

LIST OF PUBLICATIONS

Books

Textbook (invited, peer reviewed)

1. W. MEIER-AUGENSTEIN: **Stable Isotope Forensics: An Introduction to the Forensic Application of Stable Isotope Analysis**, John Wiley & Sons Ltd, Chichester (UK), 2010; ISBN 978-0-470-51705-5.

Book Chapters (invited, peer reviewed)

2. S. M. Mudge and W. MEIER-AUGENSTEIN: "Tracking Sewage Wastes", in **Environmental Forensics – Proceedings of the 2009 Annual Conference** by R.D. Morrison & G. O'Sullivan [eds.], Royal Society of Chemistry, 164-175 (2010), ISBN 1-84755-258-7.
3. 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), (2010), ISBN 1-8458-60365.
4. J. McKinley, A. Ruffell, M. Harrison, W. MEIER-AUGENSTEIN, H. Kemp, C. Graham and L. Barry: "Spatial Thinking in Search Methodology: A Case Study of the 'No Body Murder Enquiry', West of Ireland", in **Criminal and Environmental Soil Forensics** by Karl Ritz, Lorna Dawson and David Miller [eds.], Springer, Netherlands, chapter 18, 285-302 (2008), ISBN 978-1-4020-9203-9.
5. 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.
6. W MEIER-AUGENSTEIN: "GC and IRMS Technology for ^{13}C and ^{15}N 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.
7. 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.
8. 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.
9. 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)

10. H.F. Kemp and W. MEIER-AUGENSTEIN: "Human Provenancing of Mutilated Murder Victims through Stable Isotope Signatures", *Minerva Medicolegale*, **129**, 219-231 (2009).
11. W. MEIER-AUGENSTEIN: "Stable Isotopic Analysis of Fatty Acids by Gas Chromatography - Isotope Ratio Mass Spectrometry", *Anal. Chim. Acta*, **465**, 63-79, (2002).
12. W. MEIER-AUGENSTEIN: "Applied Gas Chromatography coupled to Isotope Ratio Mass Spectrometry", *J. Chromatogr. A.*, **842**, 351-371 (1999).
13. 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).
14. 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.]
15. 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).

Original Research Articles (incl. published Conference Proceedings)

16. J.M. Landwehr, W. MEIER-AUGENSTEIN and H.F. Kemp (2010): "A Counter-intuitive Approach to Calculating Non-exchangeable ²H Isotopic Composition of Hair: Treating the Molar Exchange Fraction f_E as a Process Related rather than Compound Specific Variable"; *Rapid Commun Mass Spectrom* ; accepted.
17. S.M. Mudge, C. Eadsforth, P. DeLeo and W. MEIER-AUGENSTEIN: "What contribution do detergent fatty alcohols make to sewage discharges and the marine environment?", *Journal of Environmental Monitoring*, **12**, 1846-1856 (2010); DOI: 10.1039/C0EM00079E.
18. B. Foereid, J. Bellarby, W. MEIER-AUGENSTEIN and H. Kemp: "Light exposure makes plant litter more degradable", *Plant and Soil*; **333**, 275-285 (2010); DOI: 10.1007/s11104-010-0342-1.
19. E. Henton, W. MEIER-AUGENSTEIN and H.F. Kemp: "The Use of Oxygen-18 Isotopes in Molars of Archaeological Sheep to investigate herding practices in the Neolithic Settlement of Çatalhöyük, Central Anatolia", *Archaeometry*; **52**, 429-449 (2010); DOI: 10.1111/j.1475-4754.2009.00492.x.
20. W. MEIER-AUGENSTEIN and H.F. Kemp: "Human Provenancing Based on Stable Isotope Intelligence", *Science & Justice*, **50**, 35-36 (2010), DOI:10.1016/j.scijus.2009.11.040.

21. S. Granger, R. Bol, W. MEIER-AUGENSTEIN, M. Leng, H. Kemp, S. White, T.H.E. Heaton: "The hydrological response of heavy clay grassland soils to rainfall in South-West England using $\delta^2\text{H}$ ", *Rapid Commun Mass Spectrom.*; **24**, 475-482 (2010); DOI: 10.1002/rcm.4281.
22. E.R. Dixon, M.S.A. Blackwell, M.S. Dhanoa, Z Berryman, N de la Fuente Martinez, D. Junquera, A. Martinez, P.J. Murray, H. Kemp, W. MEIER- AUGENSTEIN, A. Duffy, R. Bol: "Measurement at the field scale of soil $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ under improved grassland", *Rapid Commun Mass Spectrom.* **24**, 511-518 (2010); DOI: 10.1002/rcm.4345.
23. W. MEIER-AUGENSTEIN, H. F. Kemp and C. M. Lock: " N_2 : A Potential Pitfall for Bulk ^2H Isotope Analysis of Explosives and Other Nitrogen Rich Compounds", *Rapid Commun. Mass Spectrom.* **23**, 2011-2016 (2009), DOI: 10.1002/rcm.4112.
24. N. Farmer, J. Curran, D. Lucy, N. NicDaeid, and W. MEIER-AUGENSTEIN: "Stable Isotope Profiling of Burnt Wooden Safety Matches", *Science & Justice*, **49**, 107-113 (2009), DOI: 10.1016/j.scijus.2009.03.007.
25. N. Farmer, W. MEIER-AUGENSTEIN, and D. Lucy: "Isotope Analysis of White Paints and Likelihood Ratios", *Science & Justice*, **49**, 114-119 (2009), DOI:10.1016/j.scijus.2009.02.003.
26. D McKay, S Kirk, K Gardiner, and W MEIER-AUGENSTEIN: "Butyrate Metabolism in Quiescent *Ulcerative colitis*", *The Canadian Journal of Gastroenterology*, **23**, Supplement SA, 191 (2009).
27. D. W. Hopkins, A. D. Sparrow, E. G. Gregorich, B. Elberling, P. Novis, F. Fraser, C. Scrimgeour, P. G. Dennis, W. MEIER-AUGENSTEIN, L. G. Greenfield: "Isotopic evidence for the provenance and turnover of organic carbon by soil microorganisms in the Antarctic dry valleys", *Environmental Microbiology* **11**, 597-608 (2009), DOI:10.1111/j.1462-2920.2008.01830.x.
28. 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.
29. W. MEIER-AUGENSTEIN and I. Fraser: "Forensic stable isotope analysis leads to identification of a mutilated murder victim", *Science & Justice*, **48**, 153-159 (2008); DOI:10.1016/j.scijus.2007.10.010.
30. 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.
31. 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.

32. 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.
33. I. Fraser and W. MEIER-AUGENSTEIN: "Stable ^2H isotope analysis of human hair and nails can aid forensic human identification", *Rapid Commun. Mass Spectrom.*, **21**, 3279-3285, (2007); DOI: 10.1002/rcm.3209.
34. 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.
35. 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.
36. 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.
37. 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).
38. 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)
39. 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.
40. 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
41. L. Reidy, W. MEIER-AUGENSTEIN, and R.M. Kalin: " ^{13}C -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.
42. 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).
43. 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).

44. 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.
45. Houghton LA, Fell CE, MEIER-AUGENSTEIN W, Lawrie C, Cooper P, Whorwell PJ, Morris J.: "Can hypnosis be used to induce nausea and is this associated with delayed gastric emptying?", *Gastroenterology*; **124**, A674-A674, (2003).
46. 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).
47. 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).
48. 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).
49. W. MEIER-AUGENSTEIN, H. F. Kemp, J. F. Dillon and E. Henry: "A Novel ¹³CO₂ Breath Test for the Non-Invasive Assessment of Synthetic Liver Function *in-vivo*", *GUT*, **48**, Suppl. I, A105 (2001).
50. W. MEIER-AUGENSTEIN, H. F. Kemp and T. Preston: "A test meal suitable for measuring gastric emptying of solids by means of a [¹³C-1]-sodium acetate breath test", *Proc. Nutr. Soc.*, **60**, 9A (2001).
51. 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).
52. M. J. Rennie, S. Downie, M. Ahmed, J. N. A. Gibson and W. MEIER-AUGENSTEIN: "Measurement of collagen turnover using [¹⁵N] or [¹³C] proline by continuous flow combustion mass spectrometry", *Proc. Nutr. Soc.*, **56**, 222A (1997).
53. W. MEIER-AUGENSTEIN, P. W. Watt, and C.-D. Langhans: "Influence of Gas Chromatographic Parameters on Measurement of ¹³C/¹²C Isotope Ratios by Gas-Liquid-Chromatography - Combustion - Isotope Ratio Mass Spectrometry, I". *J. Chromatogr. A*, **752**, 233-241 (1996).
54. 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).

55. W. MEIER-AUGENSTEIN: "On-line Recording of $^{13}\text{C}/^{12}\text{C}$ Ratios and Mass Spectra in one Gas Chromatographic Analysis", *J. High Resolut. Chromatogr.*, **18**, 28-32 (1995).
56. W. MEIER-AUGENSTEIN, D. Rating, G. F. Hoffmann, U. Wendel, U. Matthiesen, and P. Schadewaldt: "Determination of ^{13}C Enrichment by Conventional GC-MS and GC-(MS)-C-IRMS", *Isotopes Environ. Health Stud.*, **31**, 261-266 (1995).
57. W. MEIER-AUGENSTEIN, A. Hess, G. F. Hoffmann, and D. Rating: "Evaluation of Water Removal and Memory Effect in $^{13}\text{CO}_2$ -Breath Tests by Isotope Ratio Mass Spectrometry", *Isotopes Environ. Health Stud.*, **30**, 349-358 (1994).
58. 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).
59. 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)
60. 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).
61. W. MEIER-AUGENSTEIN, G. F. Hoffmann, B. Holmes, J. L. Jones, W. L. Nyhan, and L. Sweetman: "Use of a Thick-Film Capillary Column for the Analysis of Organic Acids in Body Fluids", *J. Chromatogr. Biomed.*, **615**, 127-135 (1993).
62. 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).
63. 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).
64. 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).
65. 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).
66. P. Kallas, W. MEIER-AUGENSTEIN und H. Schildknecht: "Turgorine - neue Phytohormone", *Naturwissenschaftliche Rundschau*, **42**, 309-317 (1989).

Patents and Patent Applications:

1. W. MEIER-AUGENSTEIN: "Gas Inlet System", *Int. Patent Appl. No. PCT/GB96/03213; UK Patent Appl. No. 9526508.8; Publication No. WO 97/23770.*
2. W. MEIER-AUGENSTEIN, J.A. Cairns and J. Thomson: "Catalytic Conversion Interface", *Int. Patent Appl. No. PCT/GB02/00172; UK Patent Appl. No. GB0101164.2; Publication No. WO 02/057007 A2.*
3. W. MEIER-AUGENSTEIN: "Gastric Emptying Test", *Int. Patent Appl. No PCT/GB02/00528; UK Patent Appl. No. GB103097.2; Publication No. WO 02/062399 A1.*
4. W. MEIER-AUGENSTEIN: "Liver Function Test", *Int. Patent Appl. No PCT/GB02/01310; UK Patent Appl. No. GB106923.6; Publication No. WO 02/075320 A2.*
5. J. Thomson and W. MEIER-AUGENSTEIN: "CO₂ / NO_x Sensor", *Int. Patent Appl. No PCT/GB02/03888; UK Patent Appl. No. GB0120962.6; Publication No. WO 03/021245 A2.*
6. W. MEIER-AUGENSTEIN: "Method of Fabric Odour Detection"; *Int. Patent Appl. No. PCT/GB2004/00145.*
7. W. MEIER-AUGENSTEIN: "Breath Test Phenotyping for Adverse Drug Reactions"; *UK Patent Appl. GB0621829.1.*

LIST OF KEYNOTES, TALKS AND CONFERENCE PRESENTATIONS

- 1) **"Survival through Poison - Defence Mechanisms in Plants"**
17.05.1990; The South African Chemical Institute, Western Province Section; Meeting of Young Chemists, Cape Town, South Africa
- 2) **"Alternative Acidic Modifiers in HPLC Analyses"**
12.06.1990; ChromSA, The Chromatography Subject Section of the South African Chemical Institute CHROMSA, Western Cape Section, Research Institute for Nutritional Diseases, Tygerberg Hospital Campus, South Africa
- 3) **"Turgorins - A New Class of Phytohormones? The Chemical Power of Plant Movement"**
13.06.1990; Colloquium of the Department of Plant Physiology, University of Stellenbosch, South Africa
- 4) **"The Chemistry of *Mimosa pudica* L., a specific moving plant species"**
21.11.1990; The South African Chemical Institute, Western Province Section, Meeting of Young Chemists, Stellenbosch, South Africa
- 5) **"Turgorine - neue Phytohormone oder Phytotransmitter?"**
03.09.1991; Kolloquium des Bereichs Naturstoffchemie, Institut für Biochemie der Pflanze, Akademie der Wissenschaften, Halle/Saale, Germany
- 6) **"Konformationsänderung und intramolekulare Beweglichkeit von vollständig derivatisiertem -Cyclodextrin"**
20.08.1991; Seminar von Prof. Dr. K. Krohn, Universität und Gesamthochschule Paderborn, Germany
- 7) **"Biochemical Applications of GC - Combustion - Isotope Ratio Mass Spectrometry"**
21.09.1993; ChromSA, The Chromatography Subject Section of the South African Chemical Institute CHROMSA, Western Cape Section, Research Institute for Nutritional Diseases, Tygerberg Hospital Campus, South Africa
- 8) **"Ein- und zwei-dimensionale NMR-Untersuchungen an alkylierten -Cyclodextrinen"**
09.02.1994; Seminar von Prof. Dr. W. A. König, Organisch-Chemisches Institut, Universität Hamburg, Germany
- 9) **"Neue Techniken der Spurenanalyse mit modifizierten Cyclodextrinen und GC-C-IRMS"**
05.05.1994; Wissenschaftliches Kolloquium am Institut für Lebensmittelchemie, Prof. Dr. A. Mosandl, Universität Frankfurt, Germany
- 10) **"Comparing GC-C-IRMS to GC-MS in Determining $^{13}\text{C}/^{12}\text{C}$ Ratios of Short-Chain Ketocarboxylic Acids in Plasma"**
07.-08.07.1994; Stable Isotopes in Nutritional and Metabolic Research, 2nd World Conference, Erasmus University, Rotterdam, The Netherlands; conference presentation (reviewed).
- 11) **"Bestimmung der ^{13}C -Anreicherung mittels konventioneller GC-MS versus GC-C-IRMS: Erste Ergebnisse einer vergleichenden Studie"**
06.10.1994; Jahrestagung der Arbeitsgemeinschaft Stabile Isotope ASI, Kernforschungszentrum Jülich, Germany; conference presentation (reviewed).

- 12) **"Simultaneous Determination of ^{13}C Isotopic Enrichment and Recording of Mass Spectra in one Gas Chromatographic Analysis"**
08.-13.12.1994; ANALITIKA '94: Analytical Science - Towards the Welfare of People and the Environment, University of Stellenbosch, South Africa; invited conference presentation.
- 13) "Isotopic Fractionation: the devils you know and the ones you don't"
10.-12.01.1996; Second Annual Conference - Stable Isotope Mass Spectrometry Users Group SIMSUG, University of Wales - Bangor, Llandudno, United Kingdom; conference presentation.
- 14) "Eine Methode zur internen Isotopenkalibrierung"
02.10.1996; Jahrestagung der Arbeitsgemeinschaft Stabile Isotope ASI, Humboldt-Universität zu Berlin, Berlin, Germany; conference presentation (reviewed).
- 15) "A Reference Gas Inlet Module for Internal Isotopic Calibration in Continuous Flow - IRMS"
07.-08.01.1998; Third Annual Conference - Stable Isotope Mass Spectrometry Users Group SIMSUG, NERC Isotope Geosciences Laboratory - Nottingham, United Kingdom; conference presentation.
- 16) "The Flapjack: A ready-to-use, convenient and palatable test meal to assess gastric emptying of solids non-invasively via a breath test using [^{13}C -1]-sodium acetate as a probe - preliminary results."
28.-29.06.1999; BIOMED - SIGN Meeting, Royal Hospital for Sick Children, Yorkhill, University of Glasgow, United Kingdom; conference presentation.
- 17) **"Practical and meaningful breath tests for clinicians: Wishful thinking or reality?"**
08.10.1999; Yorkhill Research Seminar - "Early Origins of Health and Disease"; Royal Hospital for Sick Children, Yorkhill, University of Glasgow, United Kingdom.
- 18) "The Flapjack: A Convenient Test Meal to Assess Gastric Emptying of Solids Using a [^{13}C -1]-Sodium Acetate Based Breath Test"
18. - 19.01.2000; Annual Conference of SIMSUG, Insitute of Terrestrial Ecology, Merlewood Research Station, Grange-over Sands, United Kingdom; poster presentation.
- 19) **"The Chromatographic Side of High-Precision GC-C-IRMS"**
23.02.2000; SUERC Research Seminar; Scottish Universities Environmental Research Centre; East Kilbride, United Kingdom.
- 20) "A test meal suitable for measuring gastric emptying of solids by means of a [^{13}C -1]-sodium acetate breath test."
26. - 30.06.2000; Summer Meeting of The Nutrition Society - "Nutrition 2000 - Research Themes for the New Millenium"; University College Cork, Cork, Ireland; poster presentation (reviewed).
- 21) "A novel $^{13}\text{CO}_2$ breath test for the non-invasive assessment of synthetic liver function *in-vivo*"
16. - 17.01.2001; Annual Conference of SIMSUG, Scottish Universities Environmental Research Centre, University of Glasgow, Glasgow, United Kingdom; conference presentation.
- 22) "A novel $^{13}\text{CO}_2$ breath test for the non-invasive assessment of synthetic liver function *in-vivo*"
18. - 21.03.2001; Annual Meeting of the British Society of Gastroenterology, Glasgow, United Kingdom; poster presentation (reviewed).

23) "GC/C-IRMS: Potential and Pitfalls"

08. - 12.09.2001; Invited keynote lecture for the SIGN Symposium at the 2001 ESPEN Conference; Munich, Germany.

24) "Potential and Pitfalls of GC/C-IRMS"

25.10.2001; Invited talk for the "Biomedical Mass Spectrometry Unit Research Day" at the University of Newcastle, Newcastle, United Kingdom.

25) "Sequential Extracts of Human Bone Shows Differing Collagen Synthetic Rates", J. Babraj, D.J. Cuthbertson, P. Rickhuss, W. MEIER-AUGENSTEIN, K. Smith, and M.J. Rennie.
17. - 19.12.2001; Biochemical Society meeting, York, United Kingdom; conference presentation (reviewed).

26) "Myofibrillar protein synthesis and the activity of p70 s6 kinase in human quadriceps muscle after contractile activity with muscle shortening or stretching ", D.J. Cuthbertson, K. Smith, J. Babraj, T. Waddell, P.W. Watt, W. MEIER-AUGENSTEIN, M.J. Rennie, M. Hinsch and K. Esser.
17. - 19.12.2001; Physiological Society meeting, York, United Kingdom; poster presentation (reviewed).

27) "Lack of effect of creatine feeding on human muscle protein turnover in the rested condition, in both the post-absorptive and fed states", M. Louis, J. Poortmans, M. Francaux, E. Hultman, J. Berre, M. Boisseau, K. Smith, W. MEIER-AUGENSTEIN, J. Babraj, T. Waddell and M.J. Rennie.
17. - 19.12.2001; Physiological Society meeting, York, United Kingdom; conference presentation (reviewed).

28) "Direct, Functional and Non-Invasive Tests for Assessing Human Physiology and Metabolism *in vivo*".
31.08. - 01.09.2002; SIGN/EUROSTARCH meeting, Glasgow, United Kingdom; conference presentation.

29) "GC/C-IRMS: Potential and Pitfalls"

16. - 17.09.2002; Invited talk for the first conference of "The Network Developing Forensic Applications of Stable Isotope Mass Spectrometry"; Brands Hatch, Kent, United Kingdom.

30) "Sample Conversion at Temperatures well below Dumas-type Combustion for Compound Specific Isotope Analysis"
14. - 16.04.2003, Annual Conference of SIMSUG, School of Chemistry, University of Bristol, Bristol, United Kingdom; conference presentation.

31) "Can hypnosis be used to induce nausea and is this associated with delayed gastric emptying?" L.A. Houghton, C. Fell, W. MEIER-AUGENSTEIN, H.F. Kemp, P. Cooper, C.L. Lawrie, P.J. Whorwell, J. Morris.
21. - 24.03.2004; Annual Meeting of the British Society of Gastroenterology, Glasgow, United Kingdom; poster presentation (reviewed).

32) "Forensic Applications of Stable Isotope Technologies"
30.08. - 03.09.2004; Joint European Stable Isotope Users' Meeting (JESIUM), IAEA, Vienna; conference presentation.

- 33) "Forensic Stable Isotope Signatures from Biological and Non-Biological Materials"
08.03. – 10.03.2005; 2nd International Forensic Isotope Ratio Mass Spectrometry (FIRMS)
Network Conference, DSTL, Fort Halstead; conference presentation.
- 34) "Forensic Analysis of Safety matches". N.L. Farmer, W. Meier-Augenstein & R.M. Kalin
08.03. – 10.03.2005; 2nd International Forensic Isotope Ratio Mass Spectrometry (FIRMS)
Network Conference, DSTL, Fort Halstead; poster presentation.
- 35) "The Role of Stable Isotopes in Human Identification" I. Fraser, W. Meier-Augenstein &
R.M. Kalin.
08.03. – 10.03.2005; 2nd International Forensic Isotope Ratio Mass Spectrometry (FIRMS)
Network Conference, DSTL, Fort Halstead; poster presentation.
- 36) "The application of EA/IRMS to the stable isotope analysis of paint". L. Reidy, W. Meier-
Augenstein & R.M. Kalin.
08.03. – 10.03.2005; 2nd International Forensic Isotope Ratio Mass Spectrometry (FIRMS)
Network Conference, DSTL, Fort Halstead; poster presentation.
- 37) **"Forensic Application of Stable Isotope Signatures"**
31.03 – 02.04.2005; invited presentation for the 7th annual conference of the British
Association of Human Identification (BAHID), University College Dublin (ROI).
- 38) "Forensic Applications of IRMS." W. Meier-Augenstein & R.M. Kalin.
10.04. - 13.04.2005; Annual Conference of SIMSUG, hosted by the Stockholm Environment
Institute and the Environment Department at the University of York; conference presentation.
- 39) "A Stable Future for Forensic Chemistry: Identification of Human Bodies using Stable
Isotopes". I. Fraser, W. Meier-Augenstein & R.M. Kalin.
10.04. - 13.04.2005; Annual Conference of SIMSUG, hosted by the Stockholm Environment
Institute and the Environment Department at the University of York; poster presentation.
- 40) "Isotope Analysis of Wooden Safety matches". N.L. Farmer, W. Meier-Augenstein & R.M.
Kalin
10.04. - 13.04.2005; Annual Conference of SIMSUG, hosted by the Stockholm Environment
Institute and the Environment Department at the University of York; poster presentation.
- 41) "The application of stable isotope analysis to the forensic investigation of paint". L. Reidy,
W. Meier-Augenstein & R.M. Kalin.
10.04. - 13.04.2005; Annual Conference of SIMSUG, hosted by the Stockholm Environment
Institute and the Environment Department at the University of York; poster presentation.
- 42) "Isotope Analysis of Safety matches". Farmer, N.L., Meier-Augenstein, W., Kalin, R.M.
21.08. – 26.08.2005; 'Justice through Science', 17th Triannual Conference of the International
Association of Forensic Sciences, (IAFS 2005), Hong Kong; poster presentation.
- 43) "In-vivo Measurement of Colonic Butyrate Metabolism in Patients with active Ulcerative
colitis." D. McKay; S. J. Kirk; K. R. Gardiner; H. Kemp; W. Meier-Augenstein.
20 –25 May 2006; Digestive Disease Week, Los Angeles Convention Centre (USA).

- 44) **“Stable Isotope Profiling – A New Powerful Tool for Forensic Science and Human Identification?”**
13 – 16 June 2006, Keynote presentation at the 4th International Conference of the European Academy of Forensic Science (EAFS), Helsinki (Finland).
- 45) “In-vivo measurement of butyrate metabolism in patients active Ulcerative colitis – a pilot study.” D. McKay*; S. J. Kirk; K. R. Gardiner; H. Kemp; W. Meier-Augenstein.
03 – 06 July 2006; Annual Meeting of The Association of Coloproctology of Great Britain and Ireland, Gateshead (UK).
- 46) **“Forensic Isotope Ratio Mass Spectrometry”**
15 March 2007, invited presentation at an one day RSC and SCI joint event on ‘Modern Techniques in Forensic Analysis’ hosted by the Dublin Institute of Technology, Dublin, ROI.
- 47) **“Human Identification: It’s Elemental”**
12 – 14 April 2007, opening Keynote presentation at the 9th International Conference of the British Association for Human Identification (BAHID, University of Surrey, Guildford (UK).
- 48) **“SIF – Stable Isotope Fingerprinting”**
26 – 29 November 2007; Keynote address at the 3rd International Conference on Forensic Isotope Ratio Mass Spectrometry (FIRMS), University of Otago, Dunedin, New Zealand.
- 49) “A potentially compounding factor affecting ²H isotope analysis of explosives by TC/EA-IRMS (and nitrogen rich compounds in general)”
26 – 29 November 2007; oral presentation at the 3rd International Conference on Forensic Isotope Ratio Mass Spectrometry (FIRMS), University of Otago, Dunedin, New Zealand.
- 50) “IRMS Potential in a Forensic Context: An MDMA Profiling Example”
poster presentation; H A S Buchanan*, N Nic Daeid, W J Kerr, W Meier-Augenstein, M Middleditch, Forensic Science Society AGM, Wyboston, England, UK, Oct 31, 2008
- 51) “IRMS Potential in a Forensic Context: An MDMA Profiling Example”
poster presentation; H A S Buchanan*, N Nic Daeid, W J Kerr, W Meier-Augenstein, M Middleditch, Scottish Institute for Policing Research (SIPR) Conference, Edinburgh, Scotland, UK, Sept 2, 2008
- 52) “Emerging Use of Isotope Ratio Mass Spectrometry as a Tool for Discrimination of MDMA by Synthetic Route”
oral presentation; H A S Buchanan*, N Nic Daeid, W Meier-Augenstein, H F Kemp, W J Kerr, M Middleditch, International Association of Forensic Scientists (IAFS), New Orleans, Louisiana, USA, July 21-26, 2008
- 53) “Emerging Use of Isotope Ratio Mass Spectrometry as a Tool for Discrimination of MDMA by Synthetic Route”
oral presentation; H A S Buchanan*, N Nic Daeid, W Meier-Augenstein, H F Kemp, W J Kerr, M Middleditch, United States Drug Enforcement Agency, Special Testing and Research Facility, Dulles, Virginia, USA, July 17, 2008

- 54) “Emerging Use of Isotope Ratio Mass Spectrometry as a Tool for Discrimination of MDMA by Synthetic Route”
poster presentation; H A S Buchanan*, N Nic Daeid, W Meier-Augenstein, H F Kemp, W J Kerr, M Middleditch, WestCHEM Research Day – Organic Colloquia, University of Strathclyde, Glasgow, Scotland, UK, June 20, 2008
- 55) “Emerging Use of Isotope Ratio Mass Spectrometry as a Tool for Discrimination of MDMA by Synthetic Route”
poster presentation; H A S Buchanan*, N Nic Daeid, W Meier-Augenstein, H F Kemp, W J Kerr, M Middleditch, WestCHEM Research Day, University of Glasgow, Glasgow, Scotland, UK, May 30, 2008
- 56) “Field scale spatial distribution of soil $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ under permanent grassland”
poster presentation; E R Dixon*, D Junquera, A Martinez, M S A Blackwell, H Kemp, W Meier-Augenstein, A Duffy, R Bol, BMSS/SIMSUG 2009, Glasgow, Scotland, UK, Jan 14/15, 2009
- 57) “The hydrological response of heavy clay soils to rainfall as assessed using $\delta^2\text{H}$ ”
poster presentation; R Bol, S Granger*, W Meier-Augenstein, H Kemp, BMSS/SIMSUG 2009, Glasgow, Scotland, UK, Jan 14/15, 2009
- 58) “Butyrate Metabolism in Quiescent *Ulcerative colitis*”
poster presentation; D McKay*, S Kirk, K Gardiner, W Meier-Augenstein; Canadian Digestive Disease Week 2009, Banff, Alberta, Feb 27 – March 2, 2009.
- 59) “**Human Provenancing: It’s Elemental**”
19 - 24 April 2009, Keynote presentation at the EGU General Assembly 2009, Vienna, Austria.
- 60) “**CSI – Crime & Stable Isotopes**”
30 August – 2 September 2009, opening Plenary presentation at the International Mass Spectrometry Conference (IMSC) 2009, Bremen, Germany.
- 61) “Human Provenancing Based on Stable Isotope Forensic Intelligence”
08 – 11 September 2009, oral presentation at the EAFS Conference 2009, Glasgow, UK.
- 62) “An investigation into the power of IRMS to discriminate batches of MDMA by synthetic route”
08 – 11 September 2009, oral presentation: H A S Buchanan*, N Nic Daeid, W Meier-Augenstein, H F Kemp, W J Kerr, M Middleditch; EAFS Conference 2009, Glasgow, UK.
- 63) “**CSI – Crime & Stable Isotopes**”
17 March 2010, Plenary lecture at the AGM of the Royal Society Chemistry Analytical Division – Scotland, Aberdeen, UK.
- 64) “Isotopic evidence for the provenance and turnover of organic carbon by soil microorganisms in the Antarctic dry valleys.”
28 - 29 April 2010, oral presentation, Hopkins, D.W.*, Sparrow, A.D., Gregorich, E.G., Elberling, B., Novis, P., Fraser, F., Scrimgeour, C.M., Dennis, P.G., Meier-Augenstein, W. & Greenfield, L.G.: 2010 *UK Stable Isotope Mass Spectrometry Users Group*, Exeter.

- 65) “ ^{2}H stable isotope analysis of human tooth enamel: a new tool to extract forensic information from human remains?”
02 – 07 May 2010, poster presentation, A Holobinko*, W Meier-Augenstein, H F Kemp, T Prowse, S M Ford: EGU General Assembly 2010, Vienna, Austria.
- 66) “**Stable Isotopes and Human Provenancing**”
21 June 2010, invited presentation: Human Provenancing Seminar, The Scottish Institute for Policing Research, Edinburgh, UK.
- 67) “Human Provenancing: It’s Elemental...Aiding Victim Identification through Stable Isotope Records of Diet and Geographic Provenance in Human Remains”
14 - 15 September 2010, poster presentation, W. Meier-Augenstein* and Helen F Kemp: The SPSA / SIPR Conference “New Developments in Forensic Science”, Dundee UK.
- 68) “Stable Isotope Profiles from a Lock of Hair Provide Information of Illegal People Trafficking Route used by a Vietnamese Organised Crime Group”
14 - 15 September 2010, poster presentation, W. Meier-Augenstein*, Helen F Kemp, I. Brewster and G. Ronayne: The SPSA / SIPR Conference “New Developments in Forensic Science”, Dundee UK.
- 69) “ ^{2}H stable isotope analysis of human tooth enamel: a new tool to extract forensic information from human remains?”
27 – 30 October 2010, poster presentation, A Holobinko*, W Meier-Augenstein, H F Kemp, T Prowse, S M Ford: 38th Annual Conference of the Canadian Association for Physical Anthropology, Saskatoon, Canada.