



# WE NEED YOU

To help find a treatment for PFAS Exposure



Join this world first study commissioned by MFB, run by Macquarie University, and fully endorsed by the UFU.



# PFAS BACKGROUND

Per- and polyfluoroalkyl substances (PFAS) are a diverse group of synthetic, manufactured compounds resistant to heat, water, and oil. Since the 1950's, they have been used in hundreds of industrial applications and consumer products such as carpeting, apparel, upholstery, food paper wrappings, metal coatings, and firefighting foams.

PFAS persist long-term in the environment and in the body because they take many, many years to break down. Exposure occurs through both direct and indirect exposure.

Firefighters are known to have a higher than average exposure to PFAS through occupational exposure with AFFF.

## ASSOCIATED HEALTH OUTCOMES

The identified adverse human health outcomes associated with higher levels of PFAS include:

- Hepatic effects. Changes in markers suggestive of liver damage. In addition, increases in serum lipid levels, particularly total and LDL cholesterol.
- Cardiovascular effects. Pregnancy induced hypertension and/or pre-eclampsia.
- Endocrine effects. Increased risk of thyroid disease.
- Immune effects. Decreased antibody response to vaccines. A possible link with increased risk of asthma diagnosis has also been identified.
- Reproductive effects. Increased risk of decreased fertility.
- Developmental effects. Small decreases in birth weight.
- **The International Agency for Research on Cancer has classified PFOA as possibly carcinogenic (IARC, 2018).**

Please see below from the article studying Australian Firefighters, "Elevated levels of PFOS and PFHxS in firefighters exposed to aqueous film forming foam (AFFF)", Rotander et al. Environment International 82 (2015), 28-34

# THIS STUDY

This is a world first study commissioned by MFB, run by Macquarie University, with the full endorsement of the UFU.

The purpose of the study is to identify whether there is a significant change in PFAS levels after regular blood or plasma donations will be effective in reducing PFAS levels. This may then reduce potential future long-term health impacts.

If proven, the beneficial knowledge obtained will not just be for Victorians but shall also be shared globally.

## STUDY VISITS

The Screening Visit is conducted for consent, eligibility, brief questionnaire, and initial PFAS and blood test.

We then need to randomly split everyone into 3 groups for 1 year:

- blood donations every 3 months,
- plasma donations every 6 weeks, and
- an observational group (no need for donations).

At the end of 12 months there will be a PFAS blood test, with another PFAS and routine blood test at 15 months, which is the final test for the study.

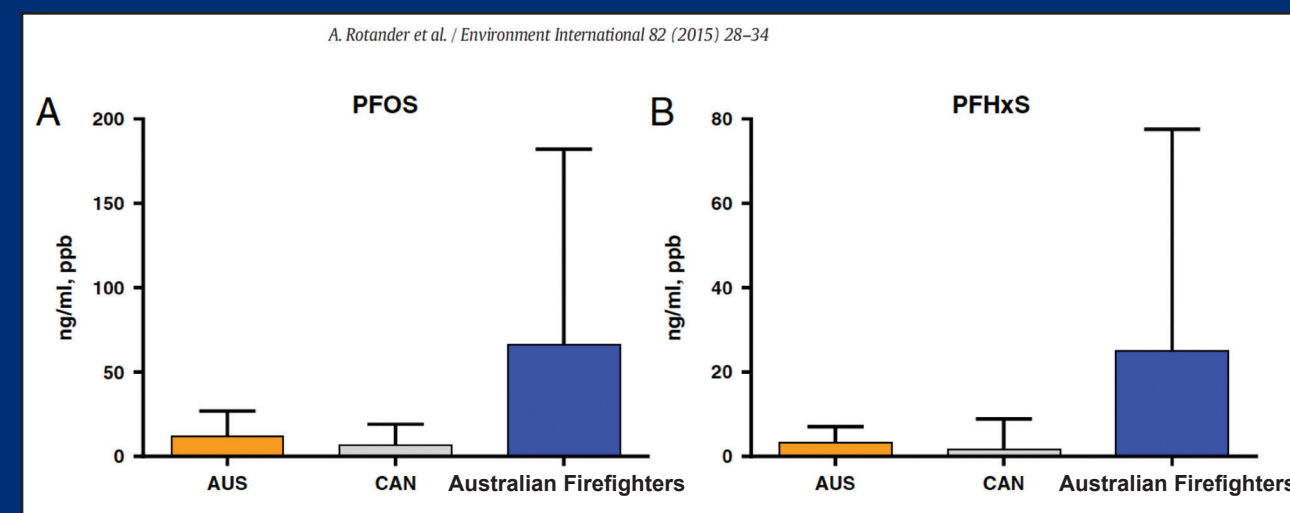
Everyone receives their PFAS and routine blood results at the end of the study through their GP.

Clinical Study Coordinator, Gab Silver, shall be sending reminders of visits and confirming completion. He is available for any questions or concerns throughout the study, along with the study doctors.

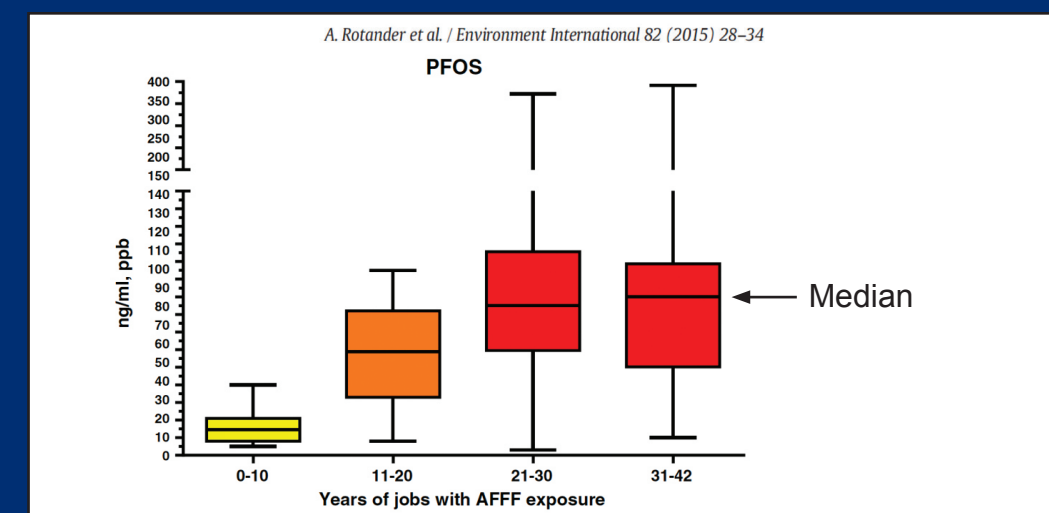
## Main Inclusion Criteria:

- MFB staff with 10 or more years of previous occupational exposure to PFAS.
- Eligible to donate blood (in accordance with the Red Cross guidelines).

## Firefighters vs general popn PFAS exposures



## Firefighters PFOS exposure over time



Please email the Study Coordinator, Gab Silver, at [PFASClinicalStudy@mq.edu.au](mailto:PFASClinicalStudy@mq.edu.au) for:

- Registering your interest in participating.
- If you would like to arrange an onsite Question and Answer session. Please obtain your Commander's approval before arranging.
- To obtain a copy of the Participant Information and Consent Form for more detailed information.

Places are limited, so please let us know soon if you would like to participate!

