

October, 2014

**CURRICULUM VITAE**

**Tom M. McLellan, Ph.D.**

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**Section 1 - Personal**

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**Home Address:**                25 Dorman Drive  
Stouffville, ON L4A 8A7  
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**Date of Birth:**                 November 18, 1952

**Place of Birth:**                Hamilton, Ontario, Canada

**Next of Kin:**                    Mrs. Jane Purdon McLellan  
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**References:**                    Dr. Ira Jacobs  
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Professor and Tier II CRC

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Dr. Bruce Bain  
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## **Section 2 - Education**

### **University Degrees:**

Hon. B.Sc.     McMaster University, 1970 - 74, Biology  
B. Ed.         University of Toronto, 1975 - 76, Education  
M.A.           University of Western Ontario, 1977 - 78, Physical Education  
Ph.D.          University of Western Ontario, 1979 - 82, Physical Education

### **Honours, Scholarships and Awards:**

Ontario Scholar	1970
McMaster University Entrance Scholarship	1970 - 71
Dean's Honour List	1971, 72, 74, 77
Medical Research Council Studentship	July 1979 - June 1982
Natural Science and Engineering Research Council Visiting Fellowship	August 1983 - July 1985

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The Technical Cooperation Program (TTCP) Achievement Award for outstanding contributions to collaborative research. TTCP is an international defence research alliance among Australia, Canada, New Zealand, the United Kingdom and the United States.	1996 (Physiological and Psychological Aspects of Personal Protection) 1999 (Hydration Status, Gender and Cognitive Performance in Protective Clothing) 2004 (Heat Stress of Low Burden CB Protective Clothing) 2005 (The Effectiveness of Caffeine to Maintain Cognitive and Physical Function and Marksmanship During Continuous Operations)
Certificate of Appreciation, Toronto Fire Service	2004 (Safe Work Limits for Firefighters)
Fellow, American College of Sports Medicine	2008
DRDC Toronto Teamwork Award	2009 (Rewriting the Remuneration Guidelines for subject participation)
DRDC Toronto Commendation Award	2011 (for outstanding contribution to the scientific study of heat stress and the impact of this work for Canadian Forces and first responders)

**Ph.D. Thesis Title:**

The significance of the aerobic and anaerobic thresholds for performance and training.

**Section 3 - Academic and Defence Science Career**

Lecturer	University of Western Ontario	July 1982
Assistant Professor (completion of Ph.D.)	University of Western Ontario	Sept 1982
Visiting Fellow	Defence and Civil Institute of Environmental Medicine North York, Ontario	August 1983 - May 1985
Lecturer	Faculty of Health Sciences University of Sydney Cumberland Campus	June 1985 - July 1987

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	Lidcombe, N.S.W., Australia	
Defence Scientist - 3	DRDC Toronto	Sept 1987 - March 1990
Defence Scientist – 4	DRDC Toronto	April 1990 – March 1996
Adjunct Appointment (Full Professor)	University of Toronto	1991 - present (2002 – present)
Adjunct Appointment	York University	1993 - present
Defence Scientist – 5	DRDC Toronto	April 1996 – March 2001
Visiting Scholar	Griffith University Exercise Science, Gold Coast Campus, Queensland, Australia	July-Aug 1998
Defence Scientist – 6	DRDC Toronto	April 2001 – present
Defence Scientist – 6	DRDC Corporate Office: Partnering with Academia Through the Granting Councils	Sept 2008 – April 2009
Adjunct Appointment	University of Ontario Institute of Technology	March 2011 – present

**Management Positions:**

Acting/Head	Environmental Physiology Section	Sept 1990 to Sept 1991
Acting/Head	Environmental and Applied Ergonomics Section	March 2001 to March 2002

**Membership in Academic Societies:**

Canadian Association of Sport Sciences/ Canadian Society for Exercise Physiologists	1977 to 2007
American College of Sports Medicine	1977 to 2013

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**Areas of Academic Specialisation:**

Exercise Physiology	Respiratory Physiology, Acid-Base Regulation, Blood Lactate Response, Ergogenic Aids and Nutritional Supplements, Immuno-inflammatory response to acute and chronic stress
Heat Strain in Protective Clothing	Aerobic Fitness, Heat Acclimation, Hydration, Gender, Menstrual Cycle, Body Composition, Work/Rest Cycles

**Reviewer:**

Aviation Space and Environmental Medicine	1989 - present
Canadian Journal of Applied Physiology	1989 - present
European Journal of Applied Physiology	1989 - present
Journal of Applied Physiology	1990 - present
Internal Journal of Sports Medicine	1989 - present
Medicine and Science in Sports and Exercise	1990 - present
Sports Medicine	1993 - present
Sports Training, Medicine and Rehabilitation	1991

External Reviewer for M.Sc. Thesis for Mr. M. McCoy, Footscray Institute of Technology, Footscray, Victoria, Australia, 1990.

External Departmental Reviewer for Ph.D. Thesis, Dr. G. McAvoy, University of Toronto, Department of Physiology, 1993.

Foreign External Examiner for M.Sc. Thesis, Ms. C. Bradford, University of Otago, Dunedin, New Zealand, 2005.

Foreign External Examiner for Ph.D. Thesis, Ms. S. Morrison, University of Otago, Dunedin, New Zealand, 2007.

External Examiner for M.Sc. Thesis for Mr. Geoffrey Hartley, Brock University, Faculty of Applied Health Sciences, June 2010.

Foreign External Examiner for Ph.D. Thesis, Mr. G. Fatseas, University of New South Wales, Sydney, Australia, 2011.

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**Journal Editorial Boards**

Canadian Journal of Applied Physiology	1992 - 1994
Medicine and Science in Sports and Exercise	2000 – 2005
Associate Editor, Medicine and Science in Sports and Exercise	2005 – 2013

**Graduate Student Supervisor & Committee Member:**

M.Sc. Thesis Supervisor for Mr. D. Honeysett, Cumberland College of Health Sciences, Sydney University, Lidcombe, New South Wales, Australia, The Influence of the Relative Intensity on the Homogeneity of Response to Submaximal Exercise, 1986 - 1990.

M.Sc. Thesis Supervisor for Ms. S. Tenaglia, University of Toronto, The Influence of the Menstrual Cycle for Users and Non-Users of Oral Contraceptives during Compensable and Uncompensable Heat Stress, 1995 - 1997.

M.Sc. Thesis Supervisor, Mr. G. Selkirk, University of Toronto, The Influence of Aerobic Fitness and Body Fatness on Tolerance to Uncompensable Heat Stress, 1998 - 2000.

Ph.D. Thesis Supervisor, Mr. S. Cheung, University of Toronto, The Thermophysiology of Uncompensable Heat Stress: Influence of Hydration Status, Fluid Replacement, Aerobic Training, Physical Fitness and Heat Acclimation, 1994 - 1997.

Ph.D. Thesis Supervisor, Mr. G. Selkirk, York University, September 2003 - 2009.

Ph.D. Thesis Supervisor, Ms. H. Wright, York University, September 2004 - 2009.

M.Sc. Committee Member, Mr. A. Morris, University of Toronto, Physiological Adaptations to Three Weeks of Combined Aerobic and Anaerobic Training, 1994 - 1996.

M.Sc. Committee Member, Mr. N. Card, York University, Validation of a double inert gas, non-rebreathe technique for measuring cardiac output throughout incremental exercise to maximum. 1995-1997.

M.Sc. Committee Member, Ms. V. Speers, University of Toronto, Influence of Menstrual Cycle Phase on the Efficacy of Carbohydrate Ingestion During Prolonged Exercise in Trained Females, 1999 – 2000.



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Ph.D. Committee Member, Mr. Y. Aoyagi, University of Toronto, Endurance Training, Heat Acclimation, and Protective Clothing: The Thermophysiology of Exercising in a Hot Climate, 1991 - 1996.

Ph.D. Committee Member, Mr. B. Bain, University of Toronto, Muscle Fatigue During Exposure to Headward (+Gz) Exposure, 1992 - 1997.

Ph.D. Committee Member, Mr. M. Pecaric, University of Toronto, Factors Influencing the Cardiovascular Response to +Gz: Implications on the Design of Life Support Systems for Acceleration Protection, 1994 - 1999.

Ph.D. Committee Member, Mr. M. Williams-Bell, University of Ontario Institute of Technology, ongoing 2011 - present.

Human Ethics Committee Member, Defence and Civil Institute of Environmental Medicine, 1990 - 1993.

Task Force Committee on Ph.D. comprehensive exams, University of Toronto, 1996.

**Undergraduate and Graduate Teaching:**

Exercise prescription methods, special topics in biochemistry of exercise, University of Western Ontario, 1982-83.

Physiology of Exercise, Cumberland College of Health Sciences, 1983-1985.

Physiology 1056S, University of Toronto, 4<sup>th</sup> year and graduate student lectures on heat tolerance and uncompensable heat stress. 1995 – 2004.

York University, graduate student lecture on thermotolerance and uncompensable heat stress, 2008.

**National Representation:**

Canadian Foundation for Innovation, Member Expert Review Committee #357, December 2008.

**International Representation:**

Canadian National Leader for The Technical Cooperation Program (TTCP), Technical Panel 6, “Physiological and Psychological Aspects of Personnel Using Protective Clothing and Personal Equipment”, 1991-2000. TTCP is a 5-nation alliance among Australia, Canada, New Zealand, the United Kingdom and the United States whose aim is to promote collaborative research and exchange among the nations. My involvement led to 3 achievement awards by the panel that were presented by the Assistant Deputy



**Section 6 - Publications, Reports, Presentations and Invited Lectures**

<i>Scientific Publications</i> .....	95
<i>Letters to Editors</i> .....	5
<i>Review Papers</i> .....	13
<i>[First Author]</i> .....	[61]
<b>Total Peer-Reviewed Scientific Journal Publications</b> .....	<b>113</b>
<i>Book Chapters</i> .....	3
<i>Government and Other Reports</i> .....	40
<i>[First Author]</i> .....	[23]
<b>Total Peer-Reviewed Journal Publications, Book Chapters and Reports</b> .....	<b>156</b>
<i>Scientific Proceedings and Presentations</i> .....	112
<i>Invited Lectures</i> .....	49
<b>Total Proceedings, Presentations and Lectures</b> .....	<b>161</b>
<b>Total Publications, Proceedings, Presentations and Lectures</b> .....	<b>317</b>

**Peer-Reviewed Scientific Journal Publications:**

1. Skinner, J.S. and **T.M. McLellan** (1980). The transition from aerobic to anaerobic metabolism. *Res. Q. Exer. Sport* 51: 234-248.
2. **McLellan, T.M.** and J.S. Skinner (1981). The use of the aerobic threshold as a basis for training. *Can. J. Appl. Sport Sci.* 6: 197-201.
3. **McLellan, T.M.** (1981). The significance of the aerobic and anaerobic thresholds for performance and training. *Coaching Science Update* 1981 edition, pp. 23-25.
4. **McLellan, T.M.** and J.S. Skinner (1982). Blood lactate removal during active recovery related to the aerobic threshold. *Int. J. Sports Med.* 3: 224-229.
5. **McLellan, T.M.** (1984). Training and the aerobic and anaerobic thresholds. *Coaching Science Update* 1984 edition, pp. 27-30.
6. **McLellan, T.M.** (1985). Ventilatory and plasma lactate response with different exercise protocols: a comparison of methods. *Int. J. Sports Med.* 6: 30-35.
7. **McLellan, T.M.** (1985). Ventilation thresholds are misinterpreted with the presentation of mean data. *Can. J. Appl. Sport Sci.* 10: 62-63.
8. **McLellan, T.M.** and J.S. Skinner (1985). Submaximal endurance performance related to the ventilation thresholds. *Can. J. Appl. Sport Sci.* 10: 81-87.
9. Paterson, D.H., **T.M. McLellan**, R.S. Stella and D.A. Cunningham (1987). Longitudinal study of ventilation threshold and maximal O<sub>2</sub> uptake in athletic boys. *J. Appl. Physiol.* 62: 2051-2057.

10. **McLellan, T.M.** (1987). The anaerobic threshold: concept and controversy. *Aust. J. Sci. Med. Sport* 19: 3 - 8.
11. **McLellan, T.M.**, I. Jacobs and W. Lewis (1988). Acute altitude exposure and altered acid-base states. Part I: Effects on the exercise ventilation and blood lactate responses. *Eur. J. Appl. Physiol.* 57: 435 - 444.
12. **McLellan, T.M.**, I. Jacobs and W. Lewis (1988). Acute altitude exposure and altered acid-base states. Part II: Effects on exercise performance and muscle and blood lactate. *Eur. J. Appl. Physiol.* 57: 445 - 451.
13. **McLellan, T.M.** and G.C. Gass (1989). Metabolic and cardiorespiratory responses relative to the anaerobic threshold. *Med. Sci. Sports Exerc.* 21: 191 - 198.
14. **McLellan, T.M.** and G.C. Gass (1989). The relationship between the ventilation and lactate thresholds following normal, low or high carbohydrate diets. *Eur. J. Appl. Physiol.* 58: 568 -576.
15. **McLellan, T.M.** and I. Jacobs (1989). The influence of active recovery and endurance training on the calculation of the individual anaerobic threshold. *Med. Sci. Sports Exerc.* 21: 586-592.
16. Graham, K.S. and **T.M. McLellan** (1989). Variability of time to exhaustion and oxygen deficit in supramaximal exercise. *Aust. J. Sci. Med. Sport* 21: 11-14.
17. **McLellan, T.M.**, M.F. Kavanagh and I. Jacobs (1990). The effect of hypoxia on performance during 30 s or 45s of supramaximal exercise. *Eur. J. Appl. Physiol.* 60: 155-161.
18. **McLellan, T.M.** and I. Jacobs (1991). Muscle glycogen utilization and the expression of the relative exercise intensity. *Int. J. Sports Med.* 12: 21 - 26.
19. **McLellan, T.M.**, K.S.Y. Cheung and I. Jacobs (1991). Incremental test protocol, recovery mode and the individual anaerobic threshold. *Int. J. Sports Med.* 12: 190 - 195.
20. **McLellan, T.M.** (1991). The influence of a respiratory acidosis on the exercise blood lactate responses. *Eur. J. Appl. Physiol.* 63: 6-11.
21. Gass, G.C., **T.M. McLellan** and E.M. Gass (1991). Effects of prolonged exercise at a similar percentage of maximal oxygen consumption in trained and untrained subjects. *Eur. J. Appl. Physiol.* 63: 430-435.
22. **McLellan, T.M.**, P. Meunier and S. Livingstone (1992). Influence of a new vapour protective clothing layer on physical work tolerance times at 40°C ambient temperature. *Aviat. Space Environ. Med.* 63: 107-113.

23. **McLellan, T.M.** and K.S.Y. Cheung (1992). A comparative evaluation of the individual anaerobic threshold and the critical power. *Med. Sci. Sports Exerc.* 24: 543-550.
24. Tikuisis, P., D. Kane, **T.M. McLellan** and F. Buick (1992). Rate of formation of carboxyhemoglobin in exercising humans exposed to carbon monoxide. *J. Appl. Physiol.* 72: 1311-1319.
25. Keith, S., I. Jacobs and **T.M. McLellan** (1992). Adaptations to training at the individual anaerobic threshold. *Eur. J. Appl. Physiol.* 65: 316-323.
26. **McLellan, T.M.** (1992). Endurance training vs. lactate production and removal. *J. Appl. Physiol.* 73: 2205-2207.
27. **McLellan, T.M.**, S.S. Cheung and M.R. Meunier (1993). The effect of normocapnic hypoxia and the duration of exposure to hypoxia on supramaximal exercise performance. *Eur. J. Appl. Physiol.* 66: 409-414.
28. **McLellan, T.M.**, I. Jacobs and B. Bain (1993). Influence of temperature and metabolic rate on work performance in Canadian Forces NBC clothing. *Aviat. Space Environ. Med.* 64: 587-594.
29. **McLellan, T.M.**, I. Jacobs and B. Bain (1993). Continuous versus intermittent work in Canadian Forces NBC clothing. *Aviat. Space Environ. Med.* 64: 595-598.
30. Prusaczyk, W.K., I. Jacobs, T. Bowden and **T.M. McLellan** (1993). A computational method for determination of the individual anaerobic threshold. *Comp. Biol. Med.* 23: 327-331.
31. **McLellan, T.M.** and I. Jacobs (1993). Reliability, reproducibility and validity of the individual anaerobic threshold. *Eur. J. Appl. Physiol.* 67: 125-131.
32. **McLellan, T.M.** (1993). Physical work performance at 40°C with Canadian Forces NBC protective clothing. *Aviat. Space Environ. Med.* 64: 1094-1100.
33. **McLellan, T.M.**, M.B. Ducharme and W.A. Bateman (1994). The influence of ondansetron on thermoregulation during exercise in a hot environment. *Aviat. Space Environ. Med.* 65: 35-40.
34. Aoyagi, Y., **McLellan, T.M.** and R.J. Shephard (1994). Effects of training and acclimation on heat tolerance in exercising men wearing protective clothing. *Eur. J. Appl. Physiol.* 68: 234-245.

35. **McLellan, T.M.**, D.G. Bell and J.K. Dix (1994). Heat strain with combat clothing worn over a chemical defence (CD) vapour protective layer. *Aviat. Space Environ. Med.* 65: 757-763.
36. **McLellan, T.M.** and J. Frim (1994). Heat strain in the Canadian Forces chemical defence clothing: problems and solutions. *Can. J. Appl. Physiol.* 19: 379-399.
37. **McLellan, T.M.**, S.S. Cheung and I. Jacobs (1995). Variability of time to exhaustion during submaximal exercise. *Can. J. Appl. Physiol.* 20: 39-52.
38. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1995). Effects of 6 versus 12 days of heat acclimation on heat tolerance in exercising men wearing protective clothing. *Eur. J. Appl. Physiol.* 71: 187-196.
39. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1995). Determination of body heat storage in clothing: calorimetry vs. thermometry. *Eur. J. Appl. Physiol.* 71: 197-206.
40. **McLellan, T.M.** and M.B. Ducharme (1996). Influence of granisetron on temperature regulation during exercise in the heat. *Aviat. Space Environ. Med.* 67: 453-457.
41. **McLellan, T.M.** and Y. Aoyagi (1996). Heat strain in protective clothing following hotwet or hotdry heat acclimation. *Can. J. Appl. Physiol.* 21: 90-108.
42. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1996). Determination of body heat storage: how to select the weighting of rectal and skin temperatures for clothed subjects. *Int. Arch. Occup. Environ. Health* 68: 325-336.
43. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1996). Residual analysis in the determination of factors affecting the estimates of body heat storage in clothed subjects. *Eur. J. Appl. Physiol.* 73: 287-298.
44. Gray, G.W., **T.M. McLellan** and M.B. Ducharme (1996). Granisetron shows no pro-arrhythmic effect in normal subjects during or after exercise in a hot environment. *Aviat. Space Environ. Med.* 67: 769-761.
45. Morris, A.C., I. Jacobs, **T.M. McLellan**, A. Klugerman, L.C.H. Wang and J. Zamecnik (1996). No ergogenic effect of ginseng ingestion. *Int. J. Sports Nutr.* 6: 263-271.
46. **McLellan, T.M.** (1996). Heat strain in the current Canadian or a new hot-weather French NBC protective clothing ensemble. *Aviat. Space Environ. Med.* 67: 1057-1062.
47. **McLellan, T.M.**, J.I. Pope, J.B. Cain and S.S. Cheung (1996). Effects of metabolic rate and ambient vapour pressure on heat strain in protective clothing. *Eur. J. Appl. Physiol.* 74: 518-527.

48. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1997). Interactions of physical training and heat acclimation: The thermophysiology of exercising in a hot climate. *Sports Med.* 23: 173-210.
49. Gonzalez, R.R., **T.M. McLellan**, W.R. Withey, S.Kw. Chang and K.B. Pandolf (1997). Heat strain models applicable for protective clothing systems: comparison of core temperature response. *J. Appl. Physiol.* 83: 1017-1032.
50. Cheung, S.S. and **T.M. McLellan** (1998). Influence of hydration status and fluid replacement on heat tolerance during uncompensable heat stress. *Eur. J. Appl. Physiol.* 77: 139-148.
51. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1998). Effects of endurance training and heat acclimation on psychological strain in exercising men wearing protective clothing. *Ergonomics* 41: 328-357.
52. Cheung, S.S. and **T.M. McLellan** (1998). Heat acclimation, aerobic fitness and hydration effects on tolerance during uncompensable heat stress. *J. Appl. Physiol.* 84: 1731-1739.
53. **McLellan, T.M.** (1998). Sex-related differences in thermoregulatory responses while wearing protective clothing. *Eur. J. Appl. Physiol.* 78: 28-37.
54. Cain, J.B. and **T.M. McLellan** (1998). A model of evaporation from the skin while wearing protective clothing. *Int. J. Biometeorol.* 41: 183-193.
55. Cheung, S.S. and **T.M. McLellan** (1998). Influence of hydration status and short-term aerobic training on tolerance during uncompensable heat stress. *Eur. J. Appl. Physiol.* 78: 50-58.
56. Bell, D.G., I. Jacobs, **T.M. McLellan**, C. Sabiston and M. Miyazaki (1999). Thermal regulation in the heat during exercise after caffeine and ephedrine ingestion. *Aviat. Space Environ. Med.* 70: 583-588.
57. Cheung, S.S. and **T.M. McLellan** (1999). Comparison of short-term aerobic training and high maximal aerobic power on tolerance to uncompensable heat stress. *Aviat. Space Environ. Med.* 70: 637-643.
58. **McLellan, T.M.**, G. A. Gannon, V. Gil, J. Zamecnik and G.M. Brown (1999). Low doses of melatonin and time of day effects on thermoregulation and tolerance to uncompensable heat stress. *J. Appl. Physiol.* 87: 308-316.
59. **McLellan, T.M.**, J. Frim and D.G. Bell (1999). Efficacy of air and liquid cooling during light and heavy exercise while wearing NBC clothing. *Aviat. Space Environ. Med.* 70: 802-811.

60. Tenaglia, S., **T.M. McLellan** and P. Klentrou (1999). Influence of menstrual cycle phase and oral contraceptive use during compensable and uncompensable heat stress. *Eur. J. Appl. Physiol.* 80: 76-83.
61. **McLellan, T.M.**, S.S. Cheung, W.A. Latzka, M.N. Sawka, K.B. Pandolf, C.E. Millard and W.R. Withey (1999). Influence of hydration status on tolerance during uncompensable heat stress. *Can. J. Appl. Physiol.* 24: 349-361.
62. Schneider, D.A., **T. M. McLellan** and G.C. Gass (2000). Plasma catecholamine and blood lactate responses to incremental arm and leg exercise. *Med. Sci. Sports Exerc.* 32: 608-613.
63. Bell, D.G., I. Jacobs, **T.M. McLellan** and J. Zamecnik (2000). Reducing the dose of caffeine and ephedrine preserves the ergogenic effect. *Aviat. Space Environ. Med.* 71: 415-419.
64. Cheung, S.S., **T.M. McLellan** and S.A. Tenaglia (2000). The thermophysiology of uncompensable heat stress: physiological manipulations and individual characteristics. *Sports Med.* 29: 329-359.
65. **McLellan, T.M.**, I.F. Smith, G.A. Gannon and J. Zamecnik (2000). Melatonin has no effect on tolerance to uncompensable heat stress. *Eur. J. Appl. Physiol.* 83: 336-343.
66. **McLellan, T.M.** and S.S. Cheung (2000). Impact of fluid replacement on heat storage while wearing protective clothing. *Ergonomics* 43: 2020-2030.
67. **McLellan, T.M.** (2001). Importance of aerobic fitness in determining tolerance to uncompensable heat stress. *Comp. Biochem. Physiol. A. Mol. Integr. Physiol.* 128: 691-700.
68. Selkirk, G.A., and **T.M. McLellan** (2001). Influence of aerobic fitness and body fatness on tolerance to uncompensable heat stress. *J. Appl. Physiol.* 91: 2055-2063.
69. Baranski, J.V., V. Gil, **T.M. McLellan**, D. Moroz, A. Buguet, and M.W. Radomski (2002). Effects of modafinil on cognitive performance during 40 hours of sleep deprivation in a warm environment. *Mil. Psychol.* 14: 23-48.
70. Bell, D.G., **T.M. McLellan** and C.M. Sabiston (2002). Effect of Ingesting Caffeine and Ephedrine on 10 km Run Performance. *Med. Sci. Sports Exerc.* 34: 344-349.
71. Bell, D.G. and **T.M. McLellan** (2002). Exercise Performance 1, 3, and 6 Hours After Caffeine Ingestion. *J. Appl. Physiol.* 93: 1227-1234.
72. Tikuisis, P., **T.M. McLellan**, and G.A. Selkirk (2002). Physiological vs. Perceptual Heat Strain During Exercise-Heat Stress. *Med. Sci. Sport Exerc.* 34: 1454-1461.



73. Bell, D.G., **T.M. McLellan** and S.S. Boyne (2002). Commercial sport drinks versus light meal combat rations: effects on simulated combat maneuvers. *Mil. Med.* 167: 692-697.
74. **McLellan, T.M.**, M.B. Ducharme, F. Canini, D. Moroz, D.G. Bell, J.V. Baranski, V. Gil, A. Buguet and M.W. Radomski (2002). Effect of Modafinil on Thermoregulation During Sleep Deprivation and Exercise in a Warm Environment. *Aviat. Space Environ. Med.* 73: 1079-1088.
75. **McLellan, T.M.**, S.G. Rhind and D.G. Bell (2002). Body temperature in sedentary adults during moderate exercise: no effect from exercise the day before. *Aviat. Space Environ. Med.* 73: 1167-1175.
76. Bell, D.G. and **T.M. McLellan** (2003). Repeated exercise performance and caffeine ingestion. *Med. Sci. Sports Exerc.* 35: 1348-1354.
77. **McLellan, T.M.** and G.A. Selkirk (2004). Heat stress while wearing pants or shorts under firefighting protective clothing. *Ergonomics* 47: 75-90.
78. G.A. Selkirk and **T.M. McLellan** (2004). Physical Work Limits for Toronto Firefighters in Warm Environments. *J. Occup. Environ. Hygiene* 1: 199-212.
79. **McLellan, T.M.**, D.G. Bell, H.R. Lieberman and G.H. Kamimori (2004). The impact of caffeine on cognitive and physical performance and marksmanship during sustained operations. *Can. Mil. J.* 4: 47-54.
80. G.A. Selkirk, **T.M. McLellan** and J. Wong (2004). Active versus passive cooling during work in warm environments while wearing firefighting protective clothing. *J. Occup. Environ. Hyg.* 1: 521-531.
81. **McLellan, T.M.**, D.G. Bell and G.H. Kamimori (2004). Caffeine improves physical performance during 24 h of active wakefulness. *Aviat. Space Environ. Med.* 75: 666-672.
82. Tikuisis, P., A.A. Keefe, **T.M. McLellan** and G.H. Kamimori (2004). Caffeine restores engagement speed but not shooting precision following 22 h of active wakefulness. *Aviat. Space Environ. Med.* 75 : 771-776.
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43. Aoyagi, Y., **T.M. McLellan** and R.J. Shephard (1997). Effects of endurance training and heat acclimation on psychological strain in protective clothing. *Med. Sci. Sports Exerc.* 29 (Suppl.): S212.
44. **McLellan, T.M.** (1997). Influence of gender on heat tolerance while wearing protective clothing. *Med. Sci. Sports Exerc.* 29 (Suppl.): S282.
45. Bell, D.G., I. Jacobs, **T.M. McLellan**, K. Sabiston and M. Miyazaki (1997). Effects of combined caffeine and ephedrine ingestion on body temperature regulation during exercise in the heat. *Can. J. Appl. Physiol.* 22 (Suppl.): 4P.
46. Cheung S.S. and **T.M. McLellan** (1997). Influence of aerobic fitness, short-term heat acclimation, and hydration status on tolerance during uncompensable heat stress. *Can. J. Appl. Physiol.* 22 (Suppl.): 9P.
47. **McLellan, T.M.**, D.G. Bell, I.F. Smith, A.C. Morris and M. Miyazaki (1997). Heat strain in the current Canadian Forces NBC ensemble compared with new hot-weather NBC garments. *Can. J. Appl. Physiol.* 22 (Suppl.): 40P.
48. **McLellan, T.M.**, and S.S. Cheung (1998). Comparison of short-term aerobic training and high maximal aerobic power on tolerance to uncompensable heat stress.

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Presented at the 8th International Conference of Environmental Ergonomics, San Diego, California, October 18-23.

49. **McLellan, T.M.** (1999). Influence of physiological manipulations on tolerance to uncompensable heat stress. Proceedings of Thermal Protection of Man under Hot and Hazardous Conditions, Paris, France, March 24-26.
50. S.S.Cheung and **T.M. McLellan** (1999). Relative influence of aerobic fitness and individual factors on response to uncompensable heat stress. *Med. Sci. Sport Exerc.* 31(Suppl.): S309.
51. **McLellan, T.M.**, G.A. Gannon, J. Zamecnik, V. Gil and G.M. Brown (1999). Diurnal effects on thermoregulation and tolerance of uncompensable heat stress. *Med. Sci. Sport Exerc.* 31(Suppl.): S309.
52. Speers, V.R., **T.M. McLellan**, C.A. Grisco, I.F. Smith and C.D. Rodgers (2000). Effects of menstrual phase on the efficacy of carbohydrate ingestion during prolonged exercise in trained females. *Med. Sci. Sports Exerc.* 32 (Suppl.): S279.
53. **McLellan, T.M.**, I.F. Smith, G.A. Gannon and J. Zamecnik (2000). Melatonin has no effect on tolerance to uncompensable heat stress. *Med. Sci. Sports Exerc.* 32 (Suppl.): S194.
54. Bell, D.G., **T.M. McLellan** and C.M. Sabiston (2000). Effect of caffeine and ephedrine ingestion on 10 km run. *Med. Sci. Sports Exerc.* 32 (Suppl.): S117.
55. **McLellan, T.M.** and G.A. Selkirk (2001). Influence of aerobic fitness and body fatness on tolerance to uncompensable heat stress. *Med. Sci. Sports Exerc.* 33 (Suppl.): S44.
56. Speers, V.R., **T.M. McLellan**, C.A. Crisso, I.F. Smith and C.D. Rodgers (2001). Carbohydrate ingestion is not affected by menstrual phase in moderately trained females. *Med. Sci. Sports Exerc.* 33 (Suppl.): S284.
57. D.G. Bell, **T.M. McLellan**, I.F. Smith and C.M. Sabiston (2001). Nutritional supplements vs rations during simulated combat maneuvers. *Can. J. Appl. Physiol.* 26: 464.
58. Tikuisis P., **T.M. McLellan**, G. Selkirk (2001). Comparison of physiologic and perception based indices of heat strain. Proceedings of the Australian Physiological and Pharmacological Society International Thermal Physiology Symposium, 32(2): 160P.
59. D.G. Bell, **T.M. McLellan** and I.F. Smith (2002). Exercise performance 1,3 and 6 hours after caffeine ingestion. *Can. J. Appl. Physiol.* 27 (Suppl.): S4-S5.

60. Selkirk, G.A. and **T.M. McLellan** (2002). Physical work limits for Toronto firefighters in warm environments. *Can. J. Appl. Physiol.* 27 (Suppl.): S45.
61. Selkirk, G.A. and **T.M. McLellan** (2003). A comparison between a physiological and perceptual strain index for indicating heat stress of firefighters. *Med. Sci. Sports Exerc.* 35 (Suppl.): S209.
62. **McLellan, T.M.** and G.A. Selkirk (2003). Effects of replacing pants with shorts on the heat stress of wearing firefighting protective clothing. *Med. Sci. Sports Exerc.* 35 (Suppl.): S210.
63. G.A. Selkirk, J. Wong and **T.M. McLellan** (2003). Active versus passive cooling during work in warm environments wearing firefighting protective clothing. *Can. J. Appl. Physiol.* 28 (Suppl.): S98.
64. J. Wong, G.A. Selkirk and **T.M. McLellan** (2003). Hydration manipulation in prolonging safe work limits for Toronto firefighters in warm environments. *Can. J. Appl. Physiol.* 28 (Suppl.): S114.
65. Bell, D.G. and **T.M. McLellan** (2003). Repeated exercise performance and caffeine ingestion. *Med. Sci. Sports Exerc.* 35 (Suppl.): S267.
66. Bell, D.G., **T.M. McLellan** and G.H. Kamimori (2004). The effect of caffeine on military tasks during a night of sleep loss. *Med. Sci. Sports Exerc.* 36 (Suppl.): S17.
67. **T.M. McLellan**, Bell, D.G. and G.H. Kamimori (2004). The effect of caffeine on run times to exhaustion at 85%  $\text{VO}_{2\text{max}}$  following a night of sleep loss. *Med. Sci. Sports Exerc.* 36 (Suppl.): S17.
68. G.H. Kamimori, **T.M. McLellan**, D. Johnson, D.G. Bell, K. Cole and D. Voss (2004). *Using caffeine to maintain cognitive and physical performance during a 26 h field exercise in a special operations unit.* Presented at the 24<sup>th</sup> Army Science Conference, Orlando, Florida, Nov 29 – Dec 2.
69. G.H. Kamimori, D. Johnson, **T.M. McLellan**, D.G. Bell and G. Belenky (2004). *Caffeinated gum maintains vigilance, marksmanship and PVT performance during a 55 hour field trial.* Presented at the 24<sup>th</sup> Army Science Conference, Orlando, Florida, Nov 29 – Dec 2.
70. **McLellan, T.M.**, G.H. Kamimori, D.M. Voss, D.G. Bell, K.G. Cole and D. Johnson (2005). *Caffeine maintains vigilance and improves running performance for special forces personnel during a night of sleep loss.* *Med. Sci. Sports Exerc.* 37 (Suppl.): S403.

71. G.H. Kamimori, D. Johnson, **T.M. McLellan**, D.G. Bell and G. Belenky (2005). *A laboratory measure that reflects performance on military tasks during a 50-hour field trial*. Presented at the Amer. Physiol. Sleep Soc. Meeting.
72. D. Johnson, G.H. Kamimori, **T.M. McLellan**, D.G. Bell, K. Cole and D. Voss (2005). *Relationship between performance on the pvt and actual field tasks during a 30 hr field exercise in elite soldiers*. Presented at the Amer. Physiol. Sleep Soc. Meeting.
73. G.A. Selkirk, H.E. Wright, S.G. Rhind, D.J. Eaton, B.S.K. Cheung, M.A. Paul and **T.M. McLellan** (2005). Nuclear factor (NF)- $\kappa$ B activation in human peripheral blood mononuclear cells during acute exertional heat stress. *Can J. Appl. Physiol.* 30 (Suppl.): S73.
74. Wright H.E., G.A. Selkirk, **T.M. McLellan**, M.A. Paul, D.J. Eaton, B.S.K. Cheung and S.G. Rhind (2005). Cognitive and psychomotor function during uncompensable heat stress in sedentary individuals. *Can J. Appl. Physiol.* 30 (Suppl.): S86.
75. **T.M. McLellan**, G.A. Selkirk, H.E. Wright and S.G. Rhind (2006). Cytoprotection against apoptosis following an acute bout of exertional heat stress. *Med. Sci. Sports Exerc.* 38 (Suppl.): S308.
76. G.A. Selkirk, **T.M. McLellan**, H.E. Wright and S.G. Rhind (2006). Intracellular HSP72 expression in monocyte subsets between trained and untrained individuals during exertional heat stress. *Med. Sci. Sports Exerc.* 38 (Suppl.): S308.
77. H.E. Wright, **T.M. McLellan** and G.A. Selkirk (2006). Neuroendocrine response in trained versus untrained individuals during exertional heat stress. *Med. Sci. Sports Exerc.* 38 (Suppl.): S485.
78. Selkirk, G.A., H.E. Wright and **T.M. McLellan** (2006). Relationship among blood volume, aerobic fitness, and thermotolerance during uncompensable heat stress. *Appl. Physiol. Nutr. Metab.* 31(Suppl.): S77.
79. Wright, H.E., **T.M. McLellan** and G.A. Selkirk (2006). Neuroendocrine response during uncompensable heat stress in trained versus untrained males. *Appl. Physiol. Nutr. Metab.* 31(Suppl.): S89.
80. G.A. Selkirk, H.E. Wright, **T.M. McLellan** and S.G. Rhind (2007). Nuclear factor (NF)- $\kappa$ B activation in human peripheral blood mononuclear cells of trained versus untrained individuals during exertional heat stress. *Med Sci Sports Exerc.* 39(Suppl.): S61.
81. H.E. Wright, G.A. Selkirk, and **T.M. McLellan** (2007). Acute neuroendocrine response to uncompensable heat stress in endurance trained versus untrained males. *Med Sci Sports Exerc.* 39(Suppl.): S310.

82. **McLellan, T.M.** (2007). Evaluations of new protective uniforms must include heat strain during MOPP 1 to determine heat tolerance during MOPP 4. *Med Sci Sports Exerc.* 39(Suppl.): S414.
83. Cameron, B.A., **T.M. McLellan**, D.J. Eaton DJ and S.G. Rhind (2007). Reactive oxygen and nitrogen species generation by hyperbaric stress in naïve versus experienced divers. Undersea Medicine Hyperbaric Symposium, Hawaii, June 12-15.
84. Wright, H.E., G.A. Selkirk and **T.M. McLellan** (2007). Examining the Tryptophan Hypothesis and Fatigue in Trained versus Sedentary Males during Uncompensable Heat Stress. Canadian Society for Exercise Physiologists Annual Meeting, London, ON, November 14-17.
85. Selkirk, G.A., H.E. Wright, **T.M. McLellan** and S.G. Rhind (2007). Intracellular HSP72 Protein Expression and Cellular Apoptosis in CD14+ Monocytes During Exertional Heat Stress. Canadian Society for Exercise Physiologists Annual Meeting, London, ON, November 14-17.
86. **McLellan, T.M.**, D.J. Eaton and S.G. Rhind (2008). Acute neuroendocrine response to hyperbaric stress in experienced male divers versus non-divers. *Med Sci Sports Exerc.* 40 (Suppl.): S169.
87. H.E. Wright, G.A. Selkirk and **T.M. McLellan** (2008). Prolactin, tryptophan, and branch chain amino acids, and relationships with psychomotor performance during heat stress. *Med Sci Sports Exerc.* 40 (Suppl.) S335.
88. Cameron, B.A., **T.M. McLellan**, D.J. Eaton and S.G. Rhind (2008). Inflammatory gene expression in the leukocytes of naive subjects and experienced divers following acute hyperbaric stress. Undersea and Hyperbaric Medicine Symposium, Salt Lake City, ID, June 26.
89. Rhind, S.G., B.A. Cameron, D.J. Eaton and **T.M. McLellan** (2008). Enhanced NF- $\kappa$ B activation in experienced divers in response to acute hyperbaric stress. Undersea and Hyperbaric Medicine Symposium, Salt Lake City, ID, June 26.
90. Wright, H.E. and **T.M. McLellan** (2008). Nine-day heat acclimation fails to improve psychomotor function in sedentary males at a given level of thermal strain. Canadian Society for Exercise Physiologists Annual Meeting, Banff, AB, October 17.
91. Wright, H.E. and **T.M. McLellan** (2009). Hypothalamic-pituitary-adrenal axis and the sympathetic-adrenomedullary system responses during heat acclimation in sedentary males. *Med Sci Sports Exerc.* 41 (Suppl.) S450.



92. **T.M. McLellan** and H.E. Wright (2009). The relationship between plasma volume changes following heat acclimation and thermotolerance during uncompensable heat stress in sedentary males. *Med Sci Sports Exerc.* 41 (Suppl.) S450.
93. Rhind, S.G., B.A. Cameron, D.J. Eaton and **T.M. McLellan** (2009). Soluble endothelial-derived adhesion molecules ICAM-1, VCAM-1 and E-Selectin after hyperbaric decompression in divers versus non-divers. Undersea and Hyperbaric Medicine Symposium, Las Vegas, Nevada, June 26.
94. B.A. Cameron, **T.M. McLellan**, D.J. Eaton and S.G. Rhind (2009). The absence of innate inflammatory gene response to acute hyperbaric stress in non-divers following heat acclimation. Undersea and Hyperbaric Medicine Symposium, Las Vegas, Nevada, June 26.
95. **McLellan, T.M.**, D.J. Eaton, S.G. Rhind and B.A. Cameron (2009). Neuroendocrine and immunological response to acute hyperbaric stress before and after heat acclimation. ONR Program Review, 4 August, Tampa, Florida.
96. **McLellan, T.M.** (2010). Defining the limits of human thermotolerance while wearing protective clothing. NATO Advanced Studies Institute, Defense related intelligent textiles and clothing for ballistic and NBC (nuclear, biological, chemical) protection. Book of Abstracts, pg 64-65.
97. **McLellan, T.M.** (2010). Options for managing thermal strain while wearing protective clothing. NATO Advanced Studies Institute, Defense related intelligent textiles and clothing for ballistic and NBC (nuclear, biological, chemical) protection. Book of Abstracts, pg 111-112.
98. **McLellan, T.M.** and H.E. Wright (2010). Prolactin as an indicator of impending fatigue during uncompensable exertional heat stress. *Med Sci Sports Exerc.* 42 (Suppl.): S194.
99. G.A. Selkirk, H.E. Wright, S.G. Rhind and **T.M. McLellan** (2010). Changes in circulating immuno-inflammatory mediators following repeated exertional heat stress exposure in untrained males. *Med Sci Sports Exerc.* 42 (Suppl.): S256.
100. H.E. Wright and **T.M. McLellan** (2010). Central fatigue indicators during repeated exertional heat stress in untrained males. *Med Sci Sports Exerc.* 42 (Suppl.): S564.
101. P.I. Brown, **T.M. McLellan**, D.M. Linnane, D.M. Wilkinson, V.L. Richmond, F.E. Horner, S.D. Blacker and M.P. Rayson (2010). Influence of hydration volume and ambient temperature on physiological responses in personal protective clothing. *Med Sci. Sports Exerc.* 42 (Suppl.): S565.

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102. S. Duncan, J. Tremblay-Lutter, P. Caron, K. Caldwell, **T.M. McLellan** and E. Gudgin Dickinson (2010). CB<sup>plus</sup> chemical-biological protective combat operations uniform: next generation low burden protective concepts. 10th International Symposium on Protection against Chemical and Biological Warfare Agents, 8-11 June, Stockholm, Sweden.
103. B.A. Cameron, S.G. Rhind, N. Holden, D.J. Eaton, R.Y. Nishi and **T.M. McLellan** (2010). Transcriptional activity in the peripheral blood leukocytes of military divers following trimix dives. Undersea and Hyperbaric Medicine Symposium, St. Pete Beach, Florida, June 3-5.
104. **McLellan, T.M.**, H.E. Wright, G.A. Selkirk and S.G. Rhind (2011). Circulating free-Tryptophan to Tyrosine as a Marker of Central Fatigue during Heat Stress. *Med Sci Sports Exerc* 42 (Suppl.):S682.
105. N.L. Zouros, G.A. Selkirk, T.A. Metcalfe, **T.M. McLellan** and S.S. Cheung (2011). Comparison of the Physiological and Perceptual Strain Indices in Firefighters During Real-Life Emergency Incidents. *Med Sci Sports Exerc* 42 (Suppl.):S705.
106. B.A. Cameron, S.G. Rhind, N. Holden, D.J. Eaton, R.Y. Nishi, F. Bouak and **T.M. McLellan** (2011). Neutrophil activation status in Navy clearance divers following decompression in trimix dives with in-water oxygen decompression. Undersea and Hyperbaric Medicine Symposium, Fort Worth, Texas, June 15-18.
107. G.A. Selkirk, H.E. Wright, S.G. Rhind and **T.M. McLellan** (2011). Intestinal barrier dysfunction, endotoxin neutralizing capacity and immuno-inflammatory mediators following repeated exertional heat stress exposure. 10<sup>th</sup> International Symposium on Exercise and Immunity, University of Oxford, Oxford, U.K., July 13-15.
108. C. LaValle, G.H. Kamimori and **T.M. McLellan** (2011). Relationship between performance on a laboratory test and operational field performance during a sustained military operation. Advanced Technology Applications for Combat Casualty Care, Fort Lauderdale, FL, August 15-18.
109. **T.M. McLellan**, C. Boscarino and E.J.S. Duncan (2012). Passive Vents in CB Uniforms During Low Dressed States Improve Tolerance During High Dress States. *Med Sci Sports Exerc* 44 (Suppl): S530.
110. Wright, H.E., C.N. Phinney, S.G. Hardcastle, **T.M. McLellan**, J. Larose, P. Boulay, & G.P. Kenny (2013). Young versus Older Males' Thermoregulatory Responses to Exercise in Humid Heat under Two Air Velocities. *Med Sci Sports Exerc* 45 (Suppl.): S67.

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111. G.P. Kenny, J. Larose, **T.M. McLellan**, S. Miller, P. Boulay, & H.E. Wright (2013). Effect of Intermittent Work in the Heat on Hydration Indices in Older Firefighters versus Non-Firefighters. *Med Sci Sports Exerc.* 45 (Suppl.): S487.
112. **T.M. McLellan** (2014). The use of caffeine to improve physical and cognitive performance during sustained operations. Third International Conference for Soldiers' Physical Performance. Boston, MA, August 18-21.

**Invited Lectures:**

1. The significance of the aerobic and anaerobic thresholds for performance and training. *University of Toronto*, 1983.
2. The use of altitude as a model to examine the exercise ventilatory and lactate response. *University of Alberta*, 1986.
3. Mechanisms involved in the exercise ventilatory response. *Westmead Hospital*, Sydney, Australia, 1986.
4. The anaerobic threshold: concept and controversy. *University of Melbourne*, Melbourne, Australia, 1986.
5. The anaerobic threshold: concept and controversy. *The University of Western Ontario*, 1987.
6. The anaerobic threshold. *Sick Children's Hospital*, 1988.
7. Continuous vs intermittent work in protective clothing. *Franco-Canadian thermal physiology workshop*, DCIEM, 1989.
8. Influence of metabolic rate at different ambient temperatures. Presented as part of a symposium on "The challenge of exercise wearing biological and chemical warfare protective clothing". *Med. Sci. Sport Exerc.* 24 (Suppl.): S20, 1992.
9. Heat tolerance while wearing NBC protective clothing: influence of acclimation and training. *University of Toronto*, 1995.
10. Recent advances in heat tolerance while wearing NBC protective clothing. *Department of National Defence CRAD Briefing Series*, Ottawa, 1997.
11. Understanding the heat intolerance of wearing NBC protective clothing. School of Exercise Science, *Griffith University*, Gold Coast Campus, Queensland, Australia, 1997.

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12. The importance of aerobic fitness in determining tolerance to uncompensable heat stress. *International Conference of Physiological and Cognitive Performance in Extreme Environments*, Canberra, Australia, March 27-30, 2000, pp 68-71.
13. The influence of aerobic fitness on tolerance to uncompensable heat stress. Invited Lecture, *University of Western Ontario*, 2000.
14. Heat stress while wearing Toronto Firefighters protective clothing: defining the problem and creating solutions. Presented to the Chief and Deputy Chiefs of the Toronto Fire Service, February 12, 2003.
15. Heat stress while wearing Toronto Firefighters protective clothing: defining the problem and creating solutions. Presented to the Research Advisory Council of the Workplace Safety Insurance Board, February 17, 2003.
16. Heat stress of wearing protective clothing. Presented to the CB<sup>plus</sup> Technology Demonstration Project, Chateau Cartier, Hull, Quebec, June 20, 2003.
17. Heat stress of wearing protective clothing. Presented to the Community Awareness and Emergency Response committee. Etobicoke, June 25, 2003.
18. Approaches for firefighting rehabilitation. Presented to the International Association of Firefighters John P. Redmond Symposium. San Francisco, October, 2003.
19. Hydration and occupational work performance. American College of Sports Medicine roundtable meeting. Boston, December 8, 2003.
20. The heat stress of wearing protective clothing: defining the problem and creating solutions. McMaster University, January 22, 2004.
21. The importance of heat acclimation for the 2004 summer Olympics in Athens. Pre-Olympic workshop. Victoria, January 29, 2004.
22. Approaches for firefighter rehabilitation. Ontario Firefighter Health and Safety Association Meeting, February 4, 2004.
23. Heat stress while wearing firefighting protective clothing: the importance of hydration and cooling. Workplace Safety Insurance Board, February 19, 2004.
24. The heat stress of wearing protective clothing: defining the problem and creating solutions. American College of Sports Medicine Tutorial Lecture, June 3, 2004.
25. Heat stress while wearing firefighting protective clothing: the importance of hydration and cooling. Invited lecture to the Occupational Health and Safety Council of Ontario, June 8, 2004.

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26. Heat stress while wearing firefighting protective clothing: the importance of cooling. Invited lecture at the Microclimate Cooling Conference, Natick, September 14, 2004.
27. Understanding heat stress in the workplace: the importance of hydration and cooling. Invited lecture to the Instructor Upgrade Conference for the Workers Health and Safety Center, Toronto, October 15, 2004.
28. Strategies for reducing the heat stress of wearing firefighting protective clothing. Invited presentation to the Workplace Safety and Insurance Board symposium entitled Solutions for Workplace Change, Toronto, November 18, 2004.
29. The heat stress of wearing firefighting protective clothing: the importance of hydration and cooling. Invited lecture to the University of Waterloo graduate seminar, March 2005.
30. Management of heat stress in the workplace: importance of hydration and cooling. Invited lecture to the Industrial Accident and Prevention Association and Health and Safety Canada annual meeting, Toronto, April 2005.
31. Heat stress and venting study. Presentation to the CB<sup>plus</sup> workshop via teleconference. Nashville, June 1, 2005.
32. Heat stress and protective clothing. Invited presentation to representatives of the US Marine Corps emergency response unit. Stafford, Virginia, June 2, 2005.
33. Management of heat stress in the workplace: efficacy of limb cooling. Invited lecture at the American College of Sports Medicine annual meeting, Nashville, June 4, 2005
34. Safe work limits with the use of firefighting protective clothing: The importance of hydration and cooling.” Invited presentation to the Health Care Health and Safety Association of Ontario, March 30, 2006.
35. Management of heat stress with the use of protective clothing: Importance of hydration and cooling. Invited presentation to the Municipal Health and Safety Symposium, Toronto, October 2, 2006.
36. Optimizing Human Performance: Special Forces to the Olympics. Invited presentation to the Sport Innovation (SPIN) Summit, Victoria, October 4, 2006.
37. Understanding Thermotolerance During Uncompensable Heat Stress. Invited presentation to the Australian Defence Force Policy Review on Heat Stress Guidelines. Canberra, Australia, November 20, 2006.
38. Management of heat stress for firefighters: efficacy of hand and forearm cooling. Invited presentation to NFPA 1584, Las Vegas, March 23, 2007.

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39. Management of heat stress to extend operational effectiveness. Invited presentation to the US Marine Corps emergency response unit. Indian Head, Maryland, July 12, 2007.
40. Management of thermal strain for military personnel and first responders. Invited lecture at the British Association of Sport and Exercise Sciences annual meeting. Bath, UK, September 14, 2007.
41. Can caffeine improve performance? Invited lecture to the Toronto Western Hospital Sleep Rounds, March 7, 2008.
42. Management of heat stress to extend operational effectiveness for firefighters. Invited lecture to the US Navy and Marine Corps Public Health Center Conference, March 19, 2008.
43. Use of caffeine to improve physical and cognitive performance during sustained operations. Invited lecture to the Aerospace Medical Association, Boston, Massachusetts, May 13, 2008.
44. Thermoregulatory challenges during exercise in protective clothing. Invited lecture to the Canadian Society for Exercise Physiologists, Banff, AB, Oct 16, 2008.
45. Understanding the thermoregulatory challenges of conducting military operations in NBC protective clothing: what are the options? Invited lecture to the NATO Army Armaments Group AC/225 Joint CBRN Capability Group Physical Protection Sub-Group (PPSG), Vilvoorde, Belgium, November 6, 2008.
46. Defining the limits of human thermotolerance while wearing protective clothing. Invited lecture to the NATO Advance Study Institute on Defense Related Intelligent Textiles and Clothing for Ballistic and NBC (Nuclear, Biological, Chemical) Protection. Split, Croatia, 12 April, 2010.
47. Options for managing thermal strain while wearing protective clothing. Invited lecture to the NATO Advance Study Institute on Defense Related Intelligent Textiles and Clothing for Ballistic and NBC (Nuclear, Biological, Chemical) Protection. Split, Croatia, 15 April, 2010.
48. New work and rest guidelines for NATO Dress States. Invited lecture to the NATO Army Armaments Group AC/225 Joint CBRN Capability Group Physical Protection Sub-Group (PPSG), San Lorenzo del Escorial, Spain, May 26, 2010.
49. State of the Literature: Mechanisms and Outcomes, Efficacy and Safety of Protein Supplementation for U.S. Armed Forces Personnel, November 7, 2012.

### **Section 7 – Grants and Patents**

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**Grants:**

1. **McLellan, T.M.** Safe work limits while wearing firefighting protective clothing. Workplace Safety and Insurance Board of Ontario, Sept 2001 – October 2003, \$197,900.
2. **McLellan, T.M.** Measurement of saccadic eye movement fatigue and its relationship with other measures of cognitive function during a night time mission scenario with or without caffeine ingestion. Walter Reed Army Institute of Research, June 2003 – June 2004, \$125,000.
3. **McLellan, T.M.** The use of a non-invasive sensor to measure hydration status. Biopeak Incorporated, December 2004, \$35,000.
4. **McLellan, T.M., S.G. Rhind, B.S. Cheung and D.J. Eaton.** Understanding the neurochemical and immunological mechanisms that define limits to human physical and cognitive function. Technology Investment Fund, Defence R&D Canada, April 2005 – March 2008, \$750,000.
5. **McLellan, T.M., S.G. Rhind, M.B. Ducharme and D.J. Eaton.** Neuroendocrine and Immunological Response to Acute Hyperbaric Stress before and after Heat Acclimation. Office of Naval Research, Department of the US Navy, March 2006 – March 2009, \$550,000.
6. **McLellan, T.M., R.H. Hughson, E.M. Weckman and G. Havenith.** Guidelines for Combined Air Demand and Heat Strain Management of First Responders. Chemical, Biological, Radiological, Nuclear and Explosives Research and Technology Initiative (CRTI), Department of National Defence and Defence R&D Canada, September 2007 – December 2010, \$1,631,790.
7. S.S. Cheung, G.A. Selkirk and **T.M. McLellan.** Physiological and psychological strain of firefighters during emergency response scenarios: field validation of the Toronto Heat Study, S.S. Cheung, G.A. Selkirk and T.M. McLellan, Workplace Safety and Insurance Board of Ontario, February 2010 – September 2010, \$59,900.
8. S.G. Rhind, C.A. Boscarino and **T.M. McLellan.** A systems biology approach to understanding the effects of operational stressors on Canadian Forces personnel: functional genomics and proteomic analyses. Technology Investment Fund, Defence R&D Canada, April 2011 – March 2014, \$750,000.
9. B.A. Murphy, S.R. Passmore, A. Hogue, B. Kapralos, J.J. Triano, S.A. Mior, **T.M. McLellan** and A. Dubrowski. Serious games to decrease injury in the fire service by training safer lifting techniques and decision making skills: development and piloting. Workers Compensation Board of Manitoba, Research and Workplace Innovation Program, October 2011, \$199,167.

***Total = \$4,298,757***

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**Patents and Inventions:**

1. **McLellan, T.M.** and G.A. Selkirk. Toronto Firefighters' slide rule, 2003.