

**Application for the ESA Australian Women in Endocrinology (AWE) Travel Award
– Dr Elisabeth Ng**

Please find attached the required documents:

Page 2: A copy of the abstract to be presented at the meeting.

Page 3: A cover letter outlining the proposed itinerary and intended benefits of travel.

Page 4: A short CV (max 1 page) - highlighting published works.

Page 5: A letter of support from PhD supervisor or Postdoctoral Advisor discussing the merits of the applicant, the need for financial support, and outlining what other travel funds are available.

Page 6: Budget justification.

Page 6: Career disruption (if relevant).

Thank you.

Clinical Prediction Algorithms for Subtyping Primary Aldosteronism in a Multicentre Australian Cohort

Authors

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Abstract

Introduction: Primary aldosteronism (PA) is the leading endocrine cause of hypertension. Recent guidelines recommending universal screening for PA in all with hypertension will increase the cases requiring differentiation of unilateral (surgically correctable) from bilateral subtypes, traditionally achieved by adrenal vein sampling (AVS). AVS is invasive and resource-intensive, with limited availability. This study evaluated existing subtyping algorithms in an Australian cohort and developed a novel predictive model to streamline the diagnostic pathway.

Methods: This multicentre retrospective study included patients with PA who underwent AVS at expert centres in Victoria, Queensland, and Western Australia. The PA subtype, unilateral (UPA) or bilateral (BPA), was determined by AVS and post-surgical outcomes. Published algorithms with high accuracy in systematic reviews were tested. A novel predictive model was developed using a stepwise backward selection logistic regression model in a training set (80%) and tested in a validation set (20%).

Results: Of 330 participants, 151 (46%) had UPA and 179 (54%) BPA. Published algorithms showed lower specificity than originally reported. For BPA, a score ≥ 8 using the algorithm by Kobayashi et al (2018) had 74% specificity and 70% sensitivity (AUC 0.78), and the algorithm by Kamemura et al (2017) had 92% specificity and 32% sensitivity (AUC 0.72). For UPA, algorithms by Song et al (2022) and Umakoshi et al (2018) had high specificity (99–100%) and low sensitivity (1–15%) (AUC 0.69 and 0.68, respectively). Collectively, these algorithms would have reduced the need for AVS by 61%, though with variable accuracy.

Our model found BPA was rendered more likely with female sex (odds ratio [OR] 2.19), higher potassium (OR 5.61), lower sodium (OR 0.81), lower aldosterone-renin ratio (OR 0.998), and absence of an adrenal nodule on CT (OR 0.17) (AUC 0.84, 95% CI 0.79-0.90). The optimal threshold value, or probability score, to estimate the likelihood of BPA, ranged from 0.40 to 0.48 for achieving the maximum accuracy of 76% in the training data set, and ranged from 0.44 to 0.57 in the validation data set for a maximum accuracy of 85%. Applying a high-specificity threshold (0.84 probability score) to our model would allow 26% of patients to bypass AVS and proceed directly to medical management with a 7% false-discovery rate.

Conclusion: Prediction models utilising routine biochemical and radiological data can accurately identify PA subtypes. Existing algorithms derived from other populations show reduced specificity in an Australian population. Our novel probability-based model, which (unlike previous algorithms) incorporates serum sodium, offers a scalable tool for personalised decision-making. High-specificity thresholds can safely transition a significant proportion of patients to targeted therapy while reducing the burden on AVS resources.

ESA selection committee
Endocrine Society of Australia
145 Macquarie Street, Sydney NSW

20 March 2026

Dear members of the ESA selection committee,

Re: Application for the ESA Australian Women in Endocrinology (AWE) Travel Award – Dr Elisabeth Ng

I am writing to apply for the above award to attend and present my research at ENDO 2026 in Chicago in June 2026.

My clinical and research focus is dedicated to primary aldosteronism (PA), the most common cause of endocrine hypertension that has been recognised to be underdiagnosed. My work is driven by a commitment to bridging the gap between complex basic science and practical clinical application. ENDO 2026 is a global forum for endocrine research, where there will be opportunities to learn from and interact with international experts in my area of research. This will be especially beneficial at this stage in my career as I plan my transition from PhD candidate to postdoctoral researcher.

I have been invited to chair a session featuring world-class speakers in my specific area of expertise. I would have the honour of co-chairing this with Prof Gail Adler, the lead author of the recently published international guidelines on the management of PA. Co-chairing with Prof Adler provides a unique platform to establish a professional relationship with a premier global expert known for mentoring junior researchers. I intend to seek her guidance on my postdoctoral research direction and explore formal mentorship and collaboration opportunities.

Furthermore, I will present original PhD findings on a multicentre Australian model for predicting PA subtypes. My project combines multicentre Australian data to develop a model for PA subtype diagnosis. As my data shows distinct differences from existing European, Canadian, and Japanese literature, presenting at this international meeting would allow me to stress-test these variations through peer review from international experts before final publication.

Beyond formal sessions, I will strategically advance my postdoctoral trajectory by engaging with key researchers and international laboratories, to discuss joint research initiatives and future laboratory visits.

With the opportunity to attend this meeting, I plan to support junior members of my research group with their presentations, and aim to introduce them to relevant international experts to catalyse their networking.

Thank you for your time and consideration.

Sincerely,



Elisabeth Ng



Dr Elisabeth Ng

MBBS (Hons), FRACP

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Education

PhD (Faculty of Medicine, Nursing and Health Sciences) – Monash University	2022 – present
‘Primary Aldosteronism: New Strategies for Diagnosis and Management’ - Centre of Endocrinology & Metabolism, Hudson Institute of Medical Research - Thesis submitted 19 January 2026	
Postgraduate Research Associate – William Harvey Heart Centre, Queen Mary University of London	2023 – 2024
RACP Endocrinology Advanced Training – The Royal Australasian College of Physicians	2020 – 2022
Admission to Fellowship of the RACP 5th December 2022	
Bachelor of Medicine, Bachelor of Surgery (Hons) – Monash University	2011 – 2015

Publications since 2022

(All publications: 31 publications, 20 first author)

- Ng E**, Jong I, Lau KK, Akram M, ... Yang J. Identification of aldosterone-producing adrenal adenomas using [68Ga]Ga-Pentixafor PET/CT in an Australian cohort. *J Nucl Med*. 2026 Jan 29: jnumed.125.271006.
- Ng E**, Gwini SM, Zheng W, Fuller PJ, Yang J. Tools to predict unilateral primary aldosteronism and optimise patient selection for adrenal vein sampling: a systematic review. *Clin Endocrinol (Oxf)*. 2025;103(1):3-12.
- Ng E**, Lee YN, Taylor A, Shaheen F, Azizan E, Drake WM, Brown MJ. Evaluation of aldosterone suppression by cinnarizine, a putative Cav1.3 inhibitor. *J Clin Endocrinol Metab*. 2025;110(10):2752-2761.
- Ng E**, Kumar S, Paul E, ... Hackman KL. Incidence, prevalence, and predictors of osteoporotic fracture in adult lung transplant recipients. *JHLT Open*. 2025;7:100182.
- Yang J, Bell DA, Carroll R, ... **Ng E**, ... Chong W. Adrenal Vein Sampling for Primary Aldosteronism: Recommendations From the Australian and New Zealand Working Group. *Clin Endocrinol*. 2025;102:31-43.
- Morris H, Melder A, **Ng E**, Skouteris H, Chong W, Yang J. A scoping review of adrenal vein sampling in practice settings: Applying an implementation science lens. *Journal of Clinical and Translational Science*. 2024;8:e214.
- Yang J, McCarthy J, Shah SS, **Ng E**, Shen J, Libianto R, Fuller PJ. Challenges in diagnosing and managing the spectrum of primary aldosteronism. *J Endocr Soc*. 2024 Jun 4;8(7):bvae109.
- Ng E**, Gwini SM, Stowasser M, ... Yang J. Aldosterone and renin concentrations and blood pressure in young Indigenous and non-Indigenous adults in the Northern Territory: a cross-sectional study. *Med J Aust* 2023;219(6):263-260.
- Ng E**, Chong W, Lau K, Gwini SM, Carroll RW, Doery JCG, Fuller PJ, Yang J. The where, who and how of adrenal vein sampling in Australia and New Zealand. *J Med Imaging Radiat Oncol*. 2024;68(1):87-93.
- Ng E**, Gwini SM, Zheng W, Fuller PJ, Yang J. Predicting bilateral subtypes of primary aldosteronism without adrenal vein sampling: a systematic review and meta-analysis. *J Clin Endocrinol Metab*. 2024;109(2):e837-e855.
- Ye S, Davis SR, **Ng E**, Warren AM, Szwarcbard N, Sztal-Mazer S. Misconceptions regarding dairy intake around thyroxine administration in pregnant and postpartum women. *Aust J Gen Pract*. 2023;52(6):367-369.
- Scholes G, **Ng E**, Bach LA, Sztal-Mazer S. Mixed insulin can improve control of prednisolone-induced hyperglycaemia. *Intern Med J*. 2023;53(12):2264-2269.
- Ng E**, Ashkar C, Seeman E, Schneider HG, Nguyen H, Ebeling PR, Sztal-Mazer S. A low serum alkaline phosphatase may signal hypophosphatasia in osteoporosis clinic patients. *Osteoporos Int*. 2023;34(2):327-337.
- Ng E**, Gwini S, Libianto R, Choy KW, Lu ZX, Shen J, Doery JCG, Fuller PJ, Yang J. Aldosterone, renin and ARR variability in screening for primary aldosteronism. *J Clin Endocrinol Metab*. 2022;108(1):33-41.
- Ng E**, Yang J. Primary aldosteronism: efficiently making a commonly missed diagnosis. *Endocrinology Today*. 2022;11:401-5.
- Ng E**, Topliss D. TIRADS classification for thyroid nodules. *Endocrinology Today*. 2022 May;11(5).
- Ng E**, Scholes G, Bach LA, ... Sztal-Mazer S. A system to detect unrecognised diabetes in a tertiary hospital. *Diabet Med*. 2022;39:e14841
- Yang S, Yang J, Shen H, **Ng E**, Feng Z, Song Y, Hu J. Development and validation of model for sparing adrenal venous sampling in diagnosing unilateral primary aldosteronism. *J Hypertens*. 2022;40(9):1692-1701.
- Ng E**, Sztal-Mazer S, Davis S. Functional hypothalamic amenorrhoea: a diagnosis of exclusion. *Med J Aust*. 2022;216(2):73-76.
- Ng E**, Shaw J, Wood A, Maple-Brown L, Hare M. Current evidence and practical guidance for the use of glucagon-like peptide-1 receptor agonist (GLP1-RA) therapy in type 2 diabetes. *Aust J Gen Pract*. 2022;51(7):513-518.

Professor Jun Yang, MBBS, PhD, FRACP

Head, Endocrine Hypertension Group

Email: jun.yang@hudson.org.au

20 March 2026

Dear members of the ESA selection committee,

Re: Application for the ESA Australian Women in Endocrinology (AWE) Travel Award – Dr Elisabeth Ng

I am writing in strong support of Dr Elisabeth Ng's application for the ESA Australian Women in Endocrinology (AWE) Travel Award for 2026 to present her original research at the Endocrine Society Conference (ENDO) in Chicago in June.

Elisabeth is a final (4th) year PhD student in my research group, and she has demonstrated exceptional dedication, intellectual rigor and scientific curiosity throughout her doctoral studies. She has worked tirelessly on her PhD projects and consistently sought opportunities to share her findings through conferences and publications.

Notably, she has been invited to chair a symposium on "*Primary Aldosteronism in the Spotlight: Advances in Diagnosis and Treatment*" at ENDO, which is a significant honour for an early-career researcher. In addition, her abstract based on original, unpublished PhD work has been accepted for a Rapid Fire Oral Presentation at ENDO.

Presenting at ENDO will provide Elisabeth with an important opportunity to showcase her research on an international stage and to establish collaborations and mentorship that are essential for her transition to a postdoctoral clinician-scientist. Direct engagement with leading adrenal researchers will provide critical feedback to refine her research direction and advance her expertise in primary aldosteronism at this pivotal career stage.

Elisabeth does not currently have access to CME or additional PhD funding to support travel to international conferences. Receiving this award would therefore make a substantial difference, helping to offset the cost of travel and accommodation that would otherwise need to be personally funded.

In summary, I strongly endorse Elisabeth's application. She is a highly deserving candidate whose work ethic, scientific contributions, and commitment to advancing endocrine research make her an outstanding representative of the ESA. I am confident that this opportunity will significantly benefit her career development and contribute to the field of endocrine hypertension.

Yours sincerely



Jun Yang

Budget justification

I have been invited to chair at ENDO 2026 but have not been offered any subsidisation of my registration, travel or accommodation.

Item	Cost (currency)	Cost in AUD
Conference registration	\$460 (USD)	\$653
Return flights		\$1380
Accommodation (booked through conference website for subsidised cost)	\$1362 (USD)	\$1934
Ground travel	£50 GBP + \$100 USD	\$95 + \$142 = \$237
Total		\$4204

Career disruption

Parental leave June to December 2024