The legal failure to prevent sub-clinical toxicity
Carl F. Cranor (University of California, Riverside, CA USA)

U.S. regulatory and compensation laws function poorly to prevent sub-clinical toxic effects in children that contribute to long-term harm. The vast majority of substances enter commerce without legally required testing (under “post-market” laws). In 1984 only a small percentage of substances had been subject to pre-market testing and very few were tested for developmental toxicity. Once substances are suspected of contributing to harm, the government (or someone claiming to be injured) has the burden of proof to show risks or harms, and their causes. This has become more difficult, and will be increasingly so if developmental exposures contribute to adverse effects later in life. Post-market laws and pre-market screening laws provide little data or protection. Pre-market testing and approval laws, analogous to U.S. drug laws, offer better structures for identifying toxicants before they contribute to harm, but they apply to few substances and would face substantial political opposition.

Pre-market laws in other jurisdictions may hold greater promise for the identification of new or existing toxicants (e.g., the REACH initiative in the EU). The potential for serious, subtle sub-clinical effects that contribute to later harm provides reasons to pursue a more primary prevention or precautionary approach to identifying potential toxicants and forestalling harms. This paper suggests much greater use of pre-market laws as well as laws that aim to prevent chemical invasions without testing. The scientific community can assist legal efforts by publicizing the seriousness of sub-clinical developmental effects, as well as the duration between initial exposure and adverse outcomes.