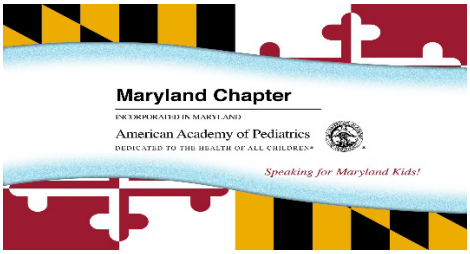

TO: The Honorable Brian J. Feldman, Chair
Members, Senate Education, Energy, and the Environment Committee
The Honorable Shelly Hettleman

FROM: Dr. Michael Ichniowski

DATE: February 2, 2023

RE: **SUPPORT** – Senate Bill 158 – *Pesticide Registration – PFAS Testing – Requirements*

The Maryland Chapter of the American Academy of Pediatrics (MDAAP) is a statewide association representing more than 1,100 pediatricians and allied pediatric and adolescent healthcare practitioners in the State and is a strong and established advocate promoting the health and safety of all the children we serve. On behalf of MDAAP, we submit this letter of **support** for Senate Bill 158.

PFAS (Per- and Poly-Fluoro Alkyl Substances) are known as "forever chemicals" because they do not break down and persist unchanged in the environment. They contain one or more fully fluorinated carbon atoms and have been found in pesticides, including those used for mosquito control. They have been identified as both active and inert ingredients, and they have been suspected as possible contaminants that have leached from the containers in which they are stored or shipped. At present, there are over 12,000 chemicals identified as PFAS.

PFAS have been widely detected in human blood samples and **most commonly enter the body by ingestion of contaminated food or water, or through inhalation of sprayed PFAS or of dust particles contaminated with PFAS.** Once present, they are poorly excreted and persist in the human body, with half-lives often measured in years to decades for some of the PFAS with longer chains of fluorinated carbon; some of these chemicals have also been found to bioaccumulate within tissues in the body. With this environmental and circulatory persistence, the potential for lifetime exposure and accumulation of PFAS is substantial, especially in children, who would have higher levels of exposure relative to their weight over a longer span of years.

Children and fetuses are also uniquely susceptible to the effects of toxic chemicals, **a vulnerability to minimal amounts that contradicts the commonly held misconception that it is the dose that determines the toxicity of a particular substance.** PFAS can cross the placenta and enter the fetal circulation, and the amount to which the fetus is exposed relative to weight is far greater than that of the mother. Toxic exposures during the time of brain and organ formation and of early growth can have long-lasting impacts on an unborn child, interfering with normal neurologic development. Infants and young children also have higher levels of exposure to toxic substances in their environment. They eat and drink more relative to their body weight than adults, and their frequent hand-to-mouth behaviors increase inadvertent non-food ingestions, such as from outdoor soil or contaminated house dust. It is easy to imagine the risk of ingestion for a child playing outdoors on a recently treated yard or play area.

Research has identified the following adverse health effects from exposures to PFAS chemicals:

- Cancer of the kidneys, testicles, ovaries, prostate; non-Hodgkins lymphoma (PFOA, other PFAS)
- Bladder cancer (PFOS)
- Immune suppression: reduced levels of vaccine-induced antibodies (tetanus, diphtheria, rubella, mumps, Hemophilus influenza B, Hepatitis A&B) (PFAS); increased risk of infections in exposed children (PFOS, PFHxS, PFOA, PFNA)
- Increased risk (PFOS, PFOA, total PFAS) and severity (PFBA, a PFAS that accumulates in lung tissue) of COVID-19 infections
- Thyroid disease, primarily hypothyroid, both congenital and acquired (PFAS)
- Low birth weight, decreased birth length and head circumference (PFOA, PFOS)
- Pre-eclampsia (PFOA)
- Increased liver enzymes and non-alcoholic fatty liver disease (PFOS, PFHxS)
- Increased total and LDL cholesterol (PFOA, total PFAS)
- Impaired kidney function (decreased glomerular filtration rate) (PFAS)
- Increased serum uric acid (marker of risk for kidney disease) (PFAS)

Senate Bill 158 would initially prohibit the use of mosquito control products that contain PFAS, beginning in 2024, and then all pesticides that contain PFAS by 2026, which would reduce the risk of exposure to these chemicals for children in Maryland. Our children deserve the opportunity to live and grow in a safe environment, protected from toxic exposures beyond their control.

Because Senate Bill 158 would be expected to reduce such exposures to PFAS and their potential toxicities, MDAAP requests a favorable report on this proposed legislation.