

New Zealand RS&T Curriculum Vitae Template

PART 1

1a. Personal details				
Full name	<i>Title</i>	<i>First name</i>	<i>Second name(s)</i>	<i>Family name</i>
	Dr	Phoebe		Macrae
Present position		Senior Lecturer/ <i>Pūkenga Matua</i>		
Organisation/Employer		University of Canterbury/ <i>Te Whare Wānanga o Waitaha</i>		
Contact Address		School of Psychology, Speech & Hearing/ <i>Te Kura Mahi ā-Hirikapo</i>		
Work telephone				
Email				
Personal website (if applicable)				

1b. Academic qualifications

2022 He Papa Tikanga - NZ Certificate in Tikanga (Level 3), Te Wananga o Aotearoa

2012 PhD, Speech and Language Sciences, University of Canterbury

2004 Bachelor of Speech & Language Therapy (First Class Honours), College of Science, UC

1c. Professional positions held

2021 – Present, Research Fellow (honorary), University of Haifa

2017 – Present, Senior Lecturer, University of Canterbury

2015 – Present, Deputy Director, Rose Centre for Stroke Recovery and Research

2014 – 2017, Lecturer, Department of Communication Disorders, UC

2012 – 2014, Philip Wrightson Post-doctoral fellow, Johns Hopkins University

2004 – 2011, Clinical Speech-Language therapist roles as Christchurch DHB, The Hearing House, Counties Manakau DHB, Burtons and Ranworth Healthcare

1d. Present research/professional speciality

Approximately 9,000 New Zealanders will be diagnosed with swallowing impairment each year, due to a vast array of diagnoses. Almost one third of these will die from secondary sequelae, such as pneumonia. I have developed three distinct, but related, lines of research and leadership expertise in the area of swallowing dysfunction (dysphagia):

1. *Increasing scientific rigor of methodology and outcome measures of swallowing*
2. *Defining the role of sensation in upper aerodigestive function*
3. *Kaupapa Māori research to address the critical need for reduced health inequities*

My thorough approach to scientific rigor and sustained productivity in transforming scientific foundations of outcome measurement was sought after in collaboration on clinically focused projects with my PhD mentor. Together we developed the research programme at the UC Rose Centre for Stroke Recovery and Research. As Deputy Director, my involvement began with secondary supervision, evidenced by my many co-authored papers documenting validity and reliability of outcome measures (CV outputs 2,4,16,19,39,41). In the last two years, my role has increased to provide a larger ratio of senior supervision, with continued generation of my methodology-focussed papers reflecting the ongoing collaboration with the Director of the Centre. My unique and novel area of research probes the role of sensation in upper aerodigestive function, for which I have obtained funding (HRC Explorer Grant) and drawn 3 doctoral students under my senior supervision (CV outputs 11,12,37,38). I am also mentoring a Post-Doctoral Fellow in sensory rehabilitation of dysphagia, and my expertise in this area resulted in a Research Fellow appointment at Haifa University. My focus on reducing health inequities has

developed significantly over the last 2 years. This has coincided with my personal development in Te Ao Māori, engagement with Māori researchers and allied health groups, and supervising Ākonga in Kaupapa Māori projects.

1e. Total years research experience	7 years
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2014 – Maternity leave; 2018 – Maternity leave

1f. Professional distinctions and memberships (including honours, prizes, scholarships, boards or governance roles, etc)

- 2022** Lotteries Community Grant (PI) **\$83,220** Development of a student-led gender-affirming voice clinic.
- 2021** UC Early Career Researcher Development Award (PI) **\$10,000** Led collaboration with biological sciences & mech engineering to develop an integrated system for measurement of respiratory-swallowing coordination.
- 2020** **Invited talk:** Cough Rehabilitation: Is it possible? European Society for Swallowing Disorders 10th annual congress, Online.
- 2020 – Present**, Postgraduate coordinator, School of Psychology, Speech & Hearing
- 2019 – Present**, Associate Editor, Speech, Language and Hearing Journal
- 2019** **Invited talk:** Interdisciplinary Dysphagia Management. CDHB Stroke Study day
- 2018** CMRF, Don Beaven Travelling Fellowship (PI) **\$3,000**.
- 2018** College of Science Emerging Researcher Award **\$3,000**.
- 2018** Australia and New Zealand Head and Neck Cancer Association Grant (PI) **\$5,400**. Dysphagia and quality of life after head and neck cancer treatment.
- 2018 – Present**, Editorial Board, Frontiers in Human Neuroscience
- 2017** **Conference leadership committee:** Stroke rehab: No-Tech to Go-Tech 2018
- 2017** **Invited panellist:** Annual meeting of Dysphagia Research Society (*principle international conference in the field attended by clinicians, researchers & physicians*)
- 2017** Health Research Council Research Partnerships for NZ Health Delivery Grant (AI) **\$250,000**. Translating ultrasound of swallowing to clinical dysphagia diagnosis.
- 2016** HRC of NZ, Explorer's grant (PI) **\$150,000** (1 of 9 awarded)
- 2016** **Keynote speaker:** SmartStrokes conference
- 2016** **Invited panellist:** Annual meeting of Dysphagia Research Society
- 2015** **Invited panellist:** Stroke rehab: from No-Tech to Go-Tech
- 2013** New Zealand Neurological Foundation Travel award **\$4,200**
- 2011** **Organizing Committee:** 8th Asia Pacific Conference on Speech, Language, Hearing
- 2011** Ngā Pae o te Māramatanga Doctoral Bridging Grant **\$12,000**
- 2010** New Zealand Neurological Foundation (NZNF) Philip Wrightson Post-Doctoral Fellowship. **\$138,000** 1 of 2 awarded.
- 2010** New Zealand Speech-Language Therapists' (SLT) Association **Research Excellence Award**. 1 of 1 awarded. To recognize excellence in SLT research in NZ.
- 2010** **2nd Place Scientific Abstract** for 18th Annual Dysphagia Research Society Meeting
- 2009 – 2010**, Associate Editor, Journal of the NZ Speech Therapists' Association
- 2008** HRC Maori Health Research Doctoral Scholarship **\$10,000**
- 2008** Top Achievers Doctoral Scholarship
- 2008** University of Canterbury Doctoral Scholarship
- 2008** Neurological Foundation of New Zealand W. & B. Miller Doctoral Scholarship (1 of 2)
- 2007** Henry Kelsey Research Award
- 2007** Todd Foundation Award for Excellence
- 2007** University of Canterbury Master's Scholarship

1g. Total number of peer reviewed publications and patents	Journal articles	Books, book chapters, books edited	Conference proceedings	Patents
	31	2	30+	0

PART 2

2a. Research publications and dissemination

Postgraduate students under my supervision marked with *, Field weighted citation index (FWCI) and Source-Normalized Impact per Paper (SNIP) from Scopus. Overall H-index: 12 [google scholar], 11 [SciVal]; citations: 470 [google scholar], 235 [SciVal]).

My shift from first author (2009-2014), to co-author (2014 – ongoing), to last author (2019 – present) reflects my progression from doctoral student and post-doc, to secondary then primary supervisor, respectively. As Deputy Director of the Rose Centre, my senior supervision of students started in 2017, with increased publications from these forthcoming.

Peer-reviewed journal articles

1. *Kwong, S. L., Hernandez, E. G., *Winiker, K., Gozdzikowska, K., **Macrae, P.**, Huckabee, M. L. (2022). Effect of Topical Nasal Anesthetic on Comfort and Swallowing in High-Resolution Impedance Manometry. *Laryngoscope*.
2. *Winiker, K., Burnip, E., Gozdzikowska, K., Guiu-Hernandez, E., Hammond, R., **Macrae, P.**, Thomas, P., & Huckabee, M-L. (2021) Ultrasound: Reliability of a pocket-sized system in the assessment of swallowing. *Journal of Speech, Language, and Hearing Research* 64;8.
3. *Winiker K., Gozdzikowska K., Guiu Hernandez E., *Kwong SL., **Macrae P.** and Huckabee ML. (2021). Potential for behavioural pressure modulation at the upper oesophageal sphincter in healthy swallowing. *Dysphagia*.
4. *Winiker, K., Burnip, E., Gozdzikowska, K., Guiu-Hernandez, E., Hammond, R., Macrae, P., and Huckabee, M-L. (2021) Ultrasound: Validity of a pocket-sized system in the assessment of swallowing. *Dysphagia*. 2:1-9. **FWCI:4; SNIP 2.03**
5. *Ng, K., Jones, R., Guiu Hernandez, E., *Erfmann, K., **Macrae, P.**, and Huckabee ML. (2021) Effect of Volitional Effort on Submental Surface Electromyographic Activity During Healthy Swallowing. *Dysphagia*.
6. *Winiker K., Gozdzikowska K., Guiu Hernandez E., *Kwong SL., **Macrae P.** and Huckabee ML. (2021). Potential for Volitional Control of Resting Pressure at the Upper Oesophageal Sphincter in Healthy Individuals. *Dysphagia*.
7. *Ng, K., Jones, R., Guiu Hernandez, E., **Macrae, P.**, and Huckabee ML. (2020). Classification of stroke patients with dysphagia into subgroups based on patterns of submental muscle strength and skill impairment. *Arch of Phys Med & Rehab*.
8. *Erfmann, K., **Macrae, P.**, Jones, R., Guiu-Hernandez, E., Huckabee, ML. (2020) Effects of cerebellar transcranial direct current stimulation (tDCS) on motor skill learning in swallowing. *Disabil Rehabil*. 1-9. doi:10.1080/09638288.2020.1827303
9. *Wallace E, **Macrae P**, Huckabee ML. (2020). Objective measurement of acoustic intensity of coughing for clearance of penetration and aspiration on video-fluoroscopy. *Int J Speech Lang Pathol*. 14;1-8.
10. *Wallace, E., Guiu-Hernandez, E., Epton M., Ploen L., Huckabee M-L. & **Macrae, P.** (2020). A Sensory Stimulation Protocol to Modulate Cough Sensitivity: A Randomized Controlled Trial Safety Study. *American Journal of Speech Language Pathology*, 1-11.
11. *Wallace, E., Guiu-Hernandez, E., *Ang, A., & **Macrae, P.** (2019). Quantifying test-retest variability of natural and suppressed citric acid cough thresholds and urge to cough ratings. *Pulmonary Pharmacology & Therapeutics*, 58.
12. *Wallace, E., Guiu Hernandez, E., *Ang, A., *Hiew, S., & **Macrae, P.** (2019). A Systematic Review of Methods of Citric Acid Cough Reflex Testing. *Pulmonary Pharmacology & Therapeutics*, 58. **FWCI:1.43 SNIP 0.99**
13. Guedes, R., Azola, A., **Macrae, P.**, Sunday, K., Mejia, V., Vose, A., Humbert, I. (2017). Examination of swallowing maneuver training and transfer of practiced behaviors to laryngeal vestibule kinematics in functional swallowing of healthy adults. *Physiology and Behavior*, 174, 155-161. **FWCI:1.11 SNIP 1.10**

14. Calvo, I., Sunday, K., **Macrae, P.**, & Humbert, I. A. (2017). Effects of chin-up posture on the sequence of swallowing events. *Head & neck*, 39(5), 947-959
15. Huckabee, M. L., **Macrae, P.**, & Lamvik, K. (2016). Expanding Instrumental Options for Dysphagia Diagnosis and Research: Ultrasound and Manometry. *Folia Phoniatrica et Logopaedica*, 67(6), 269-284.
16. Azola, A., Greene, L., *Taylor-Kamara, I., **Macrae, P.**, *Anderson, C., & Humbert, I. A. (2015). The relationship between submental surface electromyography and hyo-laryngeal kinematic measures of mendelsohn maneuver duration. *JSLHR*, 58(6), 1627-1636.
17. *Young, J. L., **Macrae, P.**, *Anderson, C., *Taylor-Kamara, I., & Humbert, I. A. (2015). The sequence of swallowing events during the chin-down posture. *American Journal of Speech-Language Pathology*, 24(4), 659-670. **FWCI:1.59 SNIP 1.55**
18. *Anderson, C., **Macrae, P.**, *Taylor-Kamara, I., Serel, S., Vose, A., & Humbert, I. A. (2015). The perturbation paradigm modulates error-based learning in a highly automated task: Outcomes in swallowing kinematics. *Journal of Applied Physiology*, 119(4), 334-341.
19. Lamvik, K., **Macrae, P.**, Doeltgen, S., Collings, A., Huckabee, M-L. (2014). Normative data for pharyngeal pressure generation during saliva, bolus and effortful saliva swallowing across age and gender. *Speech, Language and Hearing*. 17(4), 210-215.
20. **Macrae, P. R.**, Jones, R. D., & Huckabee, M. L. (2014). The effect of swallowing treatments on corticobulbar excitability: A review of transcranial magnetic stimulation induced motor evoked potentials. *Journal of Neurosci Methods*, 233.
21. Huckabee, M-L. and Macrae, **P.** (2014). Rethinking Rehab: Skill-Based Training for Swallowing Impairment. *Dysphagia Special Interest Group of the American Speech-Language-Hearing Association*.
22. **Macrae, P.**, Anderson, C., & Humbert, I. (2014). Mechanisms of airway protection during chin-down swallowing. *JSLHR*. **FWCI:3.89; SNIP:1.28**
23. **Macrae, P.**, Anderson, C., Taylor-Kamara, I., & Humbert, I. (2014). The effects of feedback on volitional manipulation of airway protection during swallowing. *Journal of Motor Behavior*. 46(2):133-139
24. **Macrae, P.**, & Humbert, I. (2013). Exploiting experience-dependent plasticity in dysphagia rehabilitation: Current evidence and future directions. *Current Physical Medicine and Rehabilitation Reports*. (Online, DOI 10.1007/s40141-013-0025-y)
25. **Macrae, P.**, Jones, R., Myall, D., Melzer, T., & Huckabee, M-L. (2013). Cross-Sectional Area of the Anterior Belly of the Digastric Muscle: Comparison of MRI and Ultrasound Measures. *Dysphagia*. 28(3), 375-80.
26. Humbert, I., Michou, E., **Macrae, P.**, Crujido, L. (2012). Electrical stimulation and swallowing: How much do we know? *Seminars in Speech and Language*. 33.
27. **Macrae, P.**, Doeltgen, S., Jones, R., & Huckabee, M-L. (2012). Intra- and inter-rater reliability for analysis of hyoid displacement captured by ultrasound. *Journal of Clinical Ultrasound*. 40(2), 74-78.
28. Doeltgen, S., **Macrae, P.**, & Huckabee, M-L. (2011). Pharyngeal pressure generation during tongue-hold swallows across age. *Am J Speech Lang Path*. 20.
29. **Macrae, P.**, Myall, D., Jones, R., & Huckabee, M-L. (2011). Pharyngeal pressures during swallowing within and across three sessions: within-subject variance and order effects. *Dysphagia*. 26.
30. Al-Toubi, A., Abu-Hijleh, A., Huckabee, M-L., **Macrae, P.**, & Doeltgen, S. (2011). Effects of repeated volitional swallowing on the excitability of submental corticobulbar motor pathways. *Dysphagia*. 26.

31. Huckabee, M-L. and Macrae, P. (2009). Temporal resolution in swallowing neural control: The way forward (Editorial). <i>Clinical Neurophysiology</i> . 120(10).
Peer reviewed books, book chapters, books edited
32. Huckabee M-L., Macrae, P. , Wallace, E. Impaired laryngeal response to cough reflex testing. In Sandhu, G.S., Allen, J., and Nouraei, S.A. (Ed.), <i>Laryngology: A case Based Approach</i> . San Diego: Plural Publishing; 2018.
33. Huckabee, M-L., Macrae, P. Management and Treatment of Oropharyngeal Dysphagia – Adult: Rehabilitative Maneuvers and Exercise: Effortful Swallow. In: <i>Manual of Diagnostic and Therapeutic Techniques for Disorders of Deglutition</i> . Shaker, R., Postma, G., Belafsky, P., Easterling, C. San Diego: Springer; 2013
Refereed conference proceedings
34. *Wallace, E., Guiu Hernandez, E., Huckabee, M.L., Epton, M., Macrae, P. (2019). Modulation of cough sensitivity using distilled water. European Society for Swallowing Disorders, (ESSD) Vienna, Austria.
35. *Wallace, E., Guiu Hernandez, E., Macrae, P. (2019). Modulation of cough sensitivity using distilled water. Upper Airway Symposium, Perth
36. *Wallace, E., Guiu Hernandez, E., Macrae, P. (2018). The Effect of Salivary pH on Citric Acid Cough Threshold. Biomouth Symposium, 2018, Christchurch, NZ
37. *Wallace, E., Guiu Hernandez, E., Huckabee, M. L., Macrae, P. (2018). Quantifying the test-retest variability of citric acid cough thresholds in healthy individuals. ESSD, Dublin, Ireland.
38. *Wallace, E., Guiu Hernandez, E., Macrae, P. (2018). Quantifying the test-retest variability of urge-to-cough (UTC) in healthy individuals. ESSD, Dublin, Ireland.
39. *Lim, S., Macrae, P. , Guiu Hernandez, E., & Huckabee, M. -L. (2017). Variability of citric acid cough reflex test: A tidal breath dose-response method. 7th Congress of the ESSD - World Dysphagia Summit. Barcelona Spain.
40. *Wallace, E., Macrae, P. , & Huckabee, M. -L. (2017). How strong is strong enough to clear aspiration? 7th Congress ESSD - World Dysphagia Summit.
41. *Kwong, S., Macrae, P. , Gozdzikowska, K., Humbert, I., Huckabee, M-L. (2017). Measures of upper esophageal sphincter function in videofluoroscopy and high-resolution manometry: subject variance within and across sessions. Dysphagia Research Society (DRS). Portland, OR, USA.
42. Macrae, P. , Finley, J., and Humbert, I. (2014). Correcting for head movement during measurement of hyoid displacement. DRS
43. Macrae, P. , Huckabee, M-L., and Jones, R. (2010). Manometric Pressures Within and Across 3 Sessions: Within-Subject Variance and Order Effects. DRS
44. Macrae, P. , Huckabee, M-L., Doeltgen, S., and Jones, R. (2009). Intra-and inter-rater reliability of hyoid displacement measured by ultrasound. DRS
Other forms of dissemination (reports for clients, technical reports, popular press, etc)
1. https://podcasts.apple.com/gb/podcast/experience-dependent-plasticity-in-dysphagia-management/id1263588769?i=1000479136219
2. http://www.scoop.co.nz/stories/SC1606/S00024/can-we-fix-the-cough-reflex.htm
3. https://www.pressreader.com/new-zealand/the-press/20080513/281900178945915
4. https://www.scoop.co.nz/stories/GE1404/S00071/canterbury-researcher-to-investigate-swallowing-disorders.htm
5. 27 community talks given since 2015, to Probus, U3A and Rotary groups. Delivered at the Rose Centre and at local community meeting locations
6. Invited speaker, University of Canterbury 'What if Wednesday' series (2015) https://www.youtube.com/watch?v=ZkhhHzEc86M
7. Facilitator, Annual appeal of the Neurological Foundation of New Zealand 'My Amazing Brain' (2014 – 2018)