

Dear Scientific Advisory Committee on Alternative Toxicological Methods,

Thank you for the opportunity to make a public comment today. My name is Ashley Haugen and I am the founder and representative of That Water Bead Lady, Inc.

Among the many exciting things about New Approach Methodologies (NAMs) is the possibility it presents for scientists and regulators to rethink previous assumptions. As Dr. John Gordon and colleagues mention in their August 2022 paper, A Framework for Establishing Scientific Confidence in New Approach Methodologies, "It is well recognized that traditional developmental neurotoxicity (DNT) animal test methods do not provide reproducible and easily interpretable information on the developing brain that is suitable for regulators". It is my firm belief that when paired with robust human data feedback systems to capture the real world impacts of chemical harm, new approach methodologies have the potential to greatly aid in the protection of children. Unfortunately, the design of many of the animal studies do not truly reflect how exposures to chemicals tend to work in the real world. If the default to validate NAMs is tied to animal studies, and not human data, progress and innovation will be delayed, and greatly limited by animal testing costs. Consequently, increasing the risk scientists and researchers will continue to unknowingly perpetuate harmful bandwagon ideas. But in situations where the price of inaccuracy is both economic and social, time is of the essence.

Experimentation with acrylamide has been occurring for decades as has its industrial use. However, it was not until 2018 that an animal study investigating subchronic environmentally relevant doses of acrylamides effect on adult neurogenesis or cognitive function demonstrated lower than assumed doses of acrylamide can impact learning and memory. One year too late for my sweet girl. With an improved robust and effective real world human data feedback mechanism, confidence in NAMs over traditional animal testing will grow because reproducibility will play out in the real world and this will not only establish confidence from industry and regulators, but it will also establish credibility amount the general public and an important factor often left unconsidered.

Sincerely,
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References

Han, S. H., Chen, Y. C., Xian, Z. X., & Teng, Y. S. (2021). Superabsorbent polymer balls as foreign bodies in the nasal cavities of children: our clinical experience. *BMC pediatrics*, 21(1), 273. <https://doi.org/10.1186/s12887-021-02740-x>

Lee, S., Park, H. R., Lee, J. Y., Cho, J. H., Song, H. M., Kim, A. H., Lee, W., Lee, Y., Chang, S. C., Kim, H. S., & Lee, J. (2018). Learning, memory deficits, and impaired neuronal maturation attributed to acrylamide. *Journal of toxicology and environmental health. Part A*, 81(9), 254–265. <https://doi.org/10.1080/15287394.2018.1440184>

Spînu, N., Cronin, M., Madden, J. C., & Worth, A. P. (2022). A matter of trust: Learning lessons about causality will make qAOPs credible. *Computational toxicology (Amsterdam, Netherlands)*, 21, 100205. <https://doi.org/10.1016/j.comtox.2021.100205>

van der Zalm, A. J., Barroso, J., Browne, P., Casey, W., Gordon, J., Henry, T. R., Kleinstreuer, N. C., Lowit, A. B., Perron, M., & Clippinger, A. J. (2022). A framework for establishing scientific confidence in new approach methodologies. *Archives of toxicology*, 10.1007/s00204-022-03365-4. Advance online publication. <https://doi.org/10.1007/s00204-022-03365-4>