

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. W. MEIER-AUGENSTEIN: "Forensic Isotope Analysis" in **McGraw-Hill Yearbook of Science & Technology 2014**, accepted.
3. W. MEIER-AUGENSTEIN and H.F. Kemp (2012): "Stable Isotope Analysis: General Principles and Limitations" in **Wiley's Encyclopaedia of Forensic Science 2nd Ed.**, by A. Jamieson and A. Moenssens [eds.]; Wiley-Blackwell; fsa1041; DOI: 10.1002/9780470061589; Online ISBN: 9780470061589.
4. W. MEIER-AUGENSTEIN and H.F. Kemp (2012): "Stable Isotope Analysis: Bone and Teeth" in **Wiley's Encyclopaedia of Forensic Science 2nd Ed.**, by A. Jamieson and A. Moenssens [eds.]; Wiley-Blackwell; fsa1042; DOI: 10.1002/9780470061589; Online ISBN: 9780470061589.
5. W. MEIER-AUGENSTEIN and H.F. Kemp (2012): "Stable Isotope Analysis: Hair and Nails" in **Wiley's Encyclopaedia of Forensic Science 2nd Ed.**, by A. Jamieson and A. Moenssens [eds.]; Wiley-Blackwell; fsa1043; DOI: 10.1002/9780470061589; Online ISBN: 9780470061589.
6. James F. Carter and W. MEIER-AUGENSTEIN (2012): "Stable Isotope Analysis: Drugs" in **Wiley's Encyclopaedia of Forensic Science 2nd Ed.**, by A. Jamieson and A. Moenssens [eds.]; Wiley-Blackwell; fsa1065; DOI: 10.1002/9780470061589; Online ISBN: 9780470061589.
7. 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.
8. 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.
9. 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.

10. 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.
11. 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.
12. 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.
13. 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.
14. 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)

15. W. MEIER-AUGENSTEIN, K.A. Hobson and L.I. Wassenaar: "Critique: Measuring Hydrogen Stable Isotope Abundance of Proteins to Infer Origins of Wildlife, Food, and People", *Bioanalysis*, (2013), in press.
16. H.F. Kemp and W. MEIER-AUGENSTEIN: "Human Provenancing of Mutilated Murder Victims through Stable Isotope Signatures", *Minerva Medicolegale*, **129**, 219-231 (2009).
17. W. MEIER-AUGENSTEIN: "Stable Isotopic Analysis of Fatty Acids by Gas Chromatography - Isotope Ratio Mass Spectrometry", *Anal. Chim. Acta*, **465**, 63-79, (2002).
18. W. MEIER-AUGENSTEIN: "Applied Gas Chromatography coupled to Isotope Ratio Mass Spectrometry", *J. Chromatogr. A.*, **842**, 351-371 (1999).
19. 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).
20. 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.]

21. 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

22. N. NicDaéid, S. Jayamana, W.J. Kerr, W. MEIER-AUGENSTEIN and H.F. Kemp (2013): "Influence of precursor solvent extraction on stable isotopic signatures of methamphetamine prepared from pseudo-ephedrine extracted from over-the-counter medicines using the Moscow and Hypophosphorous routes"; *Anal. Bioanal. Chem.*; DOI: 10.1007/s00216-012-6600-8.
23. S. Cocito, C. Ferrier-Pagès, R. Cupido, C. Rottier, W. MEIER-AUGENSTEIN, H. Kemp, S. Reynaud and A. Peirano (2013): "Nutrient acquisition in four Mediterranean gorgonian species."; *Marine Ecology Progress Series*, **473**, 179-188; DOI: 10.3354/meps10037.
24. N. NicDaéid, W. MEIER-AUGENSTEIN, H.F. Kemp and O.B. Sutcliffe (2012): "Using isotopic fractionation to link precursor to product in the synthesis of (\pm)-mephedrone. A new tool for combating 'legal high' drugs"; *Anal. Chem.*, **84**, 8691-8696; DOI: 10.1021/ac3019069.
25. M. Pilot, W. Jedrzejewski, V. E. Sidorovich, W. MEIER-AUGENSTEIN, and A. R. Hoelzel (2012): "Dietary differentiation and the evolution of population genetic structure in a highly mobile carnivore"; *PLoS ONE*; **7**, e39341; DOI: 10.1371/journal.pone.0039341.
26. E. Minet, C.E. Coxon, R. Goodhue, K.G. Richards, R.M. Kalin and W. MEIER-AUGENSTEIN (2012): "Evaluating the utility of ^{15}N and ^{18}O isotope abundance analyses to identify nitrate sources: a soil zone study"; *Water Research*, **46**, 3723-3736; DOI: 10.1016/j.watres.2012.03.004.
27. W. MEIER-AUGENSTEIN, H.F. Kemp and S. Hardy (2012): "Detection of Counterfeit Scotch Whisky by Bulk ^2H and ^{18}O Stable Isotope Analysis"; *Food Chemistry*, **133**, 1070-1074; DOI: 10.1016/j.foodchem.2012.01.084.
28. H. A. S. Buchanan, N. Nic Daéid, W. J. Kerr and W. MEIER-AUGENSTEIN (2011): "Organic Impurities, Stable Isotopes, or Both: A Comparison of Instrumental and Pattern Recognition Techniques for the Profiling of 3,4-Methylenedioxymethamphetamine"; *Anal. Methods*, **3**, 2279-2288; DOI: 10.1039/c1ay05088e.
29. W. MEIER-AUGENSTEIN, M. M. G. Chartrand, H. F. Kemp, and G. St-Jean (2011): "An Inter-Laboratory Comparative Study into Sample Preparation for both Reproducible and Repeatable Forensic ^2H Isotope Analysis of Human Hair by Continuous Flow – Isotope Ratio Mass Spectrometry"; *Rapid Commun. Mass Spectrom.*, **25**, 3331-3338; DOI: 10.1002/rcm.5235.
30. N. Nic Daéid, W. MEIER-AUGENSTEIN and H.F. Kemp (2011): "Investigating the provenance of un-dyed spun cotton fibre using multi-isotope profiles and chemometric analysis"; *Rapid Commun. Mass Spectrom.*, **25**, 1812-1816; DOI: 10.1002/rcm.5046.

31. E. Minet, R. Goodhue, C. E. Coxon, R. M. Kalin and W. MEIER-AUGENSTEIN (2011): Simplifying and improving the extraction of nitrate from freshwater for stable isotope analyses“; *Journal of Environmental Monitoring*, **13**, 2062-2066; DOI: 10.1039/C1EM10289C.
32. A. Holobinko, W. MEIER-AUGENSTEIN, H.F. Kemp, T. Prowse, and S.M. Ford (2011): “²H Stable Isotope Analysis of Human Tooth Enamel: A New Tool for Forensic Human Provenancing?”; *Rapid Commun Mass Spectrom.*, **25**, 910-916; DOI: 10.1002/rcm.4942.
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35. S.M. Mudge, C. Eadsforth, P. DeLeo and W. MEIER-AUGENSTEIN (2010): “What contribution do detergent fatty alcohols make to sewage discharges and the marine environment?”, *Journal of Environmental Monitoring*, **12**, 1846-1856; DOI: 10.1039/C0EM00079E.
36. B. Foereid, J. Bellarby, W. MEIER-AUGENSTEIN and H. Kemp (2010): “Light exposure makes plant litter more degradable”, *Plant and Soil*; **333**, 275-285; DOI: 10.1007/s11104-010-0342-1.
37. E. Henton, W. MEIER-AUGENSTEIN and H.F. Kemp (2010): “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; DOI: 10.1111/j.1475-4754.2009.00492.x.
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39. 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 (2010): “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; DOI: 10.1002/rcm.4345.
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41. N. Farmer, J. Curran, D. Lucy, N. NicDaeid, and W. MEIER-AUGENSTEIN (2009): “Stable Isotope Profiling of Burnt Wooden Safety Matches”, *Science & Justice*, **49**, 107-113, DOI: 10.1016/j.scijus.2009.03.007.

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43. 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 (2009): "Isotopic evidence for the provenance and turnover of organic carbon by soil microorganisms in the Antarctic dry valleys", *Environmental Microbiology* **11**, 597-608, DOI:10.1111/j.1462-2920.2008.01830.x.
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45. 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.
46. 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.
47. 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.
48. 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.
49. 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.
50. 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.
51. 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.
52. 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.

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54. 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
55. 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.
56. 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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61. W. MEIER-AUGENSTEIN: "On-line Recording of ¹³C/¹²C Ratios and Mass Spectra in one Gas Chromatographic Analysis", *J. High Resolut. Chromatogr.*, **18**, 28-32 (1995).
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65. 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)
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73. W. MEIER-AUGENSTEIN, N. Nic Daéid, and H.F. Kemp (2012): "Investigating the origin of cotton in yarn using multivariate isotope profiles"; *Proceedings of the 31st International Cotton Conference Bremen 2012* by F. Marquard [ed.]; Faserinstitut Bremen eV & Bremer Baumwollbörse.
74. 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.
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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 β -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 β -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, Institute 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 Millennium"; 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/EUROSTARARCH 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) “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
- 51) “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
- 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, United States Drug Enforcement Agency, Special Testing and Research Facility, Dulles, Virginia, USA, July 17, 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, International Association of Forensic Scientists (IAFS), New Orleans, Louisiana, USA, July 21-26, 2008

- 54) “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
- 55) “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
- 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 SIMSUG conference, Exeter, UK.
- 65) “ ^2H 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) “From the mountains to the sea: stable isotope data on animals and humans in Mesolithic Cantabria, northern Spain”
13 – 17 September 2010, oral presentation, Pablo Arias, Rick Schulting*, Mike Richards, Wolfram Meier-Augenstein: MESO 2010 – The 8th International Conference on the Mesolithic in Europe, Santander, Spain.
- 70) “²H 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.
- 71) “Hydrogen, Oxygen and Strontium isoscapes for provenancing in Europe”
04 – 08 April 2011, oral presentation, Jurian Hoogewerff*, Aaron Clayton, Henriette Ueckermann, Robert Posey, Hilary Bathgate, Clemens Reimann, and Wolfram Meier-Augenstein : EGU General Assembly 2011, Vienna, Austria.
- 72) “A New Approach to Calculating the Non-exchangeable ²H Isotopic Composition of Hair and the Procedural Fractionation Factor by Treating the Molar Exchange Fraction as a Process Related Variable”
04 – 08 April 2011, oral presentation, Wolfram Meier-Augenstein*, Jurate Landwehr and Helen Kemp: EGU General Assembly 2011, Vienna, Austria
- 73) “²H Stable Isotope Analysis of Human Tooth Dentine: A Pilot Study”
04 – 08 April 2011, poster presentation, Anastasia Holobinko*, Wolfram Meier-Augenstein*, Helen Kemp, Tracey Prowse and Henry Schwarcz: EGU General Assembly 2011, Vienna, Austria
- 74) “Detection of Counterfeit Scotch Whisky by ²H and ¹⁸O Stable Isotope Analysis to Determine Provenance.”
04 – 08 April 2011, poster presentation, Wolfram Meier-Augenstein*, Helen Kemp and Susie Fawley: EGU General Assembly 2011, Vienna, Austria

- 75) “Stable Isotope Profiles from a Lock of Hair Provide Information of Illegal People Trafficking Route used by a Vietnamese Organised Crime Group.”
04 – 08 April 2011, poster presentation, Wolfram Meier-Augenstein*, Helen Kemp, Ian Brewster, and Geoff Ronayne: EGU General Assembly 2011, Vienna, Austria
- 76) “Forensic identification of the anthropogenic contribution of fatty alcohols to the environment by stable isotope analysis.”
04 – 08 April 2011, poster presentation, Stephen Mudge, Paul de Leo, Wolfram Meier-Augenstein*, and Charles Eadsforth: EGU General Assembly 2011, Vienna, Austria.
- 77) “Irish case report on the multidisciplinary approach towards identification of a human skull recovered from the sea.”
09 April 2011, oral presentation, Kealy, Gerard*; Gapert, René; Buckley, Laureen; Cassidy, Marie; McNulty, Jonathan; Wright, Richard; Foyle, Robin; Meier-Augenstein, Wolfram; Kemp, Helen; Wilkinson, Caroline; Rynn, Christopher; Clifford, Stephen: BAHID conference 2011, Manchester, UK.
- 78) “Investigation into Mummies from the Atacama Desert, Chile: Did they suffer from arsenic poisoning?”
28 August – 2 September 2011, oral presentation, Eva M. Krupp*, Patrick Leidich, Andrea Raab, Wolfram Meier-Augenstein, Helen Kemp, Susana Stegen, Fabrizio Quirolo, Mark Hubbe and Joerg Feldmann: Colloquium Spectroscopicum Internationale XXXVII, 2011, Buzio, Rio de Janeiro, Brazil.
- 79) “²H Stable Isotope Analysis of Human Tooth Dentine: A Pilot Study”
25 – 26 September 2011, poster presentation, Anastasia Holobinko*, Wolfram Meier-Augenstein, Helen Kemp, Tracey Prowse and Henry Schwarcz: Isoscapes 2011, Discovery Park, Purdue University, West Lafayette, USA.
- 80) “Tackling the forensic analytical challenges associated with the global increase in seizures of cathinone-derived ‘legal highs’”
28 August – 1 September 2011, oral presentation, Oliver Sutcliffe*, Niamh Nic Daéid, Wolfram Meier-Augenstein and Helen Kemp: 242nd National Meeting & Exposition of the American Chemical Society (ACS), Denver, Colorado, USA.
- 81) **“Human Provenance and Drug Profiling based on Stable Isotope Signatures”**
10 December 2011, invited presentation: “Sex, Drugs and ...”, one-day conference of the Forensic Science Society, Aberdeen, UK.
- 82) **“Investigating the origin of cotton in yarn using multivariate isotope profiles”**
21 – 24 March 2012, invited presentation, Wolfram Meier-Augenstein*, Niamh Nic Daéid, and Helen F. Kemp: 31st International Cotton Conference Bremen 2012, Bremen, Germany.
- 83) “The First Detailed ²H and ¹⁸O Isoscapes of Freshwater in Scotland”
22 – 28 April 2012, poster presentation, Wolfram Meier-Augenstein*, Jurian Hoogewerff, Helen F. Kemp and Danny Frew: EGU General Assembly 2012, Vienna, Austria.
- 84) “Multivariate Stable Isotope Analysis to Determine Linkages between Benzocaine Seizures”
22 – 28 April 2012, poster presentation, Helen F. Kemp*, Wolfram Meier-Augenstein, Michael Collins, Helen Salouros, Andrew Cunningham and Mark Harrison: EGU General Assembly 2012, Vienna, Austria.

- 85) “Determination of geographic provenance of cotton fibres using multi-isotope profiles and multivariate statistical analysis”
22 – 28 April 2012, poster presentation, Niamh NicDaeid*, Helen F. Kemp and Wolfram Meier-Augenstein: EGU General Assembly 2012, Vienna, Austria.
- 86) “Rising to the Forensic Analytical Challenges Associated with the Global Increase in Seizures of Cathinone-derived ‘Legal Highs’”
22 – 28 April 2012, poster presentation, Oliver B. Sutcliffe*, Niamh NicDaeid, Helen F. Kemp and Wolfram Meier-Augenstein: EGU General Assembly 2012, Vienna, Austria.
- 87) “Methylamphetamine synthesized from cold medication as precursor source via two different routes show significantly different stable isotope signatures”
22 – 28 April 2012, poster presentation, S. Jayaram*, Niamh NicDaeid, William J. Kerr, Helen F. Kemp and Wolfram Meier-Augenstein: EGU General Assembly 2012, Vienna, Austria.
- 88) “Analyses of phosphates stable oxygen isotope composition using high-temperature conversion - standards selection and calibration.”
24 – 29 June 2012, oral presentation, G. Skrzypek*, R. Sadler, S. Halas, W. Meier-Augenstein, A. Pelc, H.F. Kemp: IsoPhos 2012, ETH Zürich, Switzerland.
- 89) “The Efficacy of Isotope Ratio Mass Spectrometry to Link Precursor to Final Products in the Cathinone-derived ‘Legal High’ Drugs.”
20 – 24 August 2012, poster presentation, N Nic Daeid, H Kemp, W Meier-Augenstein and O Sutcliffe: 6th European Academy of Forensic Science (EAFS) Conference 2012, The Hague, Netherlands.
- 90) “Profiling methylamphetamine synthesized using precursors extracted from proprietary cold medication via the "Hypo and Moscow" route – part 2: IRMS.”
20 – 24 August 2012, poster presentation, N Nic Daeid, W Meier-Augenstein and H Kemp: 6th European Academy of Forensic Science (EAFS) Conference 2012, The Hague, Netherlands.
- 91) “Geographical provenancing of cotton fibres using multi-isotope profiles.”
20 – 24 August 2012, poster presentation, S Jayaram, N Nic Daeid, W Kerr, W Meier-Augenstein and H Kemp: 6th European Academy of Forensic Science (EAFS) Conference 2012, The Hague, Netherlands
- 92) “**Ten Years of “Forensic” Stable Isotope Analysis: The Good, The Bad and The Ugly**”
03 – 07 September 2012, Keynote presentation for Session 9 at the Joint European Stable Isotope User Meeting (JESIUM) 2012, Umweltforschungszentrum (UFZ) Leipzig, Germany.
- 93) “**Stable Isotope Forensics: provenancing Pharmaceuticals, Drugs and People**”
09 – 13 September 2012, invited opening lecture for Session 12 at the 11th International Symposium on the Synthesis and Applications of Isotopes and Isotopically Labelled Compounds (IIS) 2012, University of Heidelberg, Germany.