

## DR BEN ROEDIGER



*"Identifying the important pathways in inflammation-associated disease will lead to new therapeutics that change the way we live and improve both the quality and longevity of our lives." Ben*

**Allergies are recognised as a significant public health concern in Australia. It is estimated that 1 in 5 Australians are living with at least one allergic disease.<sup>1</sup>**

Twenty per cent of Australian children suffer from an allergic skin disease, such as atopic dermatitis (eczema) and many infants with moderate or severe eczema will also have an immediate allergy to food(s).<sup>2</sup>

Women aged 65 and over are nearly **three times more likely to die** from asthma than men of the same age group<sup>3</sup> and there is an estimated **\$1.1 billion** in productivity losses including lost wages for people with asthma.<sup>4</sup>

Nearly **4.5 million Australians** suffered from allergic rhinitis (Hay fever) in 2014–15. Unlike many health conditions, allergic rhinitis is most common in the middle years of life (15–59 years), rather than in children or older Australians.<sup>5</sup>

Australia has one of the **highest rates** of food allergies in the developed world and it is increasing at a frightening rate. **One in ten** babies born today will develop a food allergy.<sup>6</sup>

<sup>1</sup>Mullins RJ, et al. the economic impact of allergic disease in Australia: not to be sneezed at. ASCIA/Access Economics Report, November 2007.

<sup>2</sup>[allergy.org.au/patients/skin-allergy/eczema](http://allergy.org.au/patients/skin-allergy/eczema)

<sup>3</sup>Deaths due to asthma - National Asthma Council Australia

<sup>4</sup>The Hidden Cost of Asthma - Asthma Australia

<sup>5</sup>[aihw.gov.au](http://aihw.gov.au)

<sup>6</sup>[allergyfacts.org.au/news-alerts/latest-news/490-media-release-14-may-2017-new-research-ignorance-feeds-allergy-risks](http://allergyfacts.org.au/news-alerts/latest-news/490-media-release-14-may-2017-new-research-ignorance-feeds-allergy-risks)

# CENTENARY INSTITUTE'S RESEARCH

## Fighting the fire within.

When inflammation turns from good to bad - from protecting us to damaging us - it becomes like a slow-burning fire within our bodies.

Researchers at the Centenary have a long-standing history of focusing on the mechanisms of inflammation, both at the basic level and their role in disease.

We have explored and defined the role of inflammation in causing liver cancer and atherosclerosis. We have led the world in understanding the way the immune response coordinates itself in response to inflammatory cues. We have defined new cellular players in inflammation and identified the mechanisms by which they act.

The impact of inflammation on our lives is difficult to overstate. Almost all chronic illnesses involve inflammation. From the psychological impact of scarring and sleeplessness in eczema to increased risk of a heart attack to the altered responsiveness to anti-cancer therapies. Inflammation affects the lives of all of us.

## WHAT DOES IT ALL MEAN?

**Allergy** refers to any kind of hypersensitivity that triggers an immune response and inflammation.

An **allergen** is a substance that causes an allergic reaction.

The term **atopic** refers to a predisposition toward developing certain allergic hypersensitivity reactions.

Hay fever, medically known as **allergic rhinitis**, is a condition that causes inflammation of the sinuses after exposure to pollen, dust or other allergens.

**Asthma** is a chronic condition that causes inflammation and narrowing of the bronchial tubes, the passageways that allow air to enter and leave the lungs.

**Eczema** is a term for a group of medical conditions that cause the skin to become inflamed or irritated. The most common type of eczema is known as atopic dermatitis, or atopic eczema.

In compiling the information contained in, and accessed through, this brochure ('information') the Centenary Institute has used its best endeavours to ensure that the information is correct at the time of publication but takes no responsibility for any error, omission or defect therein.