



CENTRE OF EXCELLENCE IN  
**SEVERE ASTHMA**

*Innovative solutions for severe asthma*

## Centre of Excellence in Severe Asthma Newsletter (Volume 4 – May 2018)

Welcome to the fourth Centre of Excellence in Severe Asthma newsletter. Our newsletters provide updates on activities, personnel, upcoming events and developments relevant to severe asthma

### Newsletters:

Vol. 1 (Aug 2016): [click here](#) / Vol. 2 (Dec 2016): [click here](#) / Vol. 3 (July 2017): [click here](#)  
Annual Report (2015 / 2016): [click here](#)

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*Prof. Vanessa McDonald launches the Severe Asthma Toolkit*

### Severe Asthma Toolkit Launch

We recently launched a new clinical ‘toolkit’ designed to improve the management of severe asthma at the Thoracic Society of Australia and New Zealand’s Annual Scientific Meeting in Adelaide.

As a comprehensive and independent online resource, it gives clinicians the latest treatment information to optimise care for patients with severe asthma.

Read more about the Severe Asthma Toolkit on the next page. A press release is available [here](#).

The Severe Asthma Toolkit website has been developed as a comprehensive and independent online resource, that gives clinicians the latest information to optimise care for patients with severe asthma.

Many of the contemporary asthma messages and resources are not tailored for people with severe asthma. Directed approaches to the management of severe asthma can improve patient outcomes. There is an urgent need to translate these approaches into the clinic.



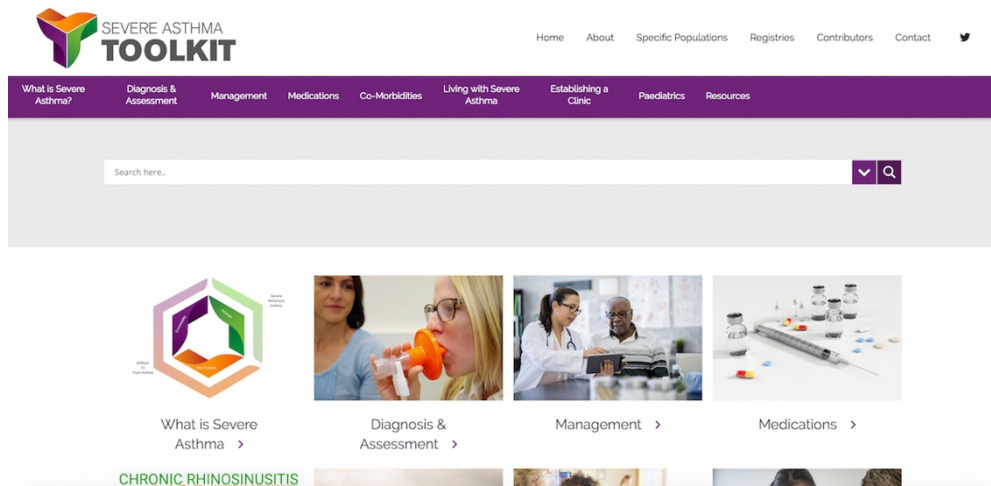
The Severe Asthma Toolkit was developed to meet this need by addressing a gap in existing evidence-based resources for clinicians in both primary and specialist care settings. The toolkit was designed by clinicians for clinicians. We invited national and international experts, as well as patients and advocate groups, to help design, develop and review the content.

**Modules include:**

- **What is Severe Asthma?**
- **Diagnosis & Assessment**
- **Management**
- **Medications**
- **Co-Morbidities**
- **Living with Severe Asthma**
- **Establishing a Clinic**
- **Paediatrics**
- **Resources**

More information about the Severe Asthma Toolkit is available here:

<https://toolkit.severeasthma.org.au/about/>



**Clinical Recommendations For The Use Of Mepolizumab In Severe Asthma**

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**About the treatment**

**Introduction**  
Mepolizumab (Nucala) is indicated as an add-on therapy for people with severe refractory eosinophilic asthma, aged ≥12 years.

**Mechanism of action**  
Mepolizumab is a humanised monoclonal antibody (IgG1, kappa), which targets human IL-5 with high affinity and specificity. IL-5 is the major cytokine responsible for the growth and differentiation, recruitment, activation and survival of eosinophils.

Mepolizumab inhibits the bioactivity of IL-5 with nanomolar potency by blocking the binding of IL-5 to the alpha chain of the IL-5 receptor complex expressed on the eosinophil cell surface, thereby inhibiting IL-5 signalling and reducing the production and survival of eosinophils.

## Monoclonal Antibody Clinical Recommendations

We have developed practical recommendation documents for Omalizumab (Xolair) and Mepolizumab (Nucala) treatment. These documents provide an overview of treatment, PBS eligibility criteria, enrolment processes, precautions/adverse effects and procedures for administration.

These documents have been developed as a guide, to inform clinical management of severe asthma.

### Download from our website:

**Omalizumab:** <https://www.severeasthma.org.au/omalizumab/>

**Mepolizumab:** <https://www.severeasthma.org.au/mepolizumab/>

## Webinar Series

Since our last newsletter, we have hosted five international experts for seminars on severe asthma. Whenever possible, we make recordings available on our website.

**Prof. Urs Frey – Early-Life Factors and Asthma Development**

**Prof. Louise Donnelly – Defective Innate Immunity in Airway Disease**

**Prof. Param Nair – Pathogenic Autoantibodies in Patients with Severe Asthma**

**Prof. Tim Harrison – Can Severe Asthma Exacerbations be Prevented with More Inhaled Steroid?**

**Prof. Janelle Yorke – Patient Reported Outcomes in Severe Asthma: Fit for Purpose?**

**Recorded Webinars are Available on our Website**

<http://www.severeasthma.org.au/tools-resources/past-webinars/>

## Peter Gibson Elected Fellow of Australian Academy of Health and Medical Sciences



Professor Peter Gibson, Co-Director of the Centre of Excellence in Severe Asthma, was recently elected as a Fellow of the [Australian Academy of Health and Medical Sciences](http://www.aaahms.org.au) (AAHMS). The AAHMS citation noted that Prof. Gibson “successfully combines his skills as a scientist, clinician and mentor to lead an internationally renowned translational research centre that has made major advances in the health care of patients with chronic respiratory disease. His work combines innovation with clinical relevance, and has improved the knowledge of clinicians and scientists globally.”

Peter joined the induction of 49 new Fellows for 2017. A full list of Fellows is available on the AAHMS [website](http://www.aaahms.org.au).



### Seed & Travel Grants

We are pleased to announce the successful recipients of the 2018 Seed Grant & Travel Grant Rounds. These grants are provided to support the generation of pilot data on topics relevant to severe asthma and for trainees to present their research at national and international conferences.

**Congratulations to all successful applicants!**

### Seed Grants

Michael Fricker: Sputum Columnar Epithelial Cells As Biomarkers In Severe Asthma  
Alan James: Extracellular Matrix Deposition in the Airway Wall in Asthmatics with Fixed Airflow Obstruction  
Natasha Winter: Mast Cell Gene Signatures For Phenotyping In Severe Asthma  
Lorraine Smith: Healthcare Professionals' Experiences Of Self-management In Severe Asthma  
Vanessa Clark: Determining Models of Care in Severe Asthma

### Travel Grants

Farid Sanai: Passive Intrinsic And Induced Active Tone To Acetylcholine And Histamine In Human Small Airways In Vitro  
Sarah Hiles: Working While Unwell: Workplace Impairment In People With Severe Asthma  
Daniela Eassey: "[Severe Asthma] Is Constantly With Me...every Day Is A Bit Of A Struggle" A Qualitative Study Of People's Experiences Of Living With Severe Asthma

### Meet Our Researchers

We have welcomed new scholars, including post-doctoral fellows and PhD scholars. Find out more about our trainees and investigators [here](#)



**Farid Sanai** completed his PhD at the University of Sydney where he trained as a pharmacologist focusing on the role of autonomic neurotransmission in smooth muscle mechanics. In his current post-doctoral role with the Airway Physiology and Imaging group and in collaboration with University of Western Australia, he is examining airway smooth muscle contractility and the role of the extracellular matrix in excessive airway narrowing in COPD. Concurrently, he is also running a clinical trial comparing changes in small airway function associated with fine versus large particle inhaled corticosteroid treatment in asthma.



**Sai Praneeth Narla** graduated with a Masters in Immunology and Allergy with the Developing Solutions Masters Scholarship from The University of Nottingham, UK. Sai is currently a PhD scholar under the supervision of Prof. John Upham and Prof. Peter Wark. His research project focuses on anti-viral immunity and the regulation of macrophages and dendritic cells, in relation to severe asthma.

## Severe Asthma News

- **Benralizumab (Fasenra; AstraZeneca)**, a monoclonal antibody therapy that blocks the IL-5 receptor alpha chain, has been recommended for PBS listing for the treatment of uncontrolled severe eosinophilic asthma. [Article in the Limbic](#)
- **Tralokinumab**, a monoclonal antibody therapy that blocks IL-13 function failed to reduce exacerbations or oral corticosteroid (OCS) use in individuals with severe, uncontrolled asthma and elevated fractional exhaled nitric oxide (FeNO). [Press release](#)

## Highlighted Recent Severe Asthma Publications

- [Severe and Difficult-to-Treat Asthma in Adults](#) Elliot Israel and Helen Reddel *New England Journal of Medicine*.
- [After Asthma: Redefining Airway Diseases – The Lancet Commission](#)
- [“I have Lost in Every Facet of My Life”: the Hidden Burden of Severe Asthma](#) Juliet Foster, Vanessa McDonald, Michael Guo and Helen Reddel *European Respiratory Journal*
- [Working While Unwell: Workplace Impairment in People with Severe Asthma](#) Sarah Hiles, Erin Harvey, Vanessa McDonald *et al. Clinical & Experimental Allergy*
- [Macrophage Dysfunction in the Pathogenesis and Treatment of Asthma](#) Michael Fricker and Peter Gibson *European Respiratory Journal*
- [“This Illness Diminishes Me. What it Does is like Theft”: A Qualitative Meta-Synthesis of People’s Experiences of Living with Asthma](#) Kristen Pickles, Daniela Eassey, Helen Reddel, Louise Locock, Susan Kirkpatrick and Lorraine Smith *Health Expectations*
- [Asthma](#) Alberto Papi, Chris Brightling, Soren Pedersen and Helen Reddel *The Lancet*
- [Adherence in Severe Asthma: Time to Get it Right](#) Vanessa McDonald and Janelle Yorke *Respirology*

## “Seeking Innovative Solutions in Severe Asthma” series for *Respirology*:

- [Severe Asthma: Can We Fix It? Prologue to Seeking Innovative Solutions for Severe Asthma](#) Vanessa McDonald, Steven Maltby and Peter Gibson
- [Severe Asthma: Current Management, Targeted Therapies and Future Directions – A Roundtable Report](#). Vanessa McDonald, Steven Maltby, Helen Reddel, Greg King, Peter Wark, Lorraine Smith, John Upham, Alan James, Guy Marks and Peter Gibson
- [Severe Asthma in Children](#). Andrew Bush, Louise Fleming and Sejal Saglani
- [Co-Morbidities in Severe Asthma: Clinical Impact and Management](#). Celeste Porsbjerg and Andrew Menzies-Gow
- [Can Biomarkers Help Us Hit Targets in Difficult-to-Treat Asthma?](#) Michael Fricker, Liam Heaney and John Upham
- [Mouse Models of Severe Asthma: Understanding the Mechanisms of Steroid Resistance, Tissue Remodelling and Disease Exacerbation](#). Steven Maltby, Hock Tay, Ming Yang and Paul Foster
- [Multidimensional Assessment of Severe Asthma: A Systematic Review and Meta-Analysis](#). Vanessa Clark, Peter Gibson, Grayson Genn, Sarah Hiles, Ian Pavord and Vanessa McDonald

## Explore Our Website And Follow Us On Twitter!

Our website (<http://www.severeasthma.org.au>) is the best source of information on the Centre of Excellence in Severe Asthma. If you would like to receive updates on events, resources and research join our mailing list on our homepage and follow us on Twitter [@SevereAsthmaCRE](#).