



Respiratory and Sleep Medicine

2012 RESEARCH REPORT



RESPIRATORY AND SLEEP MEDICINE

➔ **PROGRAM DIRECTORS: PROFESSOR FRANK THIEN, RESPIRATORY & SLEEP MEDICINE
DR ALAN YOUNG, SLEEP SERVICES & NON-INVASIVE VENTILATION**

The department of respiratory and sleep medicine has research interests in a wide range of clinical respiratory conditions. Clinical trials are being conducted in asthma, Chronic Obstructive Pulmonary Disease (COPD), interstitial lung disease and sleep apnoea. There are also research interests in Complementary and Alternative Medicine (CAM) for respiratory disease and functional lung imaging.

The research is led by Professor Frank Thien and Dr Alan Young with clinical co-investigators Dr Paul Fogarty, Dr Vivek Malipatil and Dr Ali Aminazad and is staffed by clinical trial coordinators Irina Shinkarsky and Sue Dal Sasso. The unit is further supported by research assistant Lexie Cabakarpa.

Advanced trainees are strongly encouraged to do a clinical research project during their clinical training at Eastern Health.

NOTABLE 2011-12 FUNDING

Comparison NIV models of care 3 tertiary centres ACT 3 study Eastern Health Foundation Research Grant. **Young A.** \$20,000.

Australian NIV data registry Chief Investigator ResMed Foundation. **Young A.** USD \$45,000.

INVESTIGATIONS IN PROGRESS

Investigations successfully progressing across the year have included:

The Sleep Apnoea cardioVascular Endpoints (SAVE) study

Principal investigators: **Young A, Thien F.** This is an international multicentre open parallel group, prospective, randomised, controlled trial to determine the effectiveness of treatment with continuous positive airway pressure (CPAP) in addition to standard care in reducing cardiovascular (CV) morbidity and mortality in patients.

GLYCOSA

Principal investigators: **Young A, Thien F.** This is a multicentre, international, randomised, controlled, prospective study of the effect of nasal CPAP on glycaemic control in patients with type 2 diabetes mellitus (T2DM). Subjects are randomised to either CPAP treatment or no PAP treatment as well as to lifestyle counselling and followed for six months.

Clipper study 2010-2011

Principal investigator: **Thien F.** This is a clinical trial of a once-daily inhaled steroid/long-acting beta-agonist combination in COPD looking at reducing exacerbation rates.

Tiotropium RespiMat study

Principal investigators: **Fogarty P, Thien F.** This clinical trial looks at a new delivery system of the long-acting, anti-cholinergic agent tiotropium in COPD

ASCEND study 2011

Principal investigators: **Thien F, Malipatil V, Young A.** This is a clinical trial of pirfenidone looking at clinical outcomes in idiopathic pulmonary fibrosis.

REACT study 2011

Principal investigators: **Thien F, Fogarty P, Young A.** This is a clinical trial of phosphodiesterase inhibitor roflumilast in severe COPD looking at reduction of exacerbations.

NHMRC-funded activity**The effect of a standardised ginseng extract in patients with moderate COPD: a randomised, double-blind trial**

This NHMRC-funded Project (APP616609; Xue C, **Thien F**, Worsnop C, Zhang A; 2010-2012: \$560,375) continues over 2011-2012 and study the effects of oral ginseng in subjects with moderate COPD in addition to standard care.

Ventilation heterogeneity and airway remodelling in asthma 2011-2013

This NHMRC-funded study (APP606944; **Thien F**, Thompson B, Robinson P, Harris B, Cowin G. \$504,750) uses hyperpolarised helium magnetic resonance lung imaging to characterise ventilation heterogeneity in asthma.

INVESTIGATIONS COMPLETE

Investigations successfully completed during the course of the year have included:

A clinical trial on acupuncture for hay fever

This NHMRC-funded Project Grant (555412 Xue C, **Thien F**, Story DF) is a randomised controlled trial looking at the effect of acupuncture on seasonal allergic rhinitis. This commenced in 2009, and was completed in 2011-12. Results are currently being analysed.

Clipper study

Principle investigator: **Thien F.** This is a clinical trial of a once-daily inhaled steroid/long-acting beta-agonist combination in COPD looking at reducing exacerbation rates.

IN CONCLUSION

The department of respiratory and sleep medicine continues to expand its clinical service and research since being established in September 2008. Its success in attracting academic competitive grants and industry supported clinical research

reflects the dynamic growth of the department in this time.

PUBLICATIONS**Journals****Published**

Abramson MJ, Schattner RL, Sulaiman ND, Del Colle EA, Aroni R, **Thien F.** Accuracy of asthma and COPD diagnosis in Australian general practice: a mixed methods study. *Prim Care Respir J.* 2012;21:167-73.

Burgess J, Ekanayake B, Lowe A, Dunt D, **Thien F**, Dharmage SC. Systematic review of the effectiveness of breathing retraining in asthma management. *Expert Rev Respir Med.* 2011 Dec; 5:789-807.

Oei SM, **Thien FC**, Schattner RL, Sulaiman ND, Birch K, Simpson P, Del Colle EA, Aroni RA, Wolfe R, Abramson MJ. Effect of spirometry and medical review on asthma control in patients in general practice: a randomised controlled trial. *Respirology.* 2011 Jul;16:803-10.

Xue CC, Zhang CS, Yang AW, Zhang AL, Li Y, Xia J, Da Costa C, Owe-Young G, **Thien F.** Semi-self-administered ear acupressure for persistent allergic rhinitis: a randomised sham-controlled trial. *Ann Allergy Asthma Immunol.* 2011;106:168-70.

Garner D, Berlowitz D, Douglas J, Harkness N, Howard M, McArdle N, Naughton M, Neill A, Piper A, Yeo A, **Young AC.** Home mechanical ventilation in Australia and New Zealand. *European Respiratory Journal.* Published online before print May 31, 2012, doi: 10.1183/09031936.00206311 (2012). **Young AC**, Wilson JW, Kotsimbos TK, Naughton MT. The impact of nocturnal oxygen desaturation on quality of life in cystic fibrosis. *Journal of Cystic Fibrosis.* 2011;(2): 100-106.

In press

Aiyappan V, Munawar A, Thien F. Junior doctor training in pleural procedures: A quality survey. *Internal Medicine Journal* 2012 (in press).

Ong CW, Malipatil V, Lavercombe M, Teo K, Coughlin P, Leach D, Spanger M, Thien F. Implementation of a clinical

prediction tool for pulmonary embolism diagnosis in a tertiary teaching hospital reduces the number of CT pulmonary angiograms performed. *Internal Medicine Journal* (in press).

Abstracts

Lim ML, Southcott AM, **Gillman AJ**. Modifiable risk factors for acute exacerbation of COPD: a prospective audit. The Thoracic Society of Australia & New Zealand Annual Scientific Meeting. Canberra, March 2012.

Azad AA, Thien F, Steinfurt C. Cough-bubble test compared with chest x-ray to identify pneumothorax resolution. The Thoracic Society of Australia & New Zealand Annual Scientific Meeting. Canberra, March 2012.

Thomas J, Muruganandan S, Van Langenberg D, **Thien F**. Latent tuberculosis screening in patients receiving anti-tnfa therapy for inflammatory bowel disease. The Thoracic Society of Australia & New Zealand Annual Scientific Meeting. Canberra, March 2012.

Abramson MJ, Schattner RL, Holton C, Simpson P, Briggs N, Beilby J, Nelson MR, Wood-Baker MR, **Thien F**, Sulaiman ND, Del Colle E, Wolfe R, Crockett AJ, Massi RJ. Spirometry and regular follow-up do not improve outcomes in children or adolescents with asthma. The Thoracic Society of Australia & New Zealand Annual Scientific Meeting. Canberra, March 2012.

Garner D, Berlowitz D, Douglas J, Harkness N, Howard M, McArdle N, Naughton M, Neill A, Piper A, Yeo A, **Young A**. The NOVANZ study – non-invasive domiciliary ventilation in Australia and New Zealand, *J Sleep Res*, 20 (Suppl 1): A64 (2011).

Hislop J, Parker K, Toghil J, Borg B, Naughton M, **Young A**. Audit of ward-based NIV service in a tertiary hospital, *Respirology*, 16 (Suppl 1): A85 (2011).

CONFERENCES INCLUDING PROCEEDINGS, PAPERS, POSTERS

International

Thien F. Immunological mechanisms of drug hypersensitivity. Allergy Immunology Society of Sri Lanka Biennial Scientific Meeting. Colombo, June 2012.

Thien F. Management of severe asthma. Sri Lankan Medical Association Annual Scientific Meeting. Colombo, June 2012.

National

Thien F. Management of difficult asthma. Australasian Society of Clinical Immunology and Allergy Annual Scientific Meeting. Sydney, September 2011.

Local

Aminazad A. How medications affect sleep architecture. Australian Sleep Technologists Association. Melbourne, April 2012.

Young A. What's new in NIV: hospital, home and hybrids. Thoracic Society Victorian Branch. Melbourne, July 2012.

Leversha L. The measurement and ATS standards for fractional nitric oxide in exhaled breath (FeNO). ANZSRS branch meeting. Melbourne, July 2012.



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Accessing program reports

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Readers note: Where projects are collaborative with our respective research partners, Eastern Health staff names are in bold.

Clinical program reports available include (list not exhaustive):

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