

From: Christine Massey [REDACTED]
Sent: June 30, 2020 12:35 PM
To: Macintyre, Ava <ava.macintyre@peelregion.ca>; ZZG-RegionalClerk <zzg-regionalclerk@peelregion.ca>; Lockyer, Kathryn <kathryn.lockyer@peelregion.ca>
Subject: Fwd: Recap Of Day 5: TSCA FLUORIDE TRIAL

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Dear Clerk,

I request that the email below be added to Council's next agenda.

Best wishes,
Christine

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June 30, 2020
REGION OF PEEL
OFFICE OF THE REGIONAL CLERK

REFERRAL TO _____
RECOMMENDED _____
DIRECTION REQUIRED _____
RECEIPT RECOMMENDED _____

----- Forwarded message -----

From: Christine Massey [REDACTED]
Date: Tue, Jun 16, 2020 at 3:12 PM
Subject: Recap Of Day 5: TSCA FLUORIDE TRIAL
To: <Nando.Iannicca@peelregion.ca>, <annette.groves@caledon.ca>, Crombie, Bonnie <bonnie.crombie@mississauga.ca>, Carolyn Parrish <carolyn.parrish@mississauga.ca>, Chris Fonseca <chris.fonseca@mississauga.ca>, <dipika.damerla@mississauga.ca>, George Carlson <george.carlson@mississauga.ca>, <gurpreet.dhillon@brampton.ca>, [REDACTED] Jennifer Innis <Jennifer.Innis@caledon.ca>, Johanna Downey <johanna.downey@caledon.ca>, John Kovac <John.Kovac@mississauga.ca>, Karen Ras <karen.ras@mississauga.ca>, Medeiros, Martin - Councillor <martin.medeiros@brampton.ca>, Matt Mahoney <Matt.Mahoney@mississauga.ca>, Palleschi, Michael - Councillor <michael.palleschi@brampton.ca>, Iannicca, Nando <nando.iannicca@mississauga.ca>, Saito, Pat <pat.saito@mississauga.ca>, Pat Fortini Councillor <pat.fortini@brampton.ca>, <Patrick.Brown@brampton.ca>, <paul.vicente@brampton.ca>, Starr, Ron <ron.starr@mississauga.ca>, <rowena.santos@brampton.ca>, <stephen.dasko@mississauga.ca>, McFadden, Sue <sue.mcfadden@mississauga.ca>, Mayor Allan Thompson <mayor@caledon.ca>, Premier of Ontario | Première ministre de l'Ontario <premier@ontario.ca>, <mayor_tory@toronto.ca>

Dear Premier, Regional Council and Mayor Tory,

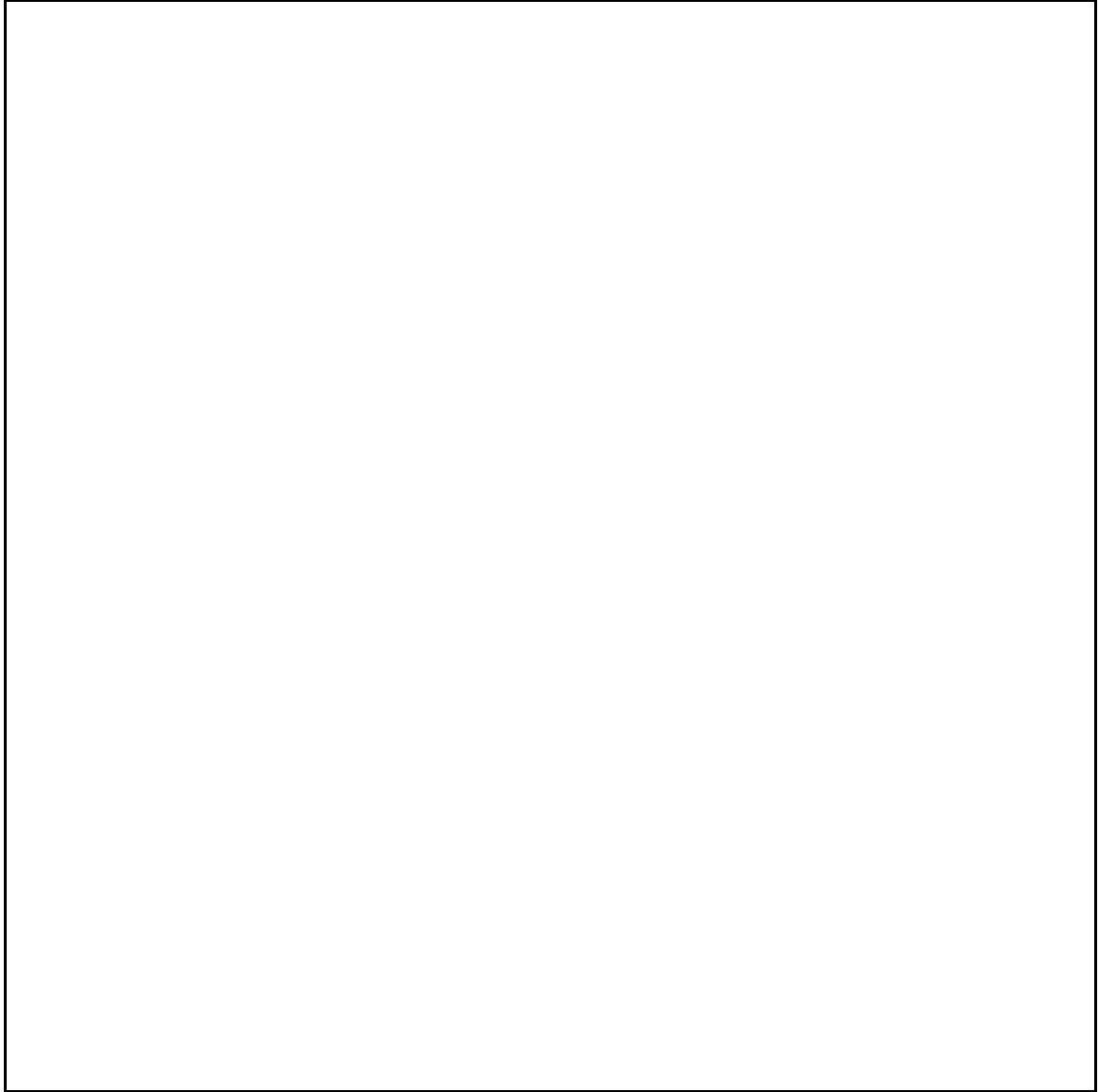
Be advised of the following, published by the Fluoride Action Network:

Day Five of the trial began with FAN's attorney, Michael Connett's cross-examination of the EPA's first expert witness, Joyce Tsuji, PhD, a consultant from Exponent. Tsuji spent much of the exchange doing a lot of talking but providing few answers. This happened so

often that the judge stopped the proceedings twice and warned her. This turned out to be a reoccurring theme for her testimony on the stand, as her answers repeatedly contradicted the testimony from her pre-trial deposition. Connett was able to get her to admit "there is enough literature for us to be concerned" about fluoride's neurotoxicity, and that despite touting in-depth systematic reviews, she had only skimmed through the animal studies showing anatomical changes to the brain shown in a large number of fluoride studies.

Tsuji's central argument was that animal studies that found neurological harm – especially behavioral changes indicating memory and learning impairment – were done at very high doses which were not relevant to human exposures. However, she conceded that the No Observed Adverse Effect Level (NOAEL) (20 mg/Liter) in the single study (McPherson, 2019) she thought was adequate in her review – would be equivalent to 1.3 ppm (well below the current MCL for fluoride of 4 ppm) for humans if the necessary scaling factors were applied. She also accepted it would have been better if McPherson had also included a higher dose – say 45 ppm (as used in many other studies)– to have looked for a LOAEL.

Tsuji argued that “very high” doses of fluoride would interfere with other system effects (e.g. muscular) which might manifest itself *indirectly* as changes in neurological behavior. What she looks for in this case is changes in bodyweight at the chosen doses. But she conceded that not all the studies (even the majority) of the studies that Dr. Thiessen used to determine LOAELs in her risk assessment were *not* conflicted with levels that caused loss in bodyweight. These are the filled square red boxes in the figure below from Thiessen's testimony (all at 45 ppm). Thiessen used these LOAELS to determine safe (i.e. protective) reference doses for humans (RfD) which are all well below current exposure levels for bottle-fed infants in the USA (see the second figure below)



The EPA then called their second expert witness, Dr. Ellen Chang (also from Exponent), to discuss the human fluoride/IQ studies. She spent much of her time attacking the quality of the studies linking fluoride to lowered IQ that were NIH funded, peer-reviewed, and published in leading scientific and medical journals. She then pivoted and started to praise an abstract of a study that claims to have found the fluoride exposure actually increased IQ. Despite not being accepted by a publication since being made public over 10-months ago, never being peer-reviewed, and the methodology remaining a mystery, Dr. Chang said she assumed--without justification--it was a higher quality study than those finding IQ loss.

In this moment, her bias was painfully apparent. Even the judge started asking how she could make such assumptions. What was abundantly apparent to viewers was the complete contradiction of how thorough and scrupulous Chang claims to be in selecting high quality studies and how willing she is to completely jettison those standards when clutching at straws to use this unpublished study support her client's interests.

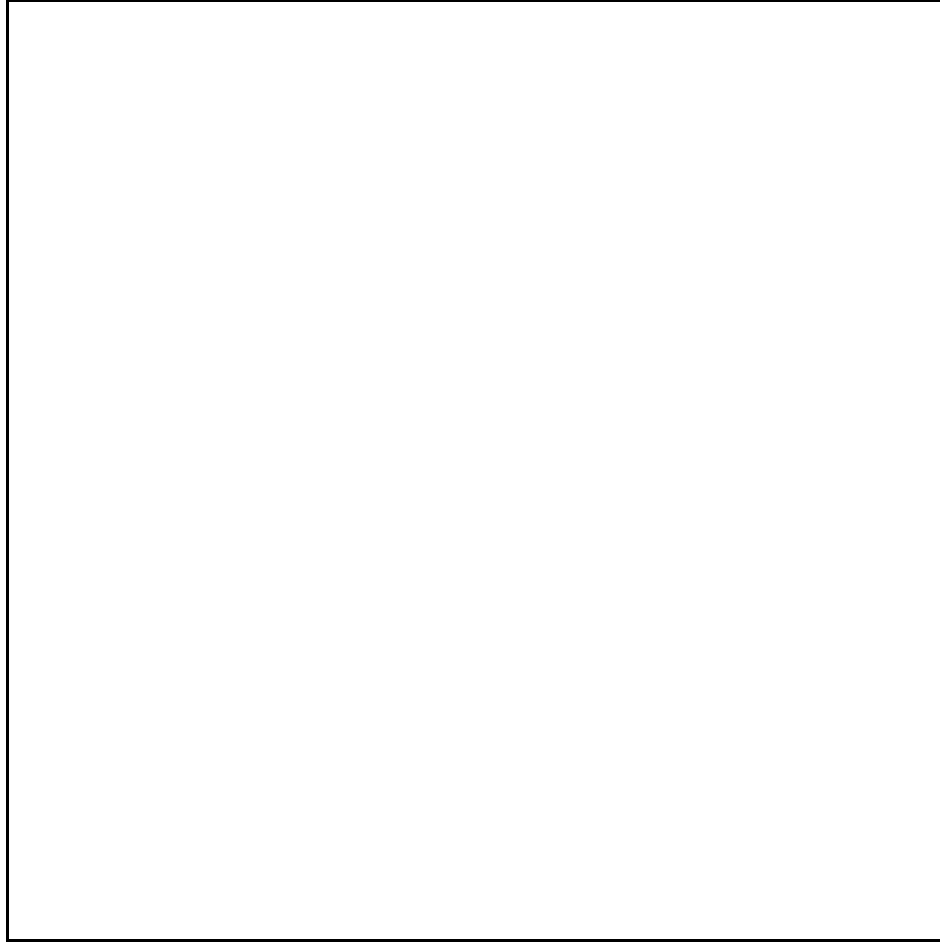
Connett continued his cross-examination, finding that Dr. Chang has billed the EPA around \$150,000 for her work, bringing the total bill for Exponent to approximately \$350,000. The remainder of questions focused on Dr. Chang's long history of producing systematic reviews for corporate polluters showing that there was always "insufficient evidence" of causation for the severe ailments caused by their products. This included reviews for DOW Chemical's Agent Orange, Monsanto's glyphosate, 3M's PFOAs, and pesticides from Syngenta and Croplife. She also worked for the American Chemistry Council, American Petroleum Institute, and the Manganese Interest Group.

The most telling moment for exposing her methodology for the "industry friendly" instrument it is, came when Connett asked her about her findings on behalf of Dow and Monsanto that there was no convincing or causal evidence that Agent Orange caused specific cancers. After she explained what she found he showed her pages from the US Veterans' Administration, which said that Agent Orange *caused* these very same cancers! Connett actually highlighted the word "Causes." Chang was left mumbling something about her definition of "causation" was different from the VA's definition.

Precisely! Chang's definition and her methodology is designed to protect industry's profits but the VA's definition was designed to protect the veteran who served in Vietnam.

Ultimately, Connett was successful in exposing her blatant bias and long track record of being on the wrong side of history and science. He was also able to get her to admit that the fluoride/IQ studies from Till, Green, and Bashash remain the most rigorous neurotoxicity studies to date, and that all found lowered IQ.

Here is the table summarizing Chang's view of the 10 most relevant human IQ studies to date:



The top 5 found lowered IQ the bottom 5 did not. According to Paul Connett, director of FAN, “Based on the quality of these two sets Chang has essentially lost the case for the EPA.”

Catch Up On The Trial

If you missed the first week, FAN’s Director, Paul Connett, PhD has produced detailed and comprehensive summaries of the first three days of the trial: [Day One](#) / [Day Two](#) / [Day Three](#). Paul has also provided a [simplified version](#) of Thiessen's evidence, which shows that safe reference doses (RfD) deemed to protect children from neurotoxic effects as demonstrated in animal studies - done using 5 different starting points - all reveal RfDs much lower than children receive in the USA.

Daily trial summaries are also being provided by the legal news website Law360, but registration with a "non-free email domain" is required to read the full articles. If you have

such an email domain, here are the three summaries thus far:

[Day One](#) / [Day Two](#) / [Day Three](#) / [Day Four](#) / [Day Five](#)

- [Day Five Click here to view all of the media coverage of the trial.](#)

Fundraising Update

A huge thank you to all who have donated so far to our campaign. We have raised **\$22,008** from **259 supporters** on our way to reaching our goal of \$50,000 from 300 donors to fund our operating budget through the remainder of 2020.

How to Make a Tax-Deductible Donate:

- **Online**, using our [secure server](#).
- **Or by Check**, payable to the Fluoride Action Network. Mail your check to:

Fluoride Action Network
c/o Connett
104 Walnut Street
Binghamton NY 13905

Day Six Of The Trial

Day six of the trial will start this afternoon (Tuesday) at **1:30PM (Pacific) / 4:30PM (Eastern)**. It will begin with the continued cross-examination of the EPA's second expert witness, [Ellen Chang, Sc.D.](#) of [Exponent](#). We expect most of the questions to focus on an abstract of a study from a cohort in Spain that claims to have shown fluoride increased IQ.

You can watch or listen from any computer or mobile device with internet using Zoom ([Download Zoom](#)). You can also listen to the trial using your phone as you would a typical conference call.

If you cannot listen in on the trial, FAN will also continue [LIVE Tweeting](#) the highlights from the proceedings so even more of you can join in the excitement of this historic event.

Here is the direct link to watch the trial:

uscourts.zoomgov.com/j/1607275798?pwd=UTZiNE1lbDE1MXdiYThNNEFtakIFQT09

Meeting ID: 160 727 5798

Password: 670801

Here is the call in information for audio only if you choose to listen by phone:

Dial by your location

+1 929 205 6099 US (New York)

+1 312 626 6799 US (Chicago)

+1 346 248 7799 US (Houston)

+1 669 900 6833 US (San Jose)

Find your local number: <https://zoom.us/u/ac4JkPfcjo>

****Recording or re-broadcasting the trial is prohibited by the court****

Thank you,

Stuart Cooper

Campaign Director

Fluoride Action Network

Christine Massey, M.Sc.

