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The role of E-cadherin/ β -catenin signalling in the development of an asthmatic airway epithelial phenotype

Kuchibhotla, Virinchi

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Virinchi Naga Sarma Kuchibhotla

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 and in accordance with
 the decision by the College of Deans.

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Monday 28 June 2021 at 16:15 hours

by

Virinchi Naga Sarma Kuchibhotla

born on 12 July 1992
 in Hyderabad, India

Supervisors

Prof. H. I. Heijink
Prof. M. C. Nawijn
Prof. D. A. Knight

Co-supervisors

Dr. A. T. Reid
Dr. C. Grainge

Assessment Committee

Prof. R. Gosens
Prof. P. S. Foster
Prof. D. Proud
Prof. A. J. Halayko

The role of E-cadherin/ β -catenin signalling in the development of an asthmatic airway epithelial phenotype

Virinchi Naga Sarma Kuchibhotla

Thesis submitted in fulfilment of the requirements for obtaining the degree of

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December 2020

School of Biomedical Sciences and Pharmacy
Faculty of Health and Medicine
University of Newcastle

Declaration

I hereby declare that the work embodied in this thesis was performed within the framework of the Groningen Research Institute of Asthma and COPD (GRIAC), and was supported by the University of Groningen, University Medical Center Groningen (UMCG), University of Newcastle (UON), Hunter Medical Research Institute (HMRI) and University of Newcastle Postgraduate Research Scholarship (UNIPRS) (Tuition Fees) and UNRS Central Scholarship. This project was also funded by the research grants obtained from De Cock Hadders (2017 – 47), Stichting Astma Bestrijding (SAB, 2017/007), Boehringer Ingelheim, National Health and Medical Research Council (NHMRC) of Australia (#1064405, #1079187, #1175134, #1072000) and Australian Research Council (#170100226).

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I hereby certify that the work embodied in this thesis contains published paper/s/scholarly work of which I am a joint author. I have included as part of the thesis a written declaration endorsed in writing by my supervisor, attesting to my contribution to the joint publication/s/scholarly work.

By signing below, I confirm that Virinchi Naga Sarma Kuchibhotla contributed as a:

- (i) Second author to the publication entitled, “Heijink IH, **Kuchibhotla VNS**, Roffel MP, Maes T, Knight DA, Sayers I, Nawijn MC. Epithelial cell dysfunction, a major driver of asthma development. Allergy. 2020 Aug;75(8):1902-1917.”
- (ii) First author to the publication entitled, “**Kuchibhotla VNS**, Jonker MR, de Bruin HG, Noordhoek JA, Knight DA, Nawijn MC, Heijink IH. Inhibition of β -catenin/CBP signalling improves airway epithelial barrier function and suppresses CCL20 release. Allergy. 2020 Jul;75(7):1786-1789.”
- (iii) Joint first author to the publication entitled, “**Kuchibhotla VNS***, Starkey MR*, Reid AT, Heijink IH, Nawijn MC, Hansbro PM*, Knight DA*. Inhibition of β -catenin/CREB binding protein signaling attenuates house dust mite-induced goblet cell metaplasia in mice. Submitted to Front Physiol 2021.”

Prof. Dr. Irene H. Heijink

Prof. Dr. Ir. Martijn C. Nawijn

Prof. Dr. Darryl A. Knight

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