

Publications of Dr. Hubert de Bruin

Papers in Refereed Journals (1996– 2003)

- * F.S. Cayabyab, H. de Bruin, M. Jimenez and E.E. Daniel, 'Ca²⁺ Role in Myogenic and Neurogenic Activities of Canine Ileum Circular Muscle', Am. J. of Physiol. (Gastrointest. and Liver Physiol.), Vol. 271, 1996, pp G1053 - G1066
- * R.P. Harper, H. de Bruin and I. Burcea, 'Muscle Activity during Mandibular Movements in Normal Subjects and Mandibular Retrognathism', J. of Oral and Maxillofacial Surgery, Vol. 55, 1997, pp 225 - 233
- * F.S. Cayabyab, M. Jimenez, P. Vergara, H. de Bruin and E.E. Daniel, 'Influence of Nitric Oxide and Vasoactive Intestinal Peptide on the Spontaneous and Triggered Electrical and Mechanical Activities of the Canine Ileum', Cdn. J. of Physiol. and Pharmacol., Vol. 75, 1997, pp 383 - 397
- * R.B. Szlavik and H. de Bruin, 'The Effect of Stimulus Current Pulse Width on Nerve Fiber Size Recruitment Patterns' Medical Engineering and Physics, Vol. 21, 1999, pp 507 - 515
- * R.B. Szlavik and H. de Bruin, 'The Effect of Anisotropy on the Potential Distribution in Biological Tissue and its Impact on Nerve Excitation Simulations' IEEE Trans. Biomed. Eng., Vol. 47, 2000, pp 1202 - 1210
- * N. Al-Mutawaly, H. de Bruin and G. Hasey, 'The Effects of Pulse Configuration on Magnetic Stimulation', J. Clin Neurophysiol., Vol. 20(5), 2003, pp 361 - 370

Papers in Refereed Conference Proceedings (1996– 2003)

- * R.B. Szlavik and H. de Bruin, 'Pulsed Transient Tissue Conductivity Measurement', Proc. of 18th Ann. Int. Conf. of IEEE Engineering in Medicine and Biology Soc., October 1996, Amsterdam, ISBN 90-90100005-9(CD-ROM): 3 pages
- * R.B. Szlavik and H. de Bruin, 'SPICE Compatible Equivalent Circuit Models of Skeletal Muscle Tissue', Proc. of 18th Ann. Int. Conf. of IEEE Engineering in Medicine and Biology Soc., October 1996, Amsterdam, ISBN 90-9010005-9(CD-ROM): 3 pages

- * J.C.R. DeGruchy, H. de Bruin, L. Wang and G. Tougas, 'Recording and Analyzing Gastric Electrical Activity', Proc. of 23rd Cdn. Medical and Biological Engineering Conf., May 1997, Toronto, pp 106 - 107.
- * R.B. Szlavik and H. de Bruin, 'Simulating the Distribution of Axon Size in Nerves', Proc. of 23rd Cdn. Medical and Biological Engineering Conf., May 1997, Toronto, pp 168 - 169.
- * R.B. Szlavik and H. de Bruin, 'Optimal Stimulus Electrode Dipole Orientation', Proc. of 25th Cdn. Medical and Biological Engineering Conf., June 1999, London, ON, pp 112 - 113.
- * N. Al-Mutawaly and H. de Bruin, 'A Coil Design for Magnetic Nerve Stimulation: 3-Dimensional Analysis', Proc. of 25th Cdn. Medical and Biological Engineering Conf., June 1999, London, ON, pp 64 - 65.
- * C. Orsi and H. de Bruin, 'Measurement of Electrical and Contractile Properties of Motor Units using EMG and Accelerometry', Dig. of the 2000 World Congress on Medical Physics and Biomedical Engineering and Proc. of 22nd Ann. Int. Conf. of IEEE EMBS, July 2000, Chicago (CD-ROM) 3 pages
- * A. McComas, V. Galea and H. de Bruin, 'Synaptic Connectivity between Human Ia Fibres and Soleus Motoneurones', Proc. XV Int. Congress of Clin. Neurophysiology, Buenos Aires, Abstract in Clin. Neurophysiol. Vol 112 Suppl 1, S17, May 2001.
- * N. Al-Mutawaly, H. de Bruin and R. D. Findlay, "Magnetic Nerve Stimulation: Field Focality and Depth of Penetration", Proc. Of 23rd Ann. Int. Conf. of IEEE EMBS, Istanbul, Oct 2001 (CD-ROM ISBN: 0-7803-7213-1) 4 pages
- * N. Al-Mutawaly and H. de Bruin, "Designing and Constructing a Magnetic Stimulator: Theoretical and Practical Considerations", Proc. of 23rd Ann. Int. Conf. of IEEE EMBS, Istanbul, Oct 2001 (CD-ROM ISBN: 0-7803-7213-1) 4 pages
- * N. Al-Mutawaly and H. de Bruin, "Measuring the Induced Electrical Fields in 3-Dimensions when Applying Magnetic Stimulation to a Spherical Target", presented at 29th Int. Cong. On Electrocardiography and 4th Int. Conf. On Bioelectromagnetism, Montreal, Int. J. of Bioelectromagnetism Vol 4, No. 2, Special Issue on Electrocardiography and Neurophysiology 2002 pp 193-194

* N. Al-Mutawaly, H. de Bruin and R.D. Findlay, "Magnetic Nerve Stimulation: A Comparison between Mono-Phasic and Bi-Phasic Waveforms", presented at 29th Int. Cong. On Electrocardiography and 4th Int. Conf. On Bioelectromagnetism, Montreal, Int. J. of Bioelectromagnetism Vol 4, No. 2, Special Issue on Electrocardiography and Neurophysiology 2002 pp 195-196

* N. Al-Mutawaly and H. de Bruin, "The Effect of Pulse Configuration on the Compound Muscle Action Potentials (CMAPS) during Magnetic Stimulation", Proc. of 27th Cdn. Med. Biol. Engg. Conf., Ottawa, Nov 2002, 4 pages

* N. Al-Mutawaly and H. de Bruin, "Design and Construction of an Electrical Nerve Stimulator", Proc. of 27th Cdn. Med. Biol. Engg. Conf., Ottawa, Nov 2002, 3 pages

Abstracts and/or Papers Read (1996– 2003)

* A.J. McComas, V. Galea and H. de Bruin, 'Human Soleus Motor Unit Population', Muscle and Nerve 24: 1428, presented at 2001 AAEM Ann. Scientific Mtg., Albuquerque, NM, Oct 2001.

* A.J. McComas, H. de Bruin and A. Upton, 'An Input-Output Relationship for the H-reflex', presented at Uppsala, Sweden, June 2001