



# Newsletter

June 2022 | Issue 6

A North Carolina research study assessing exposure to GenX and related chemicals in people living in the Cape Fear River Basin.

## From the Principal Investigator, Dr. Jane Hoppin

Thank you for being a part of the GenX Exposure Study. Your time and participation are critical to the success of the study. We appreciate your patience as we work to provide you the most accurate information we can.

Here's a quick update about the blood samples we collected in 2020-21. We are in the process of analyzing these samples for PFAS now. We hope to have the results to you by the end of the summer. The pandemic slowed us down, but we are making good progress in getting PFAS results back to you. In this newsletter, we highlight all the steps in the process to calculate PFAS levels in blood.

We are also working on several analyses related to potential health effects. Please check our website ([genxstudy.ncsu.edu](http://genxstudy.ncsu.edu)) for updates.

If you have any questions or concerns, feel free to contact us at [genx-exposure-study@ncsu.edu](mailto:genx-exposure-study@ncsu.edu) or 855-854-2641. Also, if you have moved, please let us know.

Best wishes,  
Jane Hoppin

## What it takes to provide your PFAS blood results

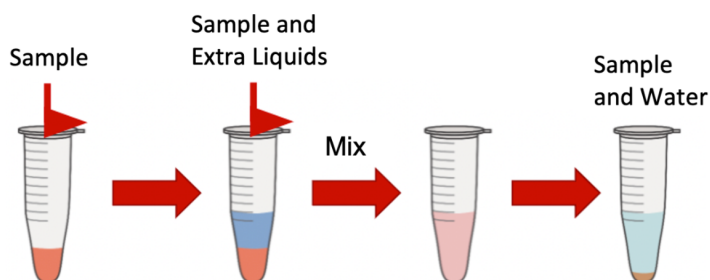
Collecting blood samples at a sampling event is just the beginning. After collection, these samples need to be prepared and analyzed. Then the data generated needs to be understood and reported back to participants. Because we have over 1,000 study participants and our team is relatively small, it takes time to get through all the steps.

See the next page to learn more:

## 1. Sample Preparation

Before we start preparing the samples, we need to create a “Method”, or plan to generate the PFAS results. Making these methods takes a while because there are no standard methods for some of the PFAS, as they are so new.

Once we create the methods, the samples need to be prepared.



## 2. Sample Analysis

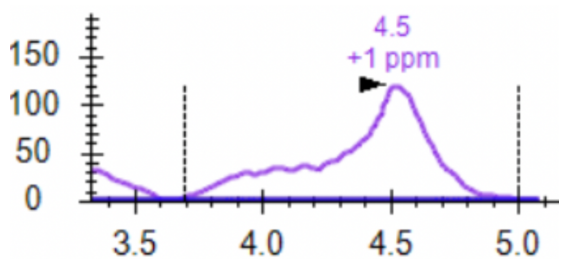
Once all the preparation is done, samples are analyzed using special instruments called mass spectrometers. Samples are run in batches. Each batch takes at least a few days, but after that the hard work of understanding the data starts.



**Mass Spectrometer**

## 3. Understanding the Data

Much time is spent understanding the data generated by the instrument. The machine creates graphs with peaks that represent concentrations of individual PFAS.



We analyze about 30 different PFAS in each sample. That means for the whole study, chemists need to review more than 30,000 peaks before confirming the results. Extra time is spent during this process because many of the PFAS are new and not well known.

## 4. Reporting back the Data

Once the data is prepared, we create report back letters and other materials for participants to explain the data. We need our materials to be approved by the Internal Review Board of NC State, which can take a month or more.

From preparing, analyzing, and understanding the data of the samples, each step requires lots of care to protect the integrity of the results. Measuring PFAS also requires added layers of precision as we are measuring very small, but relevant, values with very sensitive instruments. We hope this information helps you better understand how your results are provided to you.