


TOBY MÜNDEL

Brock University
St. Catharines, ON L2S 3A1
Canada

 +1 905 688 5550 x5457

 tmundel@brocku.ca

1. EDUCATION

- 2006 *University of Birmingham, UK*
PhD, Exercise and Thermal Physiology
Thesis: Exercise in the Heat: Perception and Endurance (Advisor: Prof. David Jones)
- 2002 *University of Birmingham, UK*
BSc (Hons), Sport and Exercise Sciences
Thesis: Effect of High-Intensity Exercise on Stimulated and Unstimulated Human Salivary IgA Secretion (Advisor: Prof. Michael Gleeson)

2. EMPLOYMENT

- 2022- *Brock University, Canada*
Professor
- 2019 *Massey University, New Zealand*
Associate Professor
- 2011 *Massey University, New Zealand*
Senior Lecturer
- 2006 *Massey University, New Zealand*
Lecturer
- 2005 *University of Birmingham, UK*
Research Fellow

3. AREAS OF EXPERTISE

Human and Applied Physiology, Environmental and Exercise Physiology, Temperature Regulation, Body Fluid Balance, Heat Stress, Hydration and Drinking, Female Health and Hormones, Brain Health and Blood Flow, Nicotine, Pain, Hypoxia, Upper Airway Physiology

4. HONOURS, DISTINCTIONS AND AWARDS

2022-2025	<i>Massey University, New Zealand</i> Honorary Research Fellow
2022-2024	<i>Kenzen Inc., USA</i> Scientific Advisor
2022-2023	<i>Hubei Normal University, China</i> Visiting Research Professor
2022	<i>National Taipei University of Nursing and Health Sciences, Taiwan</i> Invited Speaker
2021	<i>International Conference on Exercise Physiology and Fitness, Taiwan</i> Keynote Speaker
2020	<i>Kobe University, Japan</i> Visiting Researcher
2019	<i>International Sports Science Conference, Malaysia</i> Keynote Speaker
2019	<i>Sport and Exercise Science New Zealand</i> Elected Fellow
2019	<i>Singapore Sports Institute</i> Invited Speaker
2019	<i>National Taiwan Sports University, Taiwan</i> Visiting Researcher
2017	<i>High Performance Sport New Zealand Heat and Altitude Symposium</i> Invited Speaker
2017	<i>International Conference on Exercise Physiology and Fitness, Taiwan</i> Keynote Speaker
2017	<i>The Physiological Society (UK)</i> Elected Fellow
2017	<i>European College of Sport Science</i> Elected Fellow
2016	<i>International Conference on Movement Health and Exercise, Malaysia</i> Plenary Speaker
2016	<i>National Sports Institute of Malaysia</i> Invited Speaker
2014	<i>Massey University, College of Health</i> Finalist, Research Award – Supervisor
2014	<i>Scopus Young Researcher Awards Australasia</i> Finalist, New Zealand
2009	<i>Massey University Student’s Association</i> Finalist, Professor of the Year
2009	<i>Physiology and Pharmacology of Temperature Regulation, Japan</i> Young Investigator Award
2002-2005	<i>University of Birmingham, UK</i> Doctoral Scholarship
2002	<i>The Physiological Society (UK)</i> Summer Scholarship

5. RESEARCH, SCHOLARSHIP AND ENTERPRISE

OVERVIEW

Summary by Category	Number
Book	1
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Current PhD Supervision / Completed	2 / 8
Current Masters Supervision / Completed	3 / 12
Contestable Funding Capture	\$ 2.252M

RESEARCH OUTPUT

*Students supervised underlined

Textbook (invited)

1. Powers SK, Howley ET, Cotter J, Pumpa K, Leicht A, Rattray B, **Mündel T**, Janse de Jonge X (2014). *Exercise Physiology: Australia and New Zealand*. McGraw-Hill, Sydney.

Book Chapter (invited)

2. Schlader ZJ, **Mündel T** (2012). Heat acclimatization. In *Encyclopedia of Exercise Medicine in Health and Disease*, ed. Mooren FC, pp391-393. Springer, Heidelberg.
3. **Mündel T** (2008). Exercise heat stress and metabolism. In: Thermoregulation and Human Performance: Physiological and Biological Aspects. *Medicine and Sports Science*, ed. Marino FE, vol 53, pp121-129. Karger, Basel.

Review

4. O'Connor E, **Mündel T**, Barnes MJ (2022). Nutritional compounds to improve post-exercise recovery. *Nutrients* 14(23):5069.
5. Kresnajati S, Lin YY, **Mündel T**, Bernard JR, Lin HF, Liao YH (2022). Changes in arterial stiffness in response to various types of exercise modalities: A narrative review on physiological and endothelial senescence perspectives. *Cells* 11(22):3544.
6. Liu W-L, Lin Y-Y, **Mündel T**, Chou C-C, Liao Y-H (2022). Effects of acute interval exercise on arterial stiffness and cardiovascular autonomic regulatory responses: a narrative review of potential impacts of aging. *Frontiers in Cardiovascular Medicine* 9:864173.
7. Chen C-Y, Chou C-C, Lin K-X, **Mündel T**, Chen M-T, Liao Y-H, Tsai S-C (2022). A sports nutrition perspective on the impacts of hypoxic high-intensity interval training (HIIT) on appetite regulatory mechanisms: a narrative review of the current evidence. *International Journal of Environmental Research and Public Health* 19(3):1736.
8. Cao Y, Lei TH, Wang F, Yang B, **Mündel T** (2022). Head, face and neck cooling as per-cooling modalities to improve exercise performance in the heat: A narrative review and practical applications. *Sports Medicine – Open* 8(1):16.

9. Fricke A, Lark SD, Fink PW, **Mündel T**, Shultz SP (2021). Exercise interventions to improve pelvic floor muscle functioning in older women with urinary incontinence: a systematic review. *Journal of Women's Health Physical Therapy* 45(3):115-125.
10. Tan B, Philipp M, Hill S, Che Muhamed AM, **Mündel T** (2020). Pain across the menstrual cycle: considerations of hydration. *Frontiers in Physiology* 11:585667.
11. Barwood MJ, Gibson OR, Gillis DJ, Jeffries O, Morris NB, Pearce J, Ross ML, Stevens C, Rinaldi K, Kounalakis SN, Riera F, **Mündel T**, Waldron M, Best R (2020). Menthol as an ergogenic aid for the Tokyo 2021 Olympic Games: an expert-led consensus statement using the modified Delphi method. *Sports Medicine* 50:1709-1727.
12. **Mündel T** (2017). Nicotine: sporting friend or foe? A review of athlete use, performance consequences and other considerations. *Sports Medicine* 47(12):2497-2506.
13. Che Jusoh MR, Stannard SR, **Mündel T** (2016). Sago supplementation for recovery from cycling in a warm-humid environment and its influence on subsequent cycling physiology and performance. *Temperature* 3:384-393.
14. Schlader ZJ, Stannard SR, **Mündel T** (2010). Human thermoregulatory behavior during rest and exercise – a prospective review. *Physiology and Behavior* 99:269-275.

Original Research

15. Jenkins EJ, Campbell HA, Lee, JKW, **Mündel T**, Cotter JD (in press). Delineating the impacts of air temperature and humidity for endurance exercise. *Experimental Physiology*
16. Lei TH, Fujiwara M, Amano T, **Mündel T**, Inoue Y, Fujii N, Nishiyasu T, Kondo N (2023). Induction and decay of seasonal acclimatization on whole-body heat loss responses during exercise in a hot humid environment with different air velocities. *American Journal of Physiology Regulatory Integrative Comparative Physiology* 324(1):R35-R44.
17. Zheng H, Badenhorst CE, Lei TH, Liao YH, Fujii N, Kondo N, **Mündel T** (2022). Do E_2 and P_4 contribute to the explained variance in core temperature response for trained women during exertional heat stress when metabolic rates are very high? *European Journal of Applied Physiology* 122(10):2201-2212.
18. Fujii N, Amano T, Kenny GP, **Mündel T**, Lei TH, Honda Y, Kondo N, Nishiyasu T (2022). TMEM16A blockers T16Ainh-A01 and benzbrumarone do not modulate the regulation of sweating and cutaneous vasodilatation in humans in vivo. *Experimental Physiology* 107(8):844-853.
19. Korad S, **Mündel T**, Fan JL, Perry BG (2022). Cerebral autoregulation across the menstrual cycle in eumenorrhic women. *Physiological Reports* 10(9):e15287.
20. Tan B, Philipp MC, Che Muhamed AM, **Mündel T** (2022). Hypohydration but not menstrual phase influences pain perception in healthy women. *Journal of Applied Physiology* 132(3):611-621.
21. Kataoka Y, Kenny GP, Nishiyasu T, Amano T, **Mündel T**, Zheng H, Lei TH, Watanabe K, Fujii N (2022). TRPA1 channel activation with cinnamaldehyde induces cutaneous vasodilation through NOS, but not COX and K_{Ca} channel, mechanisms in humans. *Journal of Cardiovascular Pharmacology* 79(3):375-382.
22. Moyen NE, Bapat R, Tan B, Hunt L, Jay O, **Mündel T** (2021). Accuracy of algorithm to non-invasively predict core body temperature using the Kenzen wearable device. *International Journal of Environmental Research and Public Health* 18:13126.
23. Zheng H, Badenhorst CE, Lei TH, Che Muhamed AM, Liao YH, Amano T, Fujii N, Nishiyasu T, Kondo N, **Mündel T** (2021). Measurement error of self-paced exercise performance in athletic women is not affected by ovulatory status or ambient environment. *Journal of Applied Physiology* 131:1496-1504.
24. Fricke A, Fink PW, Lark SD, **Mündel T**, Shultz SP (2021). Mini-Trampoline jumping as an exercise intervention for postmenopausal women who experienced a stroke: a case report. *Journal of Women's Health Physical Therapy* 45:201-208.
25. Lei TH, Fujiwara M, Gerrett N, Amano T, **Mündel T**, Inoue Y, Okushima D, Nishiyasu T, Kondo N (2021). The effect of seasonal acclimatization on whole body heat loss response during exercise in a hot humid environment with different air velocity. *Journal of Applied Physiology* 131(2):520-531.
26. Zheng H, Badenhorst CE, Lei TH, Liao YH, Che Muhamed AM, Fujii N, Kondo N, **Mündel T** (2021). Menstrual phase and ambient temperature do not influence iron regulation in the acute exercise period. *American Journal of Physiology Regulatory Integrative Comparative Physiology*. 320(6):R780-R790.

27. Lin HF, Tseng CY, **Mündel T**, Lin YY, Lin CC, Chen CN, Liao YH (2021). Perturbations of adjuvant chemotherapy on cardiovascular responses and exercise tolerance in patients with early-stage breast cancer. *Biology* 10(9):910.
28. Chen CY, Chen CR, Chen CN, Wang PS, **Mündel T**, Liao YH, Tsai SC (2021). Amphetamine-decreased progesterone and estradiol release in rat granulosa cells: the regulatory role of cAMP- and Ca²⁺-mediated signaling pathways. *Biomedicines* 9(5):493.
29. Perry BG, **Mündel T** (2021). Lower body positive pressure affects systemic but not cerebral haemodynamics during incremental hyperthermia. *Clinical Physiology and Functional Imaging*. 41(2):226-233.
30. Fricke A, Fink PW, **Mündel T**, Lark SD, Shultz SP (2021). Mini-trampoline jumping as an exercise intervention in postmenopausal women to improve women specific health risk factors. *International Journal Preventive Medicine*. 12:10.
31. Lei TH, Schlader ZJ, Che Muhamed AM, Zheng H, Stannard SR, Kondo N, Cotter JD, **Mündel T** (2020). Differences in dry-bulb temperature do not influence moderate-duration exercise performance in warm environments when vapor pressure is equivalent. *European Journal of Applied Physiology* 120:841-852.
32. Lei TH, Matsukawa H, Okushima D, Gerrett N, Schlader ZJ, **Mündel T**, Fujiwara M, Kondo N (2020). Autonomic and perceptual thermoregulatory responses to voluntarily engaging in a common thermoregulatory behaviour. *Physiology and Behavior* 215:112768.
33. Kuo YC, Chang HL, Cheng CF, **Mündel T**, Liao YH (2020). Six-week inspiratory resistance training ameliorates endurance performance but does not affect obesity-related metabolic biomarkers in obese adults: A randomized controlled trial. *Respiratory Physiology and Neurobiology* 273:103285.
34. **Mündel T** (2020). An anti-doping perspective on nicotine detection in the peri-exercise period in a cohort of trained male cyclists. *Current Research in Physiology* 2:30-33.
35. Kamaruddin HK, Ooi CH, **Mündel T**, Aziz AR, Che Muhamed AM (2019). The ergogenic potency of carbohydrate mouth rinse on endurance running performance of dehydrated athletes. *European Journal of Applied Physiology* 119:1711-1723.
36. Che Muhamed AM, Yusof HA, Stannard SR, **Mündel T**, Thompson MW (2019). The efficacy of ingesting water on thermoregulatory responses and running performance in a warm-humid condition. *Frontiers in Physiology* 10:507.
37. **Mündel T**, Houltham SD, Barnes MJ, Stannard SR (2019). Nicotine supplementation does not influence performance of a 1h cycling time-trial in trained males. *Frontiers in Physiology* 10:292.
38. Liao YH, **Mündel T**, Yang YT, Wei CC, Tsai SC (2019). Effects of periodic carbohydrate ingestion on endurance and cognitive performances during a 40-km cycling time-trial under normobaric hypoxia in well-trained triathletes. *Journal of Sports Sciences* 37:1805-1815.
39. Pinkham MI, Burgess R, **Mündel T**, Tatkov S (2019). Nasal high flow reduces minute ventilation during sleep through a decrease of carbon dioxide re-breathing. *Journal of Applied Physiology* 126:863-869.
40. Lei TH, Cotter JD, Schlader ZJ, Stannard SR, Perry BG, Barnes MJ, **Mündel T** (2019). On exercise thermoregulation in females: interaction of endogenous and exogenous ovarian hormones. *Journal of Physiology* 597:71-88.
41. **Mündel T** (2018). Sodium bicarbonate ingestion improves repeated high-intensity cycling performance in the heat. *Temperature* 5:343-347.
42. Lei TH, Stannard SR, Perry BG, Schlader ZJ, Cotter JD, **Mündel T** (2017). Influence of menstrual phase and arid vs. humid heat stress on autonomic and behavioural thermoregulation during exercise in trained but unacclimated women. *Journal of Physiology* 595:2823-2837.
43. **Mündel T**, Machal M, Cochrane DJ, Barnes MJ (2017). A randomised, placebo-controlled, crossover study investigating the effects of nicotine gum on strength, power and anaerobic performance in nicotine-naïve, active males. *Sports Medicine – Open* 3:5.
44. McLeay Y, Stannard SR, **Mündel T**, Foskett A, Barnes M (2017). Effect of alcohol consumption on recovery from eccentric exercise induced muscle damage in females. *International Journal of Sports Nutrition and Exercise Metabolism* 27:115-121.
45. Bear TLK, Philipp M, Hill S, **Mündel T** (2016). A preliminary study on how mild hypohydration affects pain perception. *Psychophysiology* 53:605-610.

46. Legg SJ, Gilbey A, Hill S, Raman A, Dubray A, Iremonger G, **Mündel T** (2016). Effects of mild hypoxia in aviation on mood and complex cognition. *Applied Ergonomics* 53:357-363.
47. **Mündel T**, Carter JM, Wilkinson DM, Jones DA (2016). A comparison of rectal, oesophageal and gastrointestinal tract temperatures during moderate intensity cycling in temperate and hot conditions. *Clinical Physiology and Functional Imaging* 36:1-16.
48. Perry BG, Bear TLK, Lucas SJE, **Mündel T** (2016). Mild dehydration modifies the cerebrovascular response to the cold pressor test. *Experimental Physiology* 101:135-142.
49. Che Muhamed AM, Atkins K, Stannard SR, **Mündel T**, Thompson MW (2016). The effects of a systematic increase in relative humidity on thermoregulatory and circulatory responses during prolonged running exercise in the heat. *Temperature* 3:455-464.
50. Che Jusoh MR, Stannard SR, **Mündel T** (2016). Sago supplementation for recovery from cycling in a warm-humid environment and its influence on subsequent cycling physiology and performance. *Temperature* 3:444-454.
51. Che Jusoh MR, Stannard SR, **Mündel T** (2016). Physiologic and performance effects of sago supplementation before and during cycling in a warm-humid environment. *Temperature* 3:318-327.
52. Schlader ZJ, Sarker S, **Mündel T**, Coleman GL, Chapman CL, Sackett JR, Johnson BD (2016): Hemodynamic responses upon the initiation of thermoregulatory behavior in young healthy adults. *Temperature* 3:271-285.
53. **Mündel T**, Raman A, Schlader ZJ (2016). Head temperature modulates thermal behaviour in the cold in humans. *Temperature* 3:298-306.
54. **Mündel T**, Perry BG, Ainslie PN, Thomas KT, Sikken ELG, Cotter JD, Lucas SJE (2015). Post-exercise orthostatic intolerance: influence of exercise intensity. *Experimental Physiology* 100:915-925.
55. Dent JR, Edge JA, Hawke E, McMahon C, **Mündel T** (2015). Sex differences in acute translational repressor 4E-BP1 activity and sprint performance in response to repeated-sprint exercise in team sport athletes. *Journal of Science and Medicine in Sport* 18:730-736.
56. Edge J, **Mündel T**, Pilegaard H, Hawke E, Leikis M, Lopez-Villalobos N, et al. (2015) Ammonium chloride ingestion attenuates exercise-induced mRNA levels in human muscle. *PLoS ONE* 10:e0141317.
57. Bin Che Jusoh MR, Morton RH, Stannard SR, **Mündel T** (2015). A reliable pre-loaded cycling time-trial for use in conditions of significant thermal stress. *Scandinavian Journal of Medicine and Science in Sports* 25:S296-301
58. Perry BG, Cotter JD, Mejuto G, **Mündel T**, Lucas SJE (2014). Cerebral hemodynamics during graded Valsalva manoeuvres. *Frontiers in Physiology* 5:349.
59. Moyen NE, **Mündel T**, Du Bois AM, Ciccone AB, Morton RH, Judelson DA (2014). Increasing humidity affects thermoregulation during low-intensity exercise in women. *Aviation Space Environmental Medicine* 85:905-911.
60. Brown SJ, Barnes MJ, **Mündel T** (2014). Effects of hypoxia and hypercapnia on human HRV and respiratory sinus arrhythmia. *Acta Physiologica Hungarica* 101:263-272.
61. Perry BG, Lucas SJ, Thomas KN, Cochrane DJ, **Mündel T** (2014). The effect of hypercapnia on static cerebral autoregulation. *Physiological Reports* 2:e12059.
62. Raman A, Macdermid PW, **Mündel T**, Mann M, Stannard SR (2014). The effects of carbohydrate loading 48 hours prior to a simulated squash match. *International Journal of Sports Nutrition and Exercise Metabolism* 24:157-165.
63. Legg SJ, Hill S, Gilbey A, Raman A, Schlader Z, **Mündel T** (2014). Effect of mild hypoxia on working memory, complex logistical reasoning and risk judgment. *International Journal of Aviation Psychology* 24:126-140.
64. Perry BG, Schlader ZJ, Barnes MJ, Cochrane DJ, Lucas SJE, **Mündel T** (2014). Hemodynamic response to upright resistance exercise: effect of load and repetition. *Medicine and Science in Sports and Exercise* 46:479-487.
65. Perry BG, **Mündel T**, Cochrane DJ, Cotter JD, Lucas SJE (2014). The cerebrovascular response to graded Valsalva manoeuvres whilst standing. *Physiological Reports* 2:e233.

66. Barnes MJ, Booker H, **Mündel T**, Cochrane DJ (2013). Does intermittent pneumatic leg compression enhance muscle recovery after strenuous eccentric exercise? *International Journal of Sports Medicine* 34:969-974.
67. Perry BG, Schlader ZJ, Raman A, Cochrane DJ, Lucas SJE, **Mündel T** (2013). Middle cerebral artery blood flow velocity in response to lower body positive pressure. *Clinical Physiology and Functional Imaging* 33:483-488.
68. **Mündel T**, Feng S, Tatkov S, Schneider H (2013). Mechanisms of nasal high flow on ventilation during wakefulness and sleep. *Journal of Applied Physiology* 114:1058-1065.
69. Brown SJ, Raman A, Barnes MJ, **Mündel T** (2013). The autonomic cardiovascular response to acute hypoxia and passive head-up tilting in humans. *European Journal of Applied Physiology* 113:1731-1736.
70. Schlader ZJ, Perry BG, Che Jusoh MR, Hodges LD, Stannard SR, **Mündel T** (2013). Human temperature regulation when given the opportunity to behave. *European Journal of Applied Physiology* 113:1291-1301.
71. Brown SJ, Bryant M, **Mündel T**, Stannard SR (2012). Human cardiac autonomic responses to head-up tilting during 72 hour starvation. *European Journal of Applied Physiology* 112:2331-2339.
72. McLeay Y, Barnes MJ, **Mündel T**, Hurst SM, Hurst RD, Stannard SR (2012). Effect of New Zealand blueberry consumption on recovery from eccentric exercise-induced muscle damage. *Journal of the International Society of Sports Nutrition* 9:19.
73. Legg SJ, Hill S, **Mündel T**, Gilbey A, Schlader Z, Raman A (2012). Could mild hypoxia impair pilot decision making in emergencies? *Work* 41:198-203.
74. Barnes MJ, **Mündel T**, Stannard SR (2012). The effects of acute alcohol consumption on recovery from a simulated rugby match. *Journal of Sports Sciences* 30:295-304.
75. Barnes MJ, **Mündel T**, Stannard SR (2012). The effects of acute alcohol consumption and eccentric muscle damage on neuromuscular function. *Applied Physiology, Nutrition and Metabolism* 37:63-71.
76. Barnes MJ, Perry BG, **Mündel T**, Cochrane DJ (2012). The effects of vibration therapy on muscle force loss following eccentrically-induced muscle damage. *European Journal of Applied Physiology* 112:1189-1194.
77. Da Silva RP, **Mündel T**, Natali AJ, Bara Filho MG, Alfenas RCG, Lima JRP, Belfort FG, Lopes PRNR, Marins JCB (2012). Pre-game hydration status, sweat loss and fluid intake in elite Brazilian young male soccer players during competition. *Journal of Sports Sciences* 30:37-42.
78. Schlader ZJ, Stannard SR, **Mündel T** (2011). Is peak oxygen uptake a determinant of moderate duration self-paced exercise performance in the heat? *Applied Physiology, Nutrition and Metabolism* 36:863-872.
79. Schlader ZJ, Stannard SR, **Mündel T** (2011). Evidence for thermoregulatory behavior during self-paced exercise in the heat. *Journal of Thermal Biology* 36:390-396.
80. Schlader ZJ, Simmons SE, Stannard SR, **Mündel T** (2011). Skin temperature as a thermal controller of exercise intensity. *European Journal of Applied Physiology* 111:1631-1639.
81. Skein M, Duffield R, Edge J, Short MJ, **Mündel T** (2011). Intermittent-sprint performance, pacing strategies and muscle glycogen resynthesis following 30 h sleep deprivation. *Medicine and Science in Sports and Exercise* 43:1301-1311.
82. Schlader ZJ, Simmons SE, Stannard SR, **Mündel T** (2011). The independent roles of temperature and thermal perception in the control of human thermoregulatory behavior. *Physiology and Behavior* 103:217-224.
83. Silva RP, **Mündel T**, Natali AJ, Bara Filho MG, Lima JRP, Alfenas RCG, Lopes PRNR, Belfort FG, Marins JCB (2011). Fluid balance of elite Brazilian youth soccer players during consecutive days of training. *Journal of Sports Sciences* 29:725-732.
84. Schlader ZJ, Raman A, Stannard SR, Morton RH, **Mündel T** (2011). Exercise modality modulates body temperature regulation during exercise in uncompensable heat stress. *European Journal of Applied Physiology* 111:757-766.
85. Barnes MJ, **Mündel T**, Stannard SR (2011). A low dose of alcohol does not impact performance after exercise induced muscle damage. *European Journal of Applied Physiology* 111:725-729.
86. Schlader ZJ, **Mündel T**, Barnes MJ, Singleton LD (2010). Peak cardiac power output in healthy, trained males. *Clinical Physiology and Functional Imaging* 30:480-484.

87. Silva R, **Mündel T**, Altoé J, Saldanha M, Ferreira F, Marins J (2010). Preexercise urine specific gravity and fluid intake during 1-h running in a thermoneutral environment – a randomized cross-over study. *Journal of Sports Science and Medicine* 9:464-471.
88. **Mündel T**, Cox, JP, Jones DA (2010). Exercise, heat stress and the interleukin-6 response: support for temperature-mediated neuroendocrine regulatory mechanisms. *Medicina Sportiva* 14:96-102.
89. **Mündel T**, Jones DA (2010). The effects of swilling a L(-)-menthol solution during exercise in the heat. *European Journal of Applied Physiology* 109:59-65.
90. Mason R, Sharp K, **Mündel T**, Tatkov S, Pack RJ (2010). The sustained effect of nasal insufflations on cardio-respiratory, metabolic and performance measures in athletes under respiratory stress. *Medicina Sportiva* 14:50-55.
91. Barnes MJ, **Mündel T**, Stannard SR (2010). Post-eccentric exercise alcohol use interacts with muscle damage to magnify losses in performance. *European Journal of Applied Physiology* 108:1009-1014.
92. Barnes MJ, **Mündel T**, Stannard S (2010). Acute alcohol consumption aggravates the decline in muscle performance following strenuous eccentric contractions. *Journal of Science and Medicine in Sport* 13:189-193.
93. Betteridge S, **Mündel T**, Stannard SR (2010). The effect of pseudoephedrine on self-paced endurance cycling performance. *European Journal of Sport Science* 10:53-58.
94. Edge JA, **Mündel T**, Weir K, Cochrane DJ (2009). The effects of acute whole body vibration as a recovery modality following high-intensity interval training in well-trained, middle-aged runners. *European Journal of Applied Physiology* 105:421-428.
95. Brown SJ, **Mündel T**, Barnes M, Brown JA (2009). Indirect measures of human vagal withdrawal during head-up tilt with and without a respiratory acidosis. *Journal of Physiological Sciences* 59:31-36.
96. Simmons SE, **Mündel T**, Jones DA (2008). The effects of passive heating and head-cooling on perception of exercise in the heat. *European Journal of Applied Physiology* 104:281-288.
97. Brown SJ, Bryant M, **Mündel T**, Stannard SR (2008). Human ventilatory efficiency and respiratory sinus arrhythmia during head-up tilt. *Journal of Physiology and Pharmacology* 59:771-778.
98. Brown SJ, **Mündel T**, Brown JA (2007). Cardiac vagal control and respiratory sinus arrhythmia during hypercapnia in humans. *Journal of Physiological Sciences* 57:337-342.
99. **Mündel T**, Bunn SJ, Hooper PL, Jones DA (2007). The effects of face-cooling during hyperthermic exercise in man: evidence for an integrated thermal, neuroendocrine and behavioural response. *Experimental Physiology* 92:187-195.
100. **Mündel T**, Hooper PL, Bunn SJ, Jones DA (2006). The effects of face cooling on the prolactin response and subjective comfort during moderate passive heating in humans. *Experimental Physiology* 91:1007-1017.
101. **Mündel T**, King J, Collacott E, Jones DA (2006). Drink temperature influences fluid intake and endurance capacity during exercise in a hot, dry environment. *Experimental Physiology* 91:925-933.
102. **Mündel T**, Jones DA (2006). Effect of transdermal nicotine administration on exercise endurance. *Experimental Physiology* 91:705-713.
103. Carter J, Jeukendrup AE, **Mündel T**, Jones DA (2003). Carbohydrate supplementation improves moderate and high-intensity exercise in the heat. *Pflügers Archiv European Journal of Physiology* 446:211-219.

Editorial / Commentary / Letter

104. Lei TH, Zheng H, Badenhorst CE, **Mündel T** (2021). Comment on: “The effects of menstrual cycle phase on exercise performance in eumenorrhic women: a systematic review and meta-analysis” and “The effects of oral contraceptives on exercise performance in women: a systematic review and meta-analysis”. *Sports Medicine* 51:1107-1109.
105. **Mündel T** (2020). Thermoregulatory sweating and evaporative heat loss during exercise: is the whole greater than the sum of its parts? *Journal of Physiology* 598:2535-2536.
106. **Mündel T** (2020). Tokyo-2020ne, Temperature and time for reflection. *Temperature* 7:109-110.
107. Lei TH, Perry BG, **Mündel T** (2020). Commentaries on Point:Counterpoint: Investigators should/should not control for menstrual cycle phase when performing studies of vascular control that include women. *Journal of Applied Physiology* 129:1122-1135.

108. [Lei TH](#), **Mündel T** (2018). Humid heat stress affects trained female athletes more than does their menstrual phase. *Temperature* 5:202-204.
109. **Mündel T**, IM Olfert (2018). Nicotine and exercise performance: another tool in the arsenal or curse for anti-doping? *European Journal Applied Physiology* **118**:679-680.
110. **Mündel T**, Nalivaiko E, Kent S, Maloney SK, Vetter I (2016). How hot is it down under? *Temperature* 3:355-357.
111. [Schlader ZJ](#), **Mündel T** (2012). 'Cool it!'... So is thermal perception a controller of exercise intensity during heat stress? *British Journal of Sports Medicine (E-letter, Blog)*. 28th April 2012.
112. [Schlader ZJ](#), Stannard SR, **Mündel T** (2011). Exercise and heat stress: performance, fatigue and exhaustion – a hot topic. *British Journal of Sports Medicine*. 45:3-5.
113. **Mündel T** (2011). To drink or not to drink? Explaining 'contradictory findings' in fluid replacement and exercise performance: evidence from a more valid model for real-life competition. *British Journal of Sports Medicine*. 45:2.
114. **Mündel T** (2007). Evidence for anticipatory regulation mediated by drink temperature during fixed intensity exercise in the heat – reply from Toby Mündel. *Experimental Physiology* 92:469.

Media and Public Engagement (examples)

115. **Mündel T**. [Do I have to drink 8 glasses of water per day?](#) Op-Ed for *The Conversation*, Apr'18.
116. **Mündel T**. [What happens to your body when you're dehydrated?](#) Op-Ed for *The Conversation*, Feb'16.
117. **Mündel T**. Running in the New Zealand Summer. Interview by *Radio New Zealand*, Feb'13.
118. **Mündel T**. Mild hypoxia and complex decision-making. Interview by *Radio New Zealand*, Sep'11.
119. **Mündel T**. Human thermoregulation. Interview by *Radio New Zealand*, May'11.
120. **Mündel T**. What's really in our... deodorant? Interview by *TVNZ3*, Jun'10.
121. **Mündel T**. Finish fast. Interview by *Men's Health*, Jan'10.
122. **Mündel T**. Keep your cool. Interview by *Los Angeles Times*, Jun'07.

Edited Conference Proceedings

123. **Mündel T** (2019). Proceedings of the 2019 Annual Conference of Sport and Exercise Science New Zealand. *The Journal of Sport and Exercise Science* 3(1):1-39. ISSN 2703-240X.
124. Cotter JD, Lucas SJE, **Mündel T** (2013). Environmental Ergonomics XV, 2013. International Society for Environmental Ergonomics. ISBN 9780473224387.
125. Martin A, Stannard S, **Mündel T**, Edge J (2008). Post Graduate Sport Research Conference. Massey University Press, Palmerston North. ISBN 9780473133931.

CONTESTABLE RESEARCH INCOMECurrent

Title	Agency	Role	Dates	\$
A review of nutritional compounds to enhance post-exercise recovery	Viktual+ Ltd.	Co-I (PI: M Barnes)	2022	\$10,000
Investigating the effect of BerriQi® Boysenberry and apple drink consumption on lung function and immune protection following acute ozone exposure induced lung inflammation	Plant and Food Research	Co-I (PI: M Barnes)	2021-2023	\$173,249
Understanding risk for heat illness in women: effects of the menstrual cycle	Royal Society of New Zealand	PI	2021-2023	\$60,000
Validation of a non-invasive core temperature device during exercise in the heat	Kenzen Inc.	PI	2020-2021	\$24,547
Thermal and carcinogenic consequences of live fire training on National Training Centre-based trainers	Fire & Emergency New Zealand	PI	2019-2022	\$123,198
Physiological and performance effects of a probiotic supplementation on runners under heat stress	Fonterra Research and Development Centre	PI	2019-2022	\$208,865
Performance-Based Research Fund	Tertiary Education Commission	PI	2018-2024	\$231,000 (\$33,000/y)
Factors influencing the exertional heat stress response in athletic females	Massey University Research Fund	PI	2018-2021	\$75,000* used to fund PhD student

Completed

Title	Agency	Role	Dates	\$
An innovative remote body temperature monitoring solution to reduce the spread of COVID-19	Ministry of Business, Innovation & Employment	Principal Scientist (PI: N Gant)	2020-2021	\$264,124
Athlete performance enhancement with dairy ingredients	Callaghan Innovation	PI	2020-2021	\$30,500* used to fund MSc student
Effects of hypohydration and menstrual phase on pain	Massey University Research Fund	PI	2017-2020	\$75,000* used to fund PhD student
Science Teaching Leadership Programme Host	Royal Society Te Apārangi	PI	2017-2021	\$12,500
Effects of nasal high flow on upper airway physiology	Fisher & Paykel Healthcare	PI	2017-2020	\$67,090
Human temperature regulation during exercise in the heat: effects of the menstrual cycle and ambient thermal profile	Massey University Research Fund	PI	2015-2018	\$75,000* used to fund PhD student
Mobile Exercise Science Laboratory	Massey University Strategic Innovation Fund	Co-I (PI: S Stannard)	2014	\$40,000
Is there a link between pain and dehydration?	Neurological Foundation of New Zealand	PI	2013-2014	\$9,000
Performance-Based Research Fund	Tertiary Education Commission	PI	2012-2017	\$90,000 (\$15,000/y)
Exertional heat illness in Aotearoa New Zealand: the Manawatu model	Massey University Research Fund	PI	2012-2013	\$10,363
The effects of rapid and prolonged changes in blood pressure on cerebral blood flow in healthy humans	Massey University Research Fund	PI	2011-2014	\$75,000* used to fund

				PhD student
Effects of hypobaric hypoxia on cortical function	Massey University Research Fund	PI	2011-2012	\$19,777
Cosmed K4b2 Portable Cardio-Pulmonary Exercise Testing Device	Massey University Capital Equipment Fund	PI	2011	\$52,496
Effects of exercise and heat stress on nicotine concentrations	World Anti-Doping Agency	PI	2010-2013	\$31,353
The role of temperature and perception in the control of thermal behaviour during exercise	American College of Sports Medicine	Co-I (PI: Z Schlader)	2010-2011	\$7,129
The effects of mild hypoxia and hypohydration on complex decision making in a flight simulator	New Zealand Defence Technology Agency	Co-I (PI: S Legg)	2010-2011	\$17,842
Fixed intensity versus self-paced exercise in the heat	Gatorade Sports Science Institute	Co-I (PI: Z Schlader)	2010-2011	\$4,990
FMS Finometer MIDI Hemodynamic Monitor	Massey University Capital Equipment Fund	PI	2010	\$43,270
The facts about sweating	Unilever Research & Development UK	PI	2010	\$9,000
Human behavioural temperature regulation: an exercise approach	Education New Zealand	Co-I (PI: Z Schlader)	2009-2012	\$82,758* used to fund PhD student
Low-frequency vibration and the recovery from muscular damage	The Physiological Society	PI	2009	\$3,000
Siemens Rapidpoint 405 Blood Gas Analyser	Massey University Capital Equipment Fund	PI	2009	\$40,549
Lode Excalibur Sport Cycle Ergometer	Massey University Capital Equipment Fund	PI	2009	\$54,000
The effect of nasal insufflations on upper airway physiology	Fisher & Paykel Healthcare	PI	2008-2010	\$16,000
The effect of acute nicotine administration on endurance exercise performance	The Physiological Society	PI	2008	\$2,640
Get your Akt together: sleep deprivation and recovery from muscle damage	Sport & Recreation New Zealand	Co-I (PI: H Edge)	2008	\$7,008
Sleep disturbance and exercise	Massey University Research Fund	PI	2007	\$13,000
Re-feeding after a 72-hour fast: appetite and leptin responses	The Physiological Society	PI	2007	\$2,640
Effect of alcohol intake on eccentric exercise induced muscle damage	Sport & Recreation New Zealand	Co-I (PI: S Stannard)	2006-2007	\$4,770
Central brain mechanisms underlying fatigue: a functional imaging approach	University of Birmingham Interdisciplinary Grant	PI	2006	\$6,000
An investigation into stress-induced sweating	Unilever Research & Development UK	Co-I (PI: V Burns)	2006	\$120,000
Exercise in the Heat: Perception and Endurance	University of Birmingham Doctoral Scholarship	PI	2002-2005	\$60,000

GRADUATE RESEARCH SUPERVISION

Current

Date Degree	Name	Role	Topic	Notes
2021-Masters	Ellena Conland	Primary Supervisor	Prevalence, incidence and severity of musculo-skeletal injury in pre-professional dancers compared with a sporting population	
2021-Masters	Melissa Blackmore	Primary Supervisor	Attention in a dynamic real-world netball setting	Massey Masterate Scholarship
2021-Masters	Mary-Ann Moller	Co-Supervisor	Prevalence of menstrual disturbances, hormonal contraception use and the perceived impact on performance in elite mountain biking	Under Examination
2021-PhD	Stephanie Korad	Co-Supervisor	Cerebrovascular responses to resistance exercise in healthy individuals	Massey Doctoral Scholarship
2018-PhD	Anja Fricke	Co-Supervisor	Mini trampoline jumping as an exercise intervention to improve female specific health risk factors and functional fitness in postmenopausal women	Under Examination

Completed

Degree Conferred	Name	Role	Topic	Notes/Current Role
2023 PhD	Huixin Zheng	Primary Supervisor	Factors influencing the exertional heat stress response in athletic females	Scientific Officer, University of Otago
2022 PhD	Jessica Freemas	International Advisor	Fluid regulation in women and men during physical work in the heat	Indiana University, Bloomington
2021 Masters	Phoebe Jarman	Primary Supervisor	Physiological and performance effects of a probiotic supplementation on runners under heat stress	Green Prescription Advisor
2021 Masters	Samuel Richardson	Primary Supervisor	Sport psychology: The attitudes of New Zealand athletes	Laboratory Manager, Waikato Institute of Technology
2021 PhD	Beverly Tan	Primary Supervisor	Effects of hypohydration and menstrual phase on pain	Post-Doc, National University Singapore
2020 Masters	Stephanie Korad	Co-Supervisor	The effect of oestrogen on cerebrovascular regulation in eumenorrhic women	Current PhD student
2019 Masters	Joshua Stewart	Primary Supervisor	The effects of passive heat acclimation on intermittent running in the heat and concurrent training quality	Strength and Conditioning Coach, Central Districts Cricket Association
2018 PhD	Tze-Huan Lei	Primary Supervisor	Human temperature regulation during exercise in the heat: effects of the menstrual cycle and ambient thermal profile	Associate Professor, Hubei Normal University
2016 PhD	Mohd Rahimi Bin Che Jusoh	Primary Supervisor	The effect of sago supplementation on endurance cycling performance and physiological responses in a warm-humid environment	Assistant Professor, Universiti Sains Malaysia
2015 Masters	Melissa Black	Primary Supervisor	Adaptation to exercise for health and exercise capacity: does addition of heat stress induce greater improvements than exercise alone?	Senior Study Coordinator, Medical Research

				Institute of New Zealand
2014 PhD	Blake Perry	Primary Supervisor	The effect of acute and prolonged changes in blood pressure on cerebral blood flow in humans	Senior Lecturer, Massey University
2012 PhD	Matthew Barnes	Co-Supervisor	The effects of acute alcohol consumption on recovery and performance	Associate Professor, Massey University
2012 PhD	Zachary Schlader	Primary Supervisor	Human behavioral temperature regulation: an exercise approach	Associate Professor, Indiana University
2012 Masters	Nicole Moyon	International Advisor	Effects of relative humidity on thermoregulation and perception during low intensity exercise in the heat	California State University, Fullerton
2012 Masters	Aaron Raman	Primary Supervisor	The effects of carbohydrate loading 48 hours prior to a simulated squash match	Scientist, King Edward Memorial Hospital, Western Australia
2011 Masters	Yanita McLeay	Co-Supervisor	The effect of moderate alcohol consumption on recovery from eccentric exercise induced muscle damage in young women	
2010 Masters	Rafael Pires da Silva	International Advisor	Fluid balance of elite male Brazilian youth soccer players during training and competition	Federal University of Viçosa, Brazil
2009 Masters	Joshua Mouatt	Primary Supervisor	The physiological effects of pseudoephedrine on endurance cycling	
2009 Masters	Jessica Dent	Co-Supervisor	The physiological and molecular response to repeated-sprints in male and female team-sport athletes	Post-Doc, University of Auckland
2008 Masters	Scott Betteridge	Co-Supervisor	Pseudoephedrine and endurance cycling performance	Clinical Trials Coordinator, Barwell Health

6. SERVICE TO DISCIPLINE

Journal Editorial Activity

- 2023- [Experimental Physiology](#) (CiteScore=4.3, Q2) (Senior Editor)
2022- [Journal of Thermal Biology](#) (CiteScore=4.6, Q1) (Editorial Board)
2021 [Frontiers in Psychology](#), Research Topic: [How Do Extreme Environments Influence Psychological Functioning for Performance?](#) (Topic Editor)
2020 [Temperature](#), Special Issue: [Anticipating the Tokyo Olympic Games](#) (Guest Editor)
2020 [International Journal of Environmental Research and Public Health](#), Special Issue: [Exercise and Human Temperature Regulation](#) (Guest Editor)
2019- [Temperature](#) (CiteScore=7.8, Q1) (Associate Editor)
2018 [Frontiers in Physiology](#), Research Topic: [Towards Tokyo 2020: What Will Contribute to Optimal Olympic Athlete Performance?](#) (Topic Editor)
2017- [Sports Medicine](#) (CiteScore=19.8, Q1) (Editorial Board)
2017-2019 [Temperature](#) (CiteScore=7.8, Q1) (Discovery Editor)
2016 [Temperature](#), Special Issue: [How Hot is Down Under? Temperature-related Sciences in Australia and New Zealand](#) (Guest Editor)
2015- [Frontiers in Physiology](#) (CiteScore=6.6, Q1) (Editorial Board)
2013- [European Journal of Applied Physiology](#) (CiteScore=5.1, Q1) (Editorial Board)
2012-2019 [British Journal of Sports Medicine](#) (CiteScore=21.3, Q1) (Associate Editor)

Funding Agency Grant Reviewer

- 2022 Mitacs Accelerate (Canada)
2022 National Health and Medical Research Council (Australia), Committee Member
2021 Mitacs Accelerate (Canada)
2021 Mitacs Accelerate Fellowship (Canada)
2021 Austrian Science Fund
2020-2022 Research Foundation Flanders (Belgium), Committee Member
2019-2021 Royal Society Te Apārangi, Science Teaching Leadership Programme, Selection Panel
2019 Health Research Council (New Zealand)
2018 Health Research Institute Seed Funding (Ireland)
2017 Natural Sciences and Engineering Research Council of Canada
2017 Multiple Sclerosis Research Australia
2017 Research Foundation Flanders (Belgium)
2016 Canada Foundation for Innovation
2014 Lottery Health Research (New Zealand)
2010 The Marsden Fund (Biomedical Sciences, New Zealand)
2009 Wellington Medical Research Foundation (New Zealand)
2008 Sport and Recreation New Zealand

External Thesis Examiner (12 PhD, 9 Masters)

- 2022 University of Waikato, New Zealand
2021 University of Birmingham, UK
2021 University of Waikato, New Zealand
2021 Auckland University of Technology, New Zealand
2021 University of Otago, New Zealand
2018 University of Otago, New Zealand
2018 University of Waikato, New Zealand
2017 University of Otago, New Zealand
2017 Charles Sturt University, Australia
2016 University of Newcastle, Australia
2015 Brock University, Canada
2015 University of Otago, New Zealand

2014 Waikato Institute of Technology, New Zealand
2013 Waikato Institute of Technology, New Zealand
2012 University of Sydney, Australia
2011 Edith Cowan University, Australia
2011 University of Otago, New Zealand
2010 University of Otago, New Zealand
2009 University of Otago, New Zealand
2009 University of Auckland, New Zealand
2008 University of Auckland, New Zealand