

## Ergospect Medical Technologies Publications



**Skeletal muscle alkaline Pi pool is decreased in overweight-to-obese sedentary subjects and relates to mitochondrial capacity and phosphodiester content**

Valkovič L, Chmelík M, Ukropcová B, Heckmann T, Bogner W, Frollo I, Tschan H, Krebs M, Bachl N, Ukropec J, Trattnig S, Krššák M. *Sci Rep.* 2016 Feb 3; 6: 20087. doi: 10.1038/srep20087

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**Dynamic 31P MR spectroscopy of plantarflexion: influence of ergometer design, magnetic field strength (3 and 7 T), and RF-coil design**

Šedivý P, Kipfelsberger MC, Dezortová M, Krššák M, Drobny M, Chmelík M, Rydlo J, Trattnig S, Hájek M, Valkovič L. *Med Phys.* 2015 Apr;42(4):1678-89. doi: 10.1118/1.4914448

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**Depth-resolved surface coil MRS(DRESS)-localized dynamic (31) P-MRS of the exercising human gastrocnemius muscle at 7 T**

Valkovič L, Chmelík M, Just Kukurová I, Jakobová M, Kipfelsberger MC, Krumpolec P, Tušek Jelenc M, Bogner W, Meyerspeer M, Ukropec J, Frollo I, Ukropcová B, Trattnig S, Krššák M. *NMR Biomed.* 2014 Nov;27(11):1346-52. doi: 10.1002/nbm.3196. Epub 2014 Sep 9

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**Bioenergetics of the calf muscle in Friedreich ataxia patients measured by 31P-MRS before and after treatment with recombinant human erythropoietin**

Nachbauer W, Boesch S, Schneider R, Eigentler A, Wanschitz J, Poewe W, Schocke M. *PLoS One.* 2013 Jul 29;8(7):e69229. doi: 10.1371/journal.pone.0069229. Print 2013. PubMed PMID: 23922695

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**Interrelation of 31P-MRS Metabolism Measurements in Resting and Exercised Muscle of Overweight-to-Obese Sedentary Individuals**

L. Valkovič, B. Ukropcová, M. Chmelík, M. Baláž, W. Bogner, A. Schmid, I. Frollo, I. Klimeš, E. Zemková, J. Ukropec, S. Trattnig, and M. Krššák. *NMR Biomed.* 2013 Dec; 26(12):1714-22. doi: 10.1002/nbm.3008. Epub 2013 Aug 16

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**Reliability of constant-load treadmill testing in patients with intermittent claudication**

Falkensammer J, Gasteiger S, Polaschek B, Gruber I, Frech A, Fraedrich G, Schocke M, Greiner A. *Int Angiol.* 2012 Apr;31(2):150-5

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**Different Metabolic Responses during Incremental Exercise Assessed by Localized 31P MRS in Sprint and Endurance Athletes and Untrained Individuals**

Pesta D, Paschke V, Hoppel F, Kobel C, Kremser C, Esterhammer R, Burtscher M, Kemp GJ, Schocke M. *Int J Sports Med.* 2013 Aug;34(8):669-75. doi: 10.1055/s-0032-1327648. Epub 2013 Feb 1

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**High-energy phosphate metabolism in the exercising muscle of patients with peripheral arterial disease**

Schocke M, Esterhammer R, Greiner A. *Vasa.* 2008 Aug;37(3):199-210. doi: 10.1024/0301-1526.37.3.199. Review

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**High-energy phosphate metabolism in the calf muscle of healthy humans during incremental calf exercise with and without moderate cuff stenosis**

Greiner A, Esterhammer R, Bammer D, Messner H, Kremser C, Jaschke WR, Fraedrich G, Schocke MF. *Eur J Appl Physiol.* 2007 Mar;99(5):519-31. Epub 2007 Jan 6

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**Absolute quantification of phosphorus metabolite concentrations in human muscle in vivo by 31P MRS: a quantitative review**

Kemp, GJ, Meyerspeer, M, and Moser, E, *NMR Biomed.* 2007. p. 555-565.

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**Phosphocreatine kinetics in the calf muscle of patients with bilateral symptomatic peripheral arterial disease during exhaustive incremental exercise**

Esterhammer R, Schocke M, Gorny O, Posch L, Messner H, Jaschke W, Fraedrich G, Greiner A. *Mol Imaging Biol.* 2008 Jan-Feb;10(1):30-9. Epub 2007 Nov 14

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**Serum levels of ischemia-modified albumin in healthy volunteers after exercise-induced calf-muscle ischemia**

Falkensammer J, Stojakovic T, Huber K, Hammerer-Lercher A, Gruber I, Scharnagl H, Fraedrich G, Santner W, Schocke M, Greiner A. *Clin Chem Lab Med.* 2007;45(4):535-40.

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**High-energy phosphate metabolism during calf ergometry in patients with isolated aorto-iliac artery stenoses**

Schocke MF, Esterhammer R, Ostermann S, Santner W, Gorny O, Fraedrich G, Jaschke WR, Greiner A. *Invest Radiol.* 2006 Dec;41(12):874-82.

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**High-energy phosphate metabolism during incremental calf exercise in patients with unilaterally symptomatic peripheral arterial disease measured by phosphorus 31 magnetic resonance spectroscopy**

Greiner A, Esterhammer R, Messner H, Biebl M, Muhlthaler H, Fraedrich G, Jaschke WR, Schocke MF. *J Vasc Surg.* 2006 May;43(5):978-86.

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**High-energy phosphate metabolism in the calf muscle during moderate isotonic exercise under different degrees of cuff compression: a phosphorus 31 magnetic resonance spectroscopy study**

Greiner A, Esterhammer R, Pilav S, Arnold W, Santner W, Neuhauser B, Fraedrich G, Jaschke WR, Schocke MF. *J Vasc Surg.* 2005 Aug;42(2):259-67

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**High-energy phosphate metabolism during two bouts of progressive calf exercise in humans measured by phosphorus-31 magnetic resonance spectroscopy**

Schocke MF, Esterhammer R, Arnold W, Kammerlander C, Burtscher M, Fraedrich G, Jaschke WR, Greiner A. *Eur J Appl Physiol.* 2005 Jan;93(4):469-79. Epub 2004 Oct 29.

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**High-energy phosphate metabolism during incremental calf exercise in humans measured by 31 phosphorus magnetic resonance spectroscopy (31P MRS)**

Schocke MF, Esterhammer R, Kammerlander C, Rass A, Kremser C, Fraedrich G, Jaschke WR, Greiner A. Magn Reson Imaging. 2004 Jan;22(1):109-15

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**Relaxation times of 31P-metabolites in human calf muscle at 3 T**

Meyerspeer, M, Krssák M, and Moser E, Magn Reson Med, 2003. 49(4): p. 620-5.

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**Skeletal muscle energy metabolism during prolonged, fatiguing exercise**

Febbraio MA, and Dancy J. J Appl Physiol 87: 2341-2347, 1999.

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**31P-magnetic resonance spectroscopy studies of nucleated and non-nucleated erythrocytes; time domain data analysis (VARPRO) incorporating prior knowledge can give information on the binding of ADP**

Stubbs, M, et al., Biochim Biophys Acta, 1996. 1291(2): p. 143-8.

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