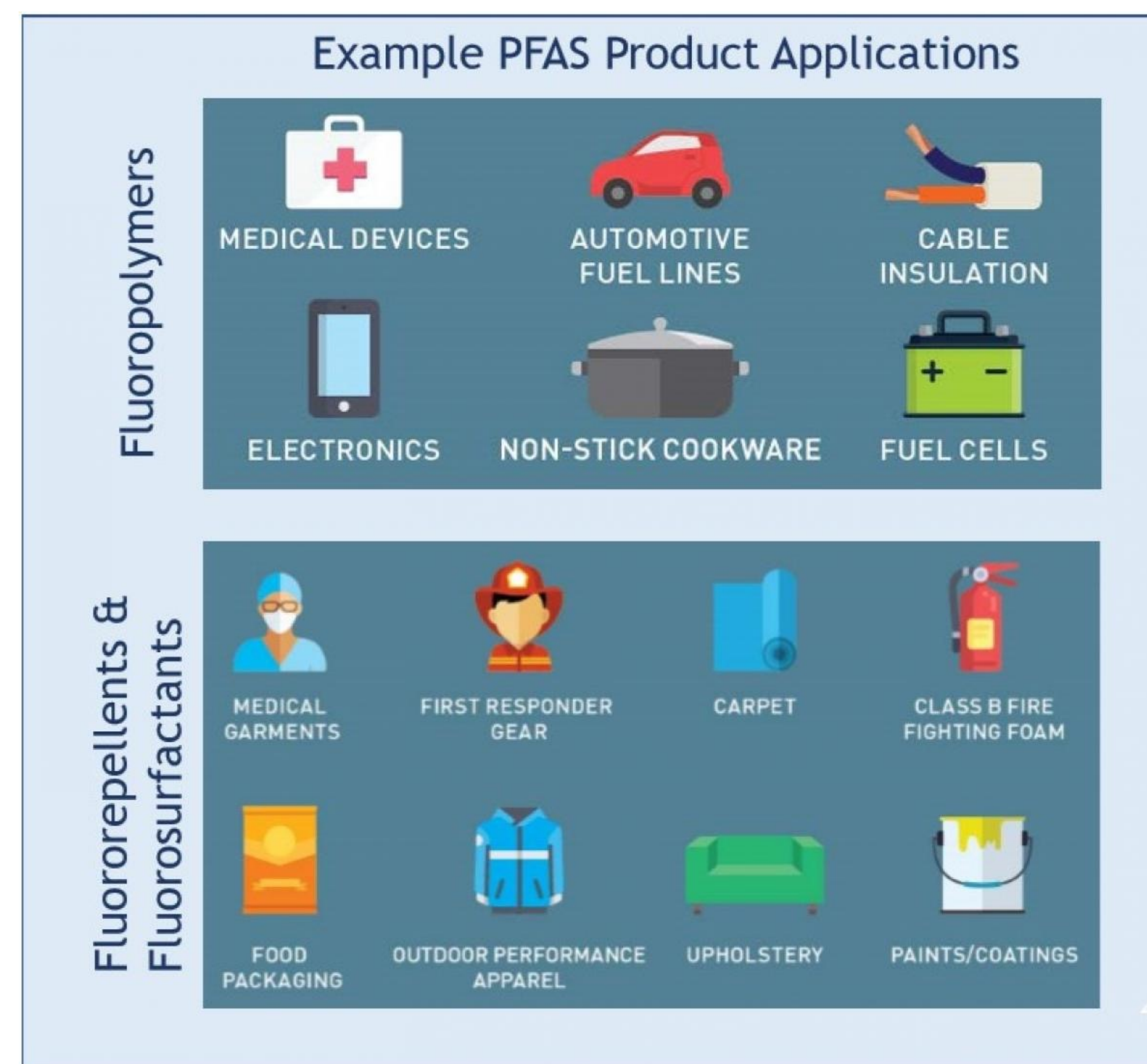
## The DeWitt Lab brand



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## 2<sup>nd</sup> year medical students experience “translational toxicology” with PFAS



## PFAS and health of individual patients

### My Story



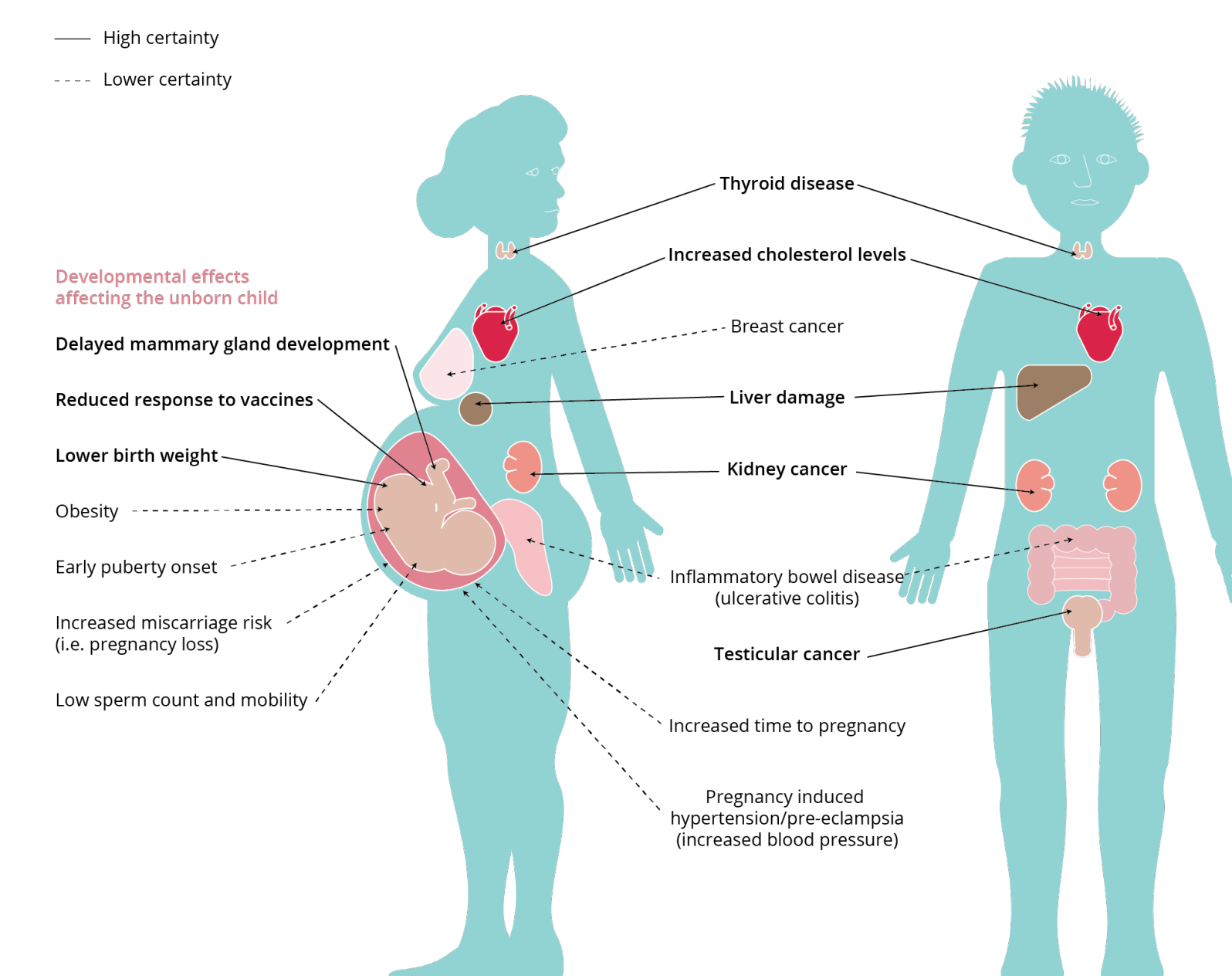
Students received background information on PFAS at the end of their toxicology education block. Embedded in the slides was a video presentation of a community member’s story about her family’s PFAS health journey. Toward the end of the video, the community member shared her PFAS blood levels. The slides were paused, and students paired up to address the following questions:

1. What is one trusted (be sure that you define what you mean by “trusted”) source of information on clinical guidance for managing patients exposed to PFAS or other environmental toxicants?
2. What would you say to Ms. Wynn Stelt about her serum PFAS concentrations?
3. What laboratory or other potential diagnostic test(s) would you recommend for Ms. Wynn Stelt, if any?

After pairing, students shared their answers to the questions and the class discussed options for a patient like this.

## Learning about PFAS is good medicine

PFAS exposure has been linked to many different health effects in humans, including high cholesterol, liver disease, cancer, immune suppression, and effects on developing babies. PFAS levels in blood aren’t regularly available through annual health exams, but early detection of linked diseases can help those at risk – along with their healthcare providers - develop strategies to reduce the risk of more severe disease. That is the goal of this translational toxicology exercise!

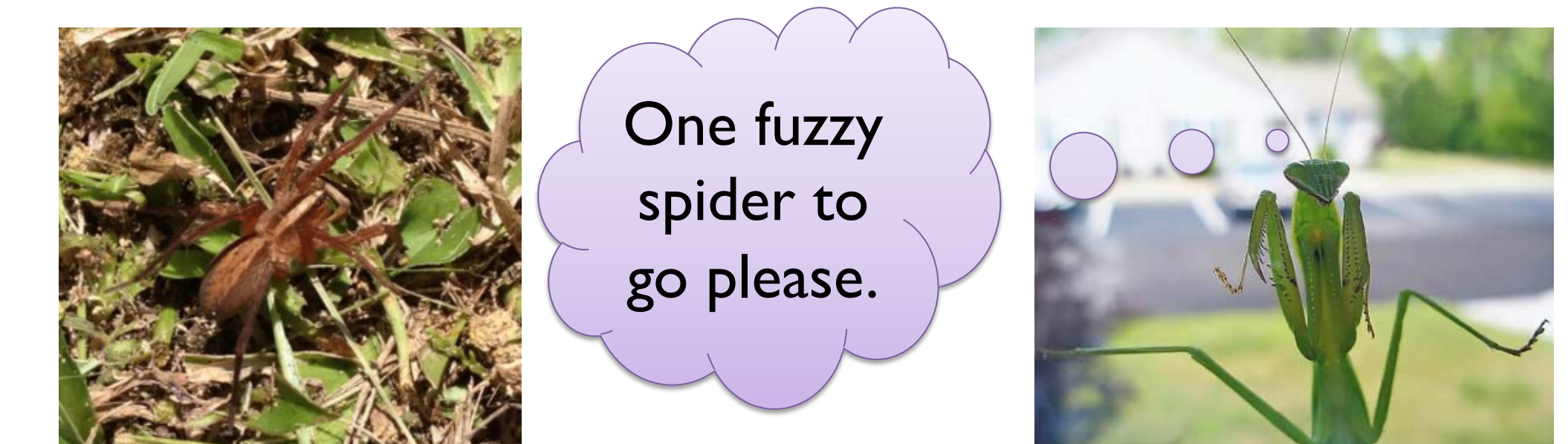


## Community perceptions

Undergraduate honors students participate in an Engagement and Outreach Scholars Academy (EOSA) project to understand community perceptions of PFAS.



## Preying mantis poop



Preying mantises like to dine on wolf spiders! A group of scientists published a paper on wolf spider walking speed when preying mantis poop was and was not present!

## Biomedical statistics can be fun

All grad students in Brody take statistics. If they take it with me, they often learn through funny examples. I use the experiment with preying mantis poop and wolf spider walking speed to teach about *paired t-tests*. Everybody poops, even preying mantises!