

25 June 2020

Impact of bushfire smoke on health to be studied

Understanding the long-term health impacts of bushfire smoke will be the focus of a new study being undertaken at the Centenary Institute and the University of Technology Sydney (UTS).

The study, funded by the Medical Research Future Fund's (MRFF) Bushfire Impact Research grants program will seek to better understand the physiological impacts of prolonged bushfire smoke exposure, to improve health outcomes for Australians.

Professor Phil Hansbro, Deputy Director at the Centenary Institute as well as Director of the Centenary UTS Centre for Inflammation was the successful recipient of the grant and will be leading a team of specialist respiratory disease researchers and clinicians on the project.

“The true extent of bushfire smoke on people is still largely unknown,” said Professor Hansbro. “We just don’t know the full impact on people resulting from prolonged smoke inhalation or if short term effects resolve after the exposure ends. There is a real knowledge gap as to what level of smoke exposure is likely ok and what level may lead to adverse health effects, particularly for the more vulnerable in our society.”

For this study, the research team will explore the short and prolonged physiological effects of bushfire smoke using mouse models and primary human cells and tissues. Assessed will be how bushfire smoke affects the airways, lungs and other organs and what the long-term consequences of this exposure could be.

Potential smoke impact on healthy individuals and those with common pre-existing respiratory disease such as asthma, emphysema and lung cancer will also be explored. “Ideally from our study, we’ll be able to help define safe levels of bushfire smoke exposure across all of these population groups,” said Professor Hansbro.

The researchers will then use their findings to evaluate new prevention strategies and treatment measures. This will include the appraisal of anti-inflammatory drugs already in pre-clinical development that can be taken to help mitigate the effects of excessive bushfire smoke inhalation. The aim is to implement the study findings into practice, as quickly as is practically possible.

Professor Hansbro is grateful for the opportunity provided by the federal government. “Bushfires and smoke are a constant feature of the Australian environment and will continue to impact many of us, whether in the bush, towns or larger cities. Our research will lead to improved knowledge in this critical area ultimately leading to improved health and wellbeing outcomes for many Australians,” he said.

More information on the Australian Government's Medical Research Future Fund and its funding of research into the health effects of bushfires can be found online (<https://www.health.gov.au/news/5-million-for-research-into-health-impacts-of-bushfires-on-australian-communities>).

[ENDS]

Images:

Professor Phil Hansbro: https://drive.google.com/file/d/1o_nU-DpL65SPAdl-gfWeFRBjXDLQFi7b/view?usp=sharing

Bushfire smoke in Australia:

<https://drive.google.com/file/d/1lj9yMrwrXR2d5P1pLNpbkevd6vl4igjJ/view?usp=sharing>

For all media and interview enquiries, please contact

Tony Crawshaw, Media and Communications Manager, Centenary Institute on 0402 770 403 or email: t.crawshaw@centenary.org.au

About the Centenary Institute

The Centenary Institute is a world-leading independent medical research institute, closely affiliated to the University of Sydney and the Royal Prince Alfred Hospital. Our research focuses on three key areas: cancer, inflammation and cardiovascular disease. Our strength lies in uncovering disease mechanisms and applying this knowledge to improve diagnostics and treatments for patients.

For more information about the Centenary Institute, visit www.centenary.org.au

About the University of Technology Sydney (UTS)

The University of Technology Sydney (UTS), located in central Sydney, is one of Australia's leading universities of technology. It is known for fusing innovation, creativity and technology in its teaching and research and for being an industry-focused university.

For more information go to uts.edu.au