

LIST OF PUBLICATIONS

Books

Textbook (invited)

1. W. MEIER-AUGENSTEIN: **Stable Isotope Forensics: An Introduction to the Forensic Application of Stable Isotope Analysis**, John Wiley & Sons Ltd, Chichester (UK), (scheduled to be published in Feb 2009).

Book Chapters (invited, peer reviewed)

2. W. MEIER-AUGENSTEIN: "Stable Isotope Analysis in Support of Disaster Victim Identification", in **Disaster Victim Identification: The Practitioner's Guide** by S. M. Black, G. Walker, L. Hackman & C. Brooks [eds.], Dundee University Press Ltd, Dundee (UK), (2008), ISBN 1-8458-60365.
3. W. MEIER-AUGENSTEIN: "Stable Isotope Fingerprinting", in **Forensic Human Identification: An Introduction** by S. M. Black & T.J.U. Thomson [eds.], CRC Press, Boca Raton, Florida (USA), (2007), chapter 2, 29-53, ISBN 0-8493-39545.
4. W MEIER-AUGENSTEIN: "GC and IRMS Technology for ¹³C and ¹⁵N Analysis of Organic Compounds and Related Gases", in **Handbook of Stable Isotope Analytical Techniques** by Pier de Groot [ed.], Elsevier Science Publishers B.V., Amsterdam, (2004), **Vol. I**, part 1, chapter 8, 153-174; ISBN 0-444-51114-8.
5. W. MEIER-AUGENSTEIN: "The Ideal Laboratory Set-up for GC-MS and Continuous-Flow IRMS", in **Handbook of Stable Isotope Analytical Techniques** by Pier de Groot [ed.], Elsevier Science Publishers B.V., Amsterdam, (2004), **Vol. I**, part 2, chapter 47, 1038-1042, ISBN 0-444-51114-8.
6. W. MEIER-AUGENSTEIN and R.H. Liu: "Forensic Applications of Isotope Ratio Mass Spectrometry", in **Advances in Forensic Applications of Mass Spectrometry** by Jehuda Yinon [ed.], CRC Press, Boca Raton, Florida (USA), (2003), chapter 4, 149-180, ISBN 0-8493-15220.
7. H. Schildknecht and W. MEIER-AUGENSTEIN: "Role of Turgorins in Leaf Movement" in **The Pulvinus: Motor Organ for Leaf Movement** by R. L. Satter, H. L. Gorton and T. C. Vogelmann [eds.], *Current Topics in Plant Physiology*, **Vol. 3**, 205-213 (1990).

Journals

Review Articles (invited, peer reviewed)

8. W. MEIER-AUGENSTEIN: "Stable Isotopic Analysis of Fatty Acids by Gas Chromatography - Isotope Ratio Mass Spectrometry", *Anal. Chim. Acta*, **465**, 63-79, (2002).

9. W. MEIER-AUGENSTEIN: "Applied Gas Chromatography coupled to Isotope Ratio Mass Spectrometry", *J. Chromatogr. A.*, **842**, 351-371 (1999).
10. W. MEIER-AUGENSTEIN: "Use of Gas Chromatography-Combustion-Isotope Ratio Mass Spectrometry in Nutrition and Metabolic Research", *Cur. Opin. Clin. Nutr. Metab. Care*, **2**, 465-470 (1999).
11. W. MEIER-AUGENSTEIN: "The Chromatographic Side of Isotope Ratio Mass Spectrometry: Pitfalls and Answers", *LC/GC*, **15**, 244-252 (1997) [*LC/GC Int.*, **10**, 17-25 (1997) UK edtn.]
12. W. MEIER-AUGENSTEIN: "Survival through Poison - Defence Mechanisms of Higher Plants", *imstus news* [published by the University of Stellenbosch, R.S.A.], **21**, 10-14 (1991).

Research Articles (incl. published Conference Proceedings)

13. W. MEIER-AUGENSTEIN and I. Fraser: "Forensic stable isotope analysis leads to identification of a mutilated murder victim", *Science & Justice*, (2008); DOI:10.1016/j.scijus.2007.10.010.
14. C. M. Lock and W. MEIER-AUGENSTEIN: "Investigation of isotopic linkage between precursor and product in the synthesis of a high explosive", *Forensic Sci. Int.* **179**, 157-162 (2008); DOI:10.1016/j.forsciint.2008.05.015.
15. H. A. S. Buchanan, N. Nic Daeid, W. MEIER-AUGENSTEIN, H. F. Kemp, W. J. Kerr and M. Middleditch: "Emerging Use of Isotope Ratio Mass Spectrometry as a Tool for Discrimination of MDMA by Synthetic Route", *Anal. Chem.* **80**, 3350-3356 (2008); DOI: 10.1021/ac702559s.
16. W. MEIER-AUGENSTEIN and N. NicDaeid: "Feasibility of Source Identification of Seized Street Drug Samples by Exploiting Differences in Isotopic Composition at Natural Abundance Level by GC/MS as compared to Isotope Ratio Mass Spectrometry (IRMS)", *Forensic Sci. Int.*; **174**, 259-261 (2008), DOI: 10.1016/j.forsciint.2007.05.006.
17. I. Fraser, W. MEIER-AUGENSTEIN, and R.M. Kalin: "Stable Isotope Analysis of Human Hair and Nail Samples: The Effect of Storage on Samples", *J. Forensic Sci.*, **53**, 95-99 (2008); DOI: 10.1111/j.1556-4029.2007.00607.x.
18. I. Fraser and W. MEIER-AUGENSTEIN: "Stable ²H isotope analysis of human hair and nails can aid forensic human identification and determine recent geographic movement", *Rapid Commun. Mass Spectrom.*, **21**, 3279-3285, (2007); DOI: 10.1002/rcm.3209.
19. A. S. Wilson, T. Taylor, M. C. Ceruti, J. A. Chavez, J. Reinhard, V. Grimes, W. MEIER-AUGENSTEIN, L. Cartmell, B. Stern, M. P. Richards, M. Worobey, I. Barnes, M. Thomas, and P. Gilbert: "Stable isotope and DNA evidence for ritual sequences in Inca child sacrifice", *Proc. Natl. Acad. Sci. U.S.A.*; **104**, 16456-16461, (2007); DOI: 10.1073/pnas.0704276104.
20. F. Keppler, D. B. Harper, R. M. Kalin, W. MEIER-AUGENSTEIN, N. Farmer, S. Davis, H.-L. Schmidt, D.M. Brown, and J. T.G. Hamilton: "Stable hydrogen isotope ratios of lignin methoxyl groups as a paleoclimate proxy and constraint of the geographical origin of wood", *New Phytologist*, **176**, 600-609, (2007); DOI: 10.1111/j.1469-8137.2007.02213.x.

21. N.L. Farmer, A. Ruffell, W. MEIER-AUGENSTEIN, J. Meneely and R.M. Kalin: "Forensic Analysis of Wooden Safety Matches – A Case Study", *Science & Justice*; **47**, 88 – 98 (2007); DOI: 10.1016/j.scijus.2007.04.001.
22. McKay D, Kirk SJ, Gardiner KR, Kemp H, MEIER-AUGENSTEIN W: "In-vivo measurement of colonic butyrate metabolism in patients with active Ulcerative colitis", *Gastroenterology*, **130**, A215-A215, (2006).
23. D McKay, S Kirk, K R Gardiner, H F Kemp & W. MEIER-AUGENSTEIN: "In-vivo Measurement of Colonic Butyrate Metabolism in Patients with Active Ulcerative colitis: A Pilot Study", *Colorectal Disease*, **8**, 46 (2006)
24. I. Fraser, W. MEIER-AUGENSTEIN, and R.M. Kalin: "The Role of Stable Isotopes in Human Identification: A longitudinal study into the variability of isotope signals in human hair and nails", *Rapid Commun. Mass Spectrom.*; **20**, 1109-1116 (2006). DOI: 10.1002/rcm.2424.
25. N. Farmer, W. MEIER-AUGENSTEIN, and R.M. Kalin: "Stable Isotope Analysis of Safety Matches using IRMS - A Forensic Case Study", *Rapid Commun. Mass Spectrom.*; **19**, 3182-3186 (2005). DOI: 10.1002/rcm.2088
26. L. Reidy, W. MEIER-AUGENSTEIN, and R.M. Kalin: "¹³C-Isotope ratio mass spectrometry as a potential tool for the forensic analysis of white architectural paints – a preliminary study", *Rapid Commun. Mass Spectrom.*; **19**, 1899-1905 (2005). DOI: 10.1002/rcm.2000.
27. Jones HP, Kemp HF, MEIER-AUGENSTEIN W, Cooper P, Fryer A, Whorwell PJ, Houghton LA: "Modulation of gastric emptying using hypnotic suggestion in healthy volunteers", *GUT*; **54**, 435 (2005).
28. L.A. Houghton, C. Fell, W. MEIER-AUGENSTEIN, H.F. Kemp, P. Cooper, C.L. Lawrie, P.J. Whorwell, J. Morris: "Can hypnosis be used to induce nausea and is this associated with delayed gastric emptying?", *GUT*; **53**, A40 (2004).
29. M. Louis, J. Poortmans, M. Francaux, E. Hultman, J. Berre, N. Boisseau, V. Young, K. Smith, W. MEIER-AUGENSTEIN, J.A. Babraj, T. Waddell and M.J. Rennie; " Creatine supplementation for 5 days has no effect on human muscle protein turnover at rest in either the post-absorptive or fed state." *Am. J. Physiol. Endocrinol. Metabol.* **284**, E764-E770 (2003). DOI 10.1152/ajpendo.00338.2002.
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31. J.A. Babraj, D.J. Cuthbertson, P Rickhuss, W. MEIER-AUGENSTEIN, K. Smith, J. Bohe, R.R. Wolfe, J.N.A. Gibson and M.J. Rennie; "Sequential Extracts of Human Bone Shows Differing Collagen Synthetic Rates", *Biochem. Soc. Trans.*, **30**, 61-65 (2002).

32. M. Louis, J. Poortmans, M. Francaux, E. Hultman, J. Berre, N. Boisseau, K. Smith, W. MEIER-AUGENSTEIN, J.A. Babraj, T. Waddell and M.J. Rennie: "Lack of effect of creatine feeding on human muscle protein turnover in the rested condition, in both the post- absorptive and fed states", *J. Physiol.*, **539**, Suppl. S, 28P-29P (2002).
33. D.J.R. Cuthbertson, K. Smith, J.A. Babraj, T. Waddell, P.W. Watt, W. MEIER-AUGENSTEIN, M.J. Rennie, M. Hinsch and K. Esser: "Myofibrillar protein synthesis and the activity of p70s6 kinase (p70s6k) in human quadriceps muscle after contractile activity with muscle shortening or stretching", *J. Physiol.*, **539**, Suppl. S, 78P (2002).
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36. W. MEIER-AUGENSTEIN: "A Reference Gas Inlet Module for Internal Isotopic Calibration in High Precision Gas-Chromatography - Combustion - Isotope Ratio Mass Spectrometry", *Rapid Commun. Mass Spectrom.*, **11**, 1775-1780 (1997).
37. M. J. Rennie, S. Downie, M. Ahmed, J. N. A. Gibson and W. MEIER-AUGENSTEIN: "Measurement of collagen turnover using [^{15}N] or [^{13}C] proline by continuous flow combustion mass spectrometry", *Proc. Nutr. Soc.*, **56**, 222A (1997).
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39. M. J. Rennie, W. MEIER-AUGENSTEIN, P. W. Watt, A. Patel, I. S. Begley, and C. M. Scrimgeour: "Use of Continuous Flow - Combustion - Isotope Ratio Mass Spectrometry in Studies of Human Metabolism", *Biochem. Soc. Trans.*, **24**, 927-932 (1996).
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43. W. MEIER-AUGENSTEIN, W. Brand, G. F. Hoffmann, and D. Rating: "Bridging the Information Gap between Isotope Ratio Mass Spectrometry and Conventional Mass Spectrometry", *Biol. Mass Spectrom.*, **23**, 376-378 (1994).

44. W. MEIER-AUGENSTEIN, G. F. Hoffmann, D. Rating, U. Wendel, U. Matthiesen, and P. Schadewaldt: "Comparing GC-C-IRMS to GC-MS in Determining $^{13}\text{C}/^{12}\text{C}$ Ratios of Short-Chain α -Ketocarboxylic Acids in Human Plasma", *World Conf. Stable Isot. Nutr. Metab. Res.*, **2nd**, 41 (1994)
45. G. F. Hoffmann, W. MEIER-AUGENSTEIN, S. Stöckler, R. Surtees, D. Rating, and W. L. Nyhan: "Physiology and Pathophysiology of Organic Acids in Cerebrospinal Fluid", *J. Inher. Metab. Dis.*, **16**, 648-669 (1993).
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47. W. MEIER-AUGENSTEIN, B. V. Burger, H. S. C. Spies, and W. J. G. Burger: "Conformational Analyses of Alkylated β -Cyclodextrins by NMR Spectroscopy", *Z. Naturforsch. B*, **47**, 877-886 (1992).
48. W. MEIER-AUGENSTEIN, B. V. Burger and H. S. C. Spies: "NMR Spectroscopic Properties of Heptakis(2,6-di-O-pentyl)- β -cyclodextrin: Two-Dimensional NMR Spectra of a Key Intermediate in Preparing Chiral Stationary Phases for Enantioselective Capillary Gas Chromatography", *Magn. Reson. Chem.*, **29**, 681-686 (1991).
49. P. Kallas, W. MEIER-AUGENSTEIN and H. Schildknecht: "The Structure-Activity Relationship of the Turgorin PLMF 1 in the Sensitive Plant *Mimosa pudica* L.: *In vitro* Binding of [^{14}C -Carboxyl]-PLMF 1 to Plasma Membrane Fractions from Mimosa Leaves and Bioassays with PLMF 1-Isomeric Compounds", *J. Plant Physiol.*, **136**, 225-230 (1990).
50. W. MEIER-AUGENSTEIN and H. Schildknecht: "Analytical and preparative high performance liquid chromatographic systems for the separation of an anomeric mixture of 4-O-(D-glucopyranosyl)gallic acid", *J. Chromatogr.*, **518**, 254-257 (1990).
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