Representative Liz Linehan's Promotion of Vaccine Legislation will Benefit her Husband's Employer Boehringer Ingelheim and Vaccine Development at the Yale Lab Where her Sister-In-Law Works

• Rep. Linehan's husband, Brian Linehan, has been employed by Boehringer Ingelheim in Ridgefield, CT for 16 years and currently works there as a research scientist.

• Rep. Linehan has stated on Facebook that her husband does not work on vaccine development and "makes absolutely zero dollars from the sale or use of vaccines" (see screenshot). He does, in fact, benefit financially because when the company does well, it will be reflected in his bonus, which is a percentage of his salary. Online sources indicate that Boehringer Ingelheim is actively involved with the research and/or development of human vaccines and, as a member of the Pharmaceutical Industry, they are tied to the outcome of these governmental mandates.



Liz Linehan

My husband is a research scientist who makes absolutely zero dollars from the sale or use of vaccines. He doesn't work on vaccines. His company does not even make human vaccines. I have never received one single dollar from pharmaceutical lobbyists. I participate in the citizen elections fund which prohibits special interest money. My sister in law is a microbiologist who is developing a vaccine for herpes at Yale, which will be HUGE when they succeed.

There you go. I'm an open book.

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- Boehringer Ingelheim (BI) appears to be entering the human vaccine market and has financially supported clinical trials for three human vaccines,^{1,2,3} one of which was a novel flu vaccine for immunocompromised individuals.
- This vaccine, "Influvac Plus," did not show an improved immune response, so it appears to have been scrapped.⁴
- However, as noted by the study authors, patients on immunosuppressive biologic drugs

only had a 19% immune response to flu vaccines. Given the exploding market of biologic drugs for growing numbers of patients with autoimmune disorders, a flu vaccine designed to be more effective for these patients would be very valuable.

- Since the completion of this trial, has BI continued to work on a flu vaccine for immunocompromised patients?
- Given suboptimal immune responses in young children, could this type of vaccine one day be marketed to children and be a mandated vaccine in Connecticut since the flu vaccine is currently mandatory for children in daycares and preschools?

• BI is also a partner of the Human Vaccines Project⁵, which lists veteran vaccinologist and rubella vaccine developer Stanley Plotkin, MD as a board member.⁶ Why would they be a partner if they were not looking to develop human vaccines?

• Will BI develop additional vaccines that could eventually be mandated for school attendance?

• Even if Brian Linehan is not directly involved in vaccine research and development at BI, his employer is heavily investing in vaccines and will likely receive substantial profits from future FDA approved products, particularly if they are mandated for school attendance.

• While Boehringer Ingelheim is entering the human vaccine market it is also developing new drugs to treat autoimmune and autoinflammatory diseases. Autoimmune diseases affect an estimated 50 million Americans and the NIH estimates their related health care costs to be approximately \$100 billion annually.⁷ Three of the top six best-selling prescription drugs in 2015 were biologics used to treat autoimmune disorders. In 2015, spending on drugs for autoimmune disorders accounted for 20% of all specialty drug spending.⁸

• Dr. Yehuda Shoenfeld, an internationally-recognized researcher on autoimmunity and its relationship to vaccines, has published that, "there are many reports that describe post-vaccination induced autoimmunity [and] strongly suggest that vaccines can induce autoimmunity."⁹

• Are pharmaceutical companies like Boehringer Ingelheim profiting off vaccines directly and then indirectly with drugs for autoimmune diseases?

• BI is investing heavily in research into immunomodulating drugs and biologics to treat autoimmune and autoinflammatory diseases. They are collaborating with Yale.⁹

• Their new drug Risankizumab, a joint effort with Abbvie (maker of blockbuster biologic Humira), will likely be the most expensive biologic on the market and is one of the "top 5 drugs to watch in 2019" for investors.^{11, 12}

• Is Brian Linehan involved in Boehringer Ingelheim's biologic and immunomodulatory division? Is he involved with their new drug Risankizumab, which will likely provide BI with massive profits?

 Will patients prescribed Risankizumab then need a special flu vaccine also made by BI?

• In addition to her family connections to Boehringer Ingelheim, Rep. Linehan's sister-in-law, Melissa Linehan, is a microbiologist and research associate in the lab of Dr. Akiko Iwasaki at Yale University that is focused on developing a vaccine for herpes simplex viruses (HSV).¹³

• Healthcare costs for genital herpes in the United States are estimated at \$984 million annually.¹⁴

• Could the HSV vaccine developed by Dr. Iwasaki and Melissa Linehan eventually be added to the list of recommended childhood vaccines, as is currently the Gardasil vaccine for human papillomavirus (HPV)?

• HB 7199 was proposed in Connecticut this session to mandate the HPV vaccine Gardasil for 9th graders.¹⁶ Could a vaccine for HSV, developed by Dr Iwasaki and Melissa Linehan, be mandated in the future and financially benefit Rep. Linehan's family?

• Is Rep. Linehan a neutral party as she attempts to mandate vaccines on a small minority of Connecticut children with religious objections?

• Or do her family connections to vaccine developers constitute a conflict of interest as she attempts to pass a bill that would repeal the religious exemption to vaccination currently used by 1.4% of Connecticut schoolchildren?

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