

Publication List

Single Authored Book

D. O'Hagan

'The Polyketide Metabolites' published September 1991 by Ellis Horwood Ltd, Chichester.

Papers in Peer Reviewed Journals (Chronological)

1. D. O'Hagan, J.A. Robinson and D.L. Turner
Biosynthesis of the Macrolide Antibiotic Tylosin. Origin of the Oxygen Atoms of Tylactone.
J.C.S. Chem. Commun., 1983, 1337-1340.
2. D. Gani, D. O'Hagan, K. Reynolds and J.A. Robinson
Biosynthesis of the Polyether Antibiotic Monensin-A. Stereochemical Aspects of the Incorporation and Metabolism of Isobutyrate.
J.C.S. Chem. Commun., 1985, 1002-1004.
3. K. Reynolds, D. O'Hagan, D. Gani and J.A. Robinson
Butyrate Metabolism in Streptomyces. Characterisation of an Intramolecular Vicinal Interchange Rearrangement Linking Iso-butyrate and *n*-Butyrate in *Streptomyces cinnamoneus*.
J.C.S. Perkin Trans. I, 1988, 3195-3207.
4. D. O'Hagan
Structural and Stereochemical Homology between the Macrolide and Polyether Antibiotics.
Tetrahedron, 1988, **44**, 1691-1696.
5. R.D. Chambers, R. Jaouhari and D. O'Hagan
Synthesis of a Difluoromethylenephosphonate Analogue of Glycerol-3-Phosphate. A Substrate for NADH Linked G-3-P Dehydrogenase.
J.C.S. Chem. Commun., 1988, 1169-1170.
6. D. O'Hagan
The Polyether and Macrolide Antibiotics. Biogenetic Analysis and Structural Correlations.
Nat. Prod. Rep., 1989, **6**, 205-219.
7. D. O'Hagan
Preparation of Monofluorocarboxylic Acids Using N,N-Diethyl-1,1,2,3,3,3-Hexafluoropropylamine.
J. Fluorine Chem., 1989, **43**, 371-377.
8. R.D. Chambers, R. Jaouhari and D. O'Hagan
Fluorine in Enzyme Chemistry: Part 1. Synthesis of Difluoromethylenephosphonate Derivatives as Phosphate Mimics.
J. Fluorine Chem., 1989, **44**, 275-284.
9. R.D. Chambers, R. Jaouhari and D. O'Hagan
Fluorine in Enzyme Chemistry: Part 2. The Preparation of Difluoromethylenephosphonate Analogues of Glycolytic Phosphates. Approaching an Isosteric and Isoelectronic Phosphate Mimic.
Tetrahedron, 1989, **45**, 5101-5108.
10. P. Zhou, D. O'Hagan, U. Mocck, Z. Zeng, L-D. Yuen, T. Frenzel, C.J. Unkefer, J.M. Beale and H.G. Floss
Biosynthesis of the Antibiotic Thiostrepton. Methylation of Tryptophan in the Formation of the Quinaldic Acid Moiety by Transfer of the Methionine Methyl Group with Net Retention of Configuration.
J. Am. Chem. Soc., 1989, **111**, 7274-7276.
11. D. O'Hagan
Evolution of the Polyketide Metabolites.
Chem. Br., 1990, **26**, 246-250.

12. R.D. Chambers, D. O'Hagan, R.B. Lamont and S.C. Jain
 The Difluoromethylenephosphonate Moiety as a Phosphate Mimic: X-ray Structure of 2-Amino-1,1-difluorophosphonic Acid.
J. Chem. Soc. Chem. Commun., 1990, 1053-1054.
13. D.B. Harper, J.T. Hamilton and D. O'Hagan
 Identification *Threo*-18-Fluorodihydroxystearic Acid: A Novel ω -Fluorinated Fatty Acid from *Dichapetalum toxicarium* Seeds.
Tetrahedron Letts., 1990, **31**, 7661-7662.
14. R.J. Cox and D. O'Hagan
 Synthesis of Isotopically Labelled 3-Amino-2-Phenylpropionic Acid and its Role as a Precursor in the Biosynthesis of Tenellin and Tropic Acid.
J. Chem. Soc. Perkin Trans. I, 1991, 2537-2540.
15. J.J.M. Meyer and D. O'Hagan
 Conversion of Fluoropyruvate to Fluoroacetate by *Dichapetalum cymosum*.
Phytochemistry, 1992, **31**, 499-501.
16. J.J.M. Meyer and D. O'Hagan
 The Biosynthesis of Fluoroacetate in *D. cymosum* (Hook) Engl. The Conversion of 3-Fluoropyruvate to Fluoroacetate in a Cell Free Extract.
Phytochemistry, 1992, **31**, 2699-2701.
17. D. O'Hagan and N. A. Zaidi
 Hydrolytic Resolution of Tertiary Acetylenic Acetate Esters with the Lipase From *Candida cylindracea*.
J. Chem. Soc. Perkin. Trans. I., 1992, 947-948.
18. D. O'Hagan, S.V. Rogers, G.R. Duffin and R.L. Edwards
 Biosynthesis of the Fungal Polyketide, Cubensis Acid from *Xylaria cubensis*
Tetrahedron Letts., 1992, **33**, 5585-5588.
19. J.J.M. Meyer and D. O'Hagan
 The Rare Fluorinated Natural Products
Chem. Br., 1992, **28**, 785-788.
20. D. O'Hagan
 Biosynthesis of The Polyketide Metabolites
Nat. Prod. Reports, 1992, **9**, 447-480.
21. V.F. Hogan, D. O'Hagan and J. Sanvoisin
 Rate Enhancement of the *Candida cylindracea* Lipase Catalysed Transesterifications in Organic Solvents: Enzymatic Reactions Below Zero.
Ind. J. Chem Section (B)., 1992, **31**, 883-885.
22. U. Mocek, J. M. Beale, T. Frenzel, D. R. Houck, D. O'Hagan, R. Tsuchiya, L-D Yuen, Z-P Zeng, P. Zhou and H. G. Floss
 Amino Acid Modification in the Biosynthesis of Thiopeptide Antibiotics, p77-89, in *Frontiers and New Horizons In Amino Acid Research*, Ed. K. Takai, Elsevier, Tokyo, 1992.
23. D. O'Hagan, R. Perry, J.M. Lock, J.J.M. Meyer, L. Dasaradhi, J.T.G. Hamilton and D.B. Harper*
 The Identification of Exceptionally High Levels of Monofluoroacetate in *Dichapetalum braunii* from Southeastern Tanzania.
Phytochemistry, 1993, **33**, 1043-1046
24. D. Bailey, D. O'Hagan, U. Dyer and R.B. Lamont
 Preparation of Highly Enantiopure Pyridylethanols by Bakers' Yeast Reductions.
Tetrahedron Asymmetry, 1993, **4**, 1255-1258.

25. D. O'Hagan
The Biosynthesis of the Fatty acid and Polyketide Metabolites.
Nat. Prod. Reports, 1993, **6**, 593-624.
26. O. Casher, D. O'Hagan, C.A. Rosenkranz, H.S. Rzepa and N.A. Zaidi
Electronic Effects in π -Facial Selective Epoxidation of 1-Phenyl-1-trifluoromethyl-2-propene-1-ol.
J. Chem. Soc. Chem. Commun., 1993, 1337-1340.
27. D. O'Hagan, N.A. Zaidi and R.B. Lamont
The Synthesis of (*R*)- γ -Phenyl- γ -(trifluoromethyl)-butyrolactone and (*2R,3S*)-1,1,1-Trifluoro-2-methoxy-2-phenyl-3,4-epoxybutane in Homochiral Forms.
Tetrahedron Asymmetry, 1993, **4**, 1703-1708.
28. L. Dasaradhi and D. O'Hagan
The effect of aryl fluorines in a lipase resolution.
Bio & Med. Chem. Letts., 1993, **3**, 1655-1658.
29. U. Mocek, Z. Zeng, D. O'Hagan, P. Zhou, L-D G. Fan, J. M. Beale and H. G. Floss
Biosynthesis of the Modified Peptide Antibiotic Thiostrepton in *Streptomyces azureus* and *S. treptomyces laurentii*.
J. Am. Chem. Soc., 1993, **115**, 7992-8001.
30. D. O'Hagan and N. A. Zaidi
Polymerisation of 10-Hydroxydecanoic Acid With the Lipase From *Candida cylindracea*.
J. Chem. Soc. Perkin Trans. I., 1993, 2389-2390.
31. D. O'Hagan and H. S. Rzepa
The Stereoelectronic Influence of Fluorine in Enzyme Resolutions of α -Fluoro Esters
J. Chem. Soc. Perkin Trans. 2., 1994, 3-4.
32. D. B. Harper and D. O'Hagan
The Fluorinated Natural Products
Nat. Prod. Reports, 1994, **11**, 123-134.
33. D. O'Hagan* and N. A. Zaidi
A Comparison of the Properties of Methacrylate Polymers Derived From Racemic and Homochiral Monomers Containing a Trifluoromethyl Group at a Tertiary Stereogenic Centre.
Makromol. Chem., Macromol. Symp. 1994, **82**, 57-60.
34. N.C.J.E. Chesters, D. O'Hagan and R. J. Robins
The Biosynthesis of Tropic Acid In Plants. Evidence for the Direct Rearrangement of 3-Phenyllactate to Tropate.
J. Chem. Soc. Perkin Trans., I, 1994, 1159-1162.
35. D. O'Hagan and N. A. Zaidi
The Resolution of α -Acetylene- Acetate Esters by the Lipase from *Candida cylindracea*.
Tetrahedron Asymmetry, 1994, **5**, 1111-1118.
36. D. O'Hagan and N. A. Zaidi
Enzyme Catalysed Condensation Polymerisation (ECCP) of 11-Hydroxyundecanoic acid With the Lipase From *Candida cylindracea*.
Polymer, 1994, **35**, 3577-3578.
37. D. O'Hagan, J. White and D. A. Jones
Efficient Routes To Isotopically Labelled Epichlorohydrins ((Chloromethyl) oxiranes).
J. Labelled Compd. Radiopharm., 1994, **34**, 871-880.
38. D. O'Hagan, S. V. Rogers, K. A Reynolds and G. R. Duffin
The Incorporation of Thymine and β -Aminoisobutyrate into the Polyether Antibiotic, Monensin-A.
J. Chem. Soc. Chem. Commun., 1994, 1577-1578.

39. D. O'Hagan and H. S. Rzepa
Stereospecific Control of the Citrate Synthase Mediated Synthesis of (*2R,3R*) 3-Fluorocitrate by the Relative Stabilities of the Intermediate Fluoroenolates.
J. Chem. Soc. Chem. Commun., 1994, 2029-2030.
40. J. A. K. Howard, A. S. Bastanov, D. O'Hagan and J. White
3-Chloro and 3-Bromo-2-oxopropyl *p*-toluenesulfonate.
Acta Crystallographica Section C., 1994, C50, 1825-1828.
41. D. O'Hagan,
Biosynthesis of the Polyketide Metabolites.
Nat. Prod. Rep., 1995, **12**, 1-32.
42. R. J. Robins, N. C. J. E. Chesters, D. O'Hagan, A. J. Parr, N. J. Walton and J. G. Woolley.
The Biosynthesis of Hyoscymamine: The Process by Which Littorine Rearranges to Hyoscymamine.
J. Chem. Soc. Perkin. Trans. I., 1995, 481-485.
43. L. Dasaradhi, D. O'Hagan, M. C. Petty and C. Pearson
The Synthesis and Characterisation of Selectively Fluorinated Stearic Acids (Octadecanoic Acids) and Their Tristearins: The Effect of Introducing One and Two Fluorine Atoms Into a Hydrocarbon Chain.
J. Chem. Soc. Perkin Trans 2., 1995, 221-225.
44. N. C. J. E. Chesters, D. O'Hagan and R. J. Robins
The Biosynthesis of Tropic Acid: The (R)-D-Phenyllactyl Moiety is Processed by the Mutase Involved in Hyoscymamine Biosynthesis in *Datura stramonium*.
J. Chem. Soc., Chem. Commun., 1995, 127-128.
45. N. C. J. E. Chesters, D. O'Hagan, R. J. Robins, A. Kastelle and H. G. Floss
The Biosynthesis of Tropic Acid: The Stereochemical Course of the Mutase Involved in Hyoscymamine Biosynthesis in *Datura stramonium*.
J. Chem. Soc., Chem. Commun., 1995, 129-130.
46. M. Hübel and D. O'Hagan
Synthesis of Trifluoromethyl-Containing Monomers for the Preparation of Piezoelectric Polymers.
Liebigs Ann., 1995, 583-585.
47. K. A. Reid, J. T. G. Hamilton, R. D. Bowden, D. O'Hagan, Lakkaraju Dasaradhi, M. R Amin and D. B. Harper
Biosynthesis of Fluorinated Secondary Metabolites by *Streptomyces cattleya*.
Microbiology, 1995, **141**, 1385-1393.
48. J. Nieschalk and D. O'Hagan
Monofluorophosphonates as Phosphate Mimics in Bioorganic Chemistry: A Comparative Study of CH₂-, CHF- and CF₂- Phosphonate Analogues of *sn*-Glycerol-3-phosphate as Substrates for *sn*-Glycerol-3-phosphate Dehydrogenase.
J. Chem. Soc. Chem. Commun., 1995, 719-720.
49. A. Stabel, L. Dasaradhi, D. O'Hagan and J. P. Rabe
Scanning Tunneling Microscopy Imaging of Single Fluorine Atom Substitution in Stearic Acid
Langmuir, 1995, **11**, 1427-1430.
50. J. A. K. Howard, D. O'Hagan, N. A. Pitchford and N. A. Zaidi
The Solid State Structure of the 34-Membered Macrocyclic Diolide of 16-Hydroxyhexadecanoic Acid, Formed by Porcine Pancreatic Lipase Mediated Cyclisation in Hexane.
J. Chem. Res(S.), 1995, 427.
51. D. O'Hagan, S. V. Rogers, G. R. Duffin and K. A. Reynolds

- The Biosynthesis of Monensin-A: Thymine, β -Aminoisobutyrate and Methacrylate Metabolism in *Streptomyces cinnamoneus*.
J. Antibiotics, 1995, **48**, 1280-1287.
52. D O'Hagan, C. F. Bridge, K. K. Wallace, and K. A. Reynolds
Kinetic and Stereoelectronic Effects of a Fluorine Substituent on the Reaction Catalyzed by an NADPH-Dependent 1-Cyclohexenylcarbonyl-CoA Reductase.
J. Chem. Soc., Chem. Commun., 1995, 2329-2330.
53. J. Nieschalk, A. S Batsanov, D. O'Hagan and J. A K Howard
Synthesis of Monofluoro- and Difluoro- methylenephosphonate Analogues of *sn*-Glycerol-3-phosphate as Substrates for Glycerol-3-Phosphate Dehydrogenase and the X-Ray Structure of the Fluoromethylenephosphonate Moiety.
Tetrahedron, 1996, **52**, 165-176.
54. N. Reineke, N. A. Zaidi, M. Mitra, D. O'Hagan, A. S. Batsanov, J. A. K. Howard and D. Y. Naumov
A One Step Photocatalytic Synthesis of 2-(Trifluoromethyl)butyrolactones.
J. Chem. Soc. Perkin Trans. I., 1996, 147-150.
55. M. Mitra and D. O'Hagan
The Synthesis of a Homochiral Methacrylate Macromonomer by Polymerisation of (*R*)- or (*S*)-Methyl β -hydroxyisobutyrate
Polymer Bulletin, 1996, **36**, 311-316.
56. N. C J E Chesters, K. Walker, D. O'Hagan and H. G. Floss
The Biosynthesis of Tropic Acid: A Reevaluation of the Stereochemical Course of the Conversion of Phenyllactate to Tropate in *Datura Stramonium*.
J. Am. Chem. Soc., 1996, **118**, 925-926.
57. M. D'Alpaos, D. Favretto, D. O'Hagan*, J. Nieschalk and P. Traldi
FAB Mass Spectrometry of Mono- and Di- fluorophosphonate Analogues of Glycerol-3-phosphate.
Rapid Commun., Mass Spec., 1996, **10**, 1291-1294.
58. J. A. K. Howard, V. J. Hoy, D. O'Hagan and G. T. Smith
How Good is Fluorine as a Hydrogen Bond Acceptor?
Tetrahedron, 1996, **52**, 12613-12622.
59. A. Keeney, J. Nieschalk and D. O'Hagan
The Synthesis of α -Monofluorovinylphosphonates by a Peterson Type Olefination Reaction.
J. Fluorine Chem., 1996, **80**, 59-62.
60. David J. Bailey, David O'Hagan and Mustafa Tavasli
A Short Synthesis of (*S*)-2-(Diphenylmethyl)pyrrolidine a Chiral Solvating Agent for NMR Analysis.
Tetrahedron Asymmetry, 1997, **8**, 149-153.
61. C. F. Bridge and D. O'Hagan
The Synthesis of α -Fluoroketones by 1,4-Additions of Monofluorinated Enamines to Michael Acceptors,
J. Fluorine Chem., 1997, **82**, 21-24.
62. H. S. Rzepa and D. O'Hagan
Some Aspects of Fluorine in Bioorganic Chemistry, (Feature Article),
Chem. Comm., 1997, 645-652.
63. T. Daniell, D. O'Hagan and R. Edwards
Alfalfa Cell Cultures Treated With Fungal Elicitor Accumulate Flavone Metabolites Rather Than Isoflavones in the Presence of the Methylation Inhibitor Tubericidin.
Phytochemistry, 1997, **44**, 285-291.
64. Simon J. Borwick, Judith A. K. Howard, Christian W. Lehmann and David O'Hagan,

- 2-Fluoroethanone,1-(4-bromophenyl)-(2,4-dinitrophenyl)hydrazone Contains a Particularly Short Fluorine Hydrogen Bond.
Acta Cryst. C, 1997, C**53**, 124-126.
65. Nicola C J E Chesters and David O'Hagan,
 The Biosynthesis of the Fungal Metabolite, Piliformic Acid (2-hexylidene-3-methylsuccinic acid).
J. Chem. Soc., Perkin Trans. I., 1997, 827-834.
66. John T.G. Hamilton, Muhammad R. Amin, David B. Harper and David O'Hagan.
 The Biosynthesis of Fluoroacetate and 4-Fluorothreonine by *Streptomyces cattleya*. Glycine and Pyruvate as Precursors.
Chem. Comm., 1997, 797-798.
67. Jens Nieschalk, John T G Hamilton, Cormac D Murphy, David B Harper and David O'Hagan
 The Biosynthesis of Fluoroacetate and 4-Fluorothreonine by *Streptomyces cattleya*. The Stereochemical Processing of Glycerol.
Chem. Comm., 1997, 799-800.
68. Jens Nieschalk and David O'Hagan
 A Short Synthesis of (*IS, 2R*)- and (*IR, 2R*)- [1-²H]-Glycerols
Tetrahedron Asymmetry, 1997, **8**, 2325-2330.
69. Muhammad R Amin, David. B. Harper, Janet M Moloney, Cormac D Murphy, Judith A K Howard and David O'Hagan,
 A Short Highly Stereospecific Synthesis of the Fluorinated Natural product 4-(2S, 3S)-Fluorothreonine
Chem. Comm., 1997, 1471-1472.
70. David O'Hagan,
 Pyrrole, Pyrrolidine, Pyridine, Piperidine, Azepine and Tropane Alkaloids
Nat. Prod. Rep., 1997, **14**, 637 - 651.
71. John T. G. Hamilton, Cormac D Murphy, Muhammad R Amin, David O'Hagan and David B Harper,
 Exploring the Biosynthetic Origin of Fluoroacetate and 4-Fluorothreonine
J. Chem. Soc. Perkin Trans. I., 1998, 759-767.
72. Helen Culceth, Jens Fuchser, Steven J Moss, Jens Nieschalk and David O'Hagan
 Evidence for an Octanoate Synthase Operating During the Biosynthesis of Piliformic Acid in *Poronia piliformis*
Tetrahedron Letters, 1998, **39**, 1949-1952.
73. Chi W Wong, John T. G. Hamilton, David O'Hagan and Richard J. Robins.
 Tropic Acid Biosynthesis: The Incorporation of (RS)-phenyl-[2-¹⁸O, ²H]-lactate into Littorine and Hyoscyamine in *Datura stramonium*
Chem. Commun., 1998, 1045 - 1046.
74. David O'Hagan and Richard J Robins
 Tropic Acid Ester Biosynthesis in *Datura stramonium* and Related Species
Chem. Soc. Rev., 1998, **27**, 207 - 212.
75. M. Caragh Moore, Russell J Cox, Gordon R Duffin and David O'Hagan
 Synthesis and Evaluation of a Putative Acyl Tetramic Acid Intermediate in Tenellin Biosynthesis in *Beauveria bassiana*. A New Role for Tyrosine.
Tetrahedron , 1998, **54**, 9195 - 9206.
76. David O'Hagan, Itsunaro Kumadaki, Michael Petty, Hiroaki Takaya and Christopher Pearson,
 Synthesis and Langmuir Isotherms of Difluorostearic Acids.
J. Fluorine Chem., 1998, **90**, 133-138.
77. Jens Nieschalk and David O'Hagan.
 Synthesis of 6-Fluoro-D-olivose (2,6-Dideoxy-6-fluoro-D-*arabino*-hexopyranose)

J. Fluorine Chem., 1998, **91**, 159 - 163.

- 78 Ioannis Zabetakis, Robert Edwards, John T. G. Hamilton and David O'Hagan,
The Biosynthetic Relationship Between Littorine and Hyoscyamine in Transformed Root Cultures of
Datura stramonium,
Plant Cell Reports, 1998, **18**, 341-345.
79. David O'Hagan and Adam H. Parker
Enzyme mediated polyester synthesis with the lipase from *Candida rugosa*. Preparation of an enantiomerically enriched polymer from an A-B monomer.
Polymer Bulletin, 1998, **41**, 519 - 524.
80. Muhammad R Amin, David B Harper and David O'Hagan
The Biosynthesis of fluorinated natural products by *Streptomyces cattleya*. Deuterium exchange into the fluorometabolites from the medium.
J. Labelled Compounds and Radiopharmas., 1998, **41**, 1045-1048.
- 81 Ioannis Zabetakis, Robert Edwards and David O'Hagan,
Elicitation of Tropane Alkaloid Biosynthesis in Transformed Root Cultures of *Datura stramonium*;
Methyl Jasmonate Selectively Inhibits the Biosynthesis of Tropine Precursors.
Phytochemistry, 1999, **50**, 53-56.
82. Daniel J. Fowler, John T. G. Hamilton, Andrew J. Humphrey and David O'Hagan,
Plant Terpene Biosynthesis. The Biosynthesis of Linalyl Acetate in *Mentha Citrata*.
Tetrahedron Lett., 1999, **40**, 3803 - 3806.
83. David O'Hagan and Mustafa Tavasli
A Short Synthesis of (*S*)- α -(Diphenylmethyl)alkyl Amines from Amino Acids
Tetrahedron Asymmetry, 1999, **10**, 1189 - 1192.
84. David O'Hagan, Richard J. Robins*, Marina Wilson, Chi W. Wong, Mike Berry and Ionnis Zabetakis
Fluorinated Tropane Alkaloids Generated by Directed Biosynthesis in Transformed Root Cultures of
Datura Stramonium,
J. Chem. Soc., Perkin Trans. 1., 1999, 2117 - 2120.
85. David O'Hagan and David B. Harper
Fluorine containing natural products
J. Fluorine Chem., 1999, **100**, 125 – 131.
86. Denis Bouvet and David O'Hagan
The Synthesis of 1-Fluoro- and 1,1-difluoro- Analogues of 1-Deoxy-D-Xylulose
Tetrahedron, 1999, **55**, 10481 - 10486.
87. John W. Banks, Andreei S Batsanov, Judith A. K. Howard, David O'Hagan, Henry S. Rzepa and
Sonssoles Martin-Santamaria,
The Preferred Conformation of α -Fluoroamides.
J. Chem. Soc., Perkin Trans., 2., 1999, 2409 – 2051.
88. Mustafa Tavasli, David O'Hagan, Andrei S Batsanov, Graham R. Foxon, Robert F. Halliwell and
Judith A. K. Howard
The Synthesis, Conformation and Antimuscarinic Properties of Ketone Analogues of
Tropane Esters,
J. Chem. Soc., Perkin Trans., 1., 1999, 3455 - 3462
89. Daniel J Fowler, John T. G. Hamilton, Andrew J. Humphrey and David O'Hagan
The Biosynthesis of Plant Terpenes via the Non Mevalonate Pathway,
Chem. Listy, Symposia, 1999, **93**, S1 – S69.
90. Rebecca J. M. Goss, Jens Fuchser and David O'Hagan,

- Biosynthesis of longianone from *Xylaria longiana*. A metabolite with a biosynthetic relationship to patulin.
Chem. Commun., 1999, 2255 - 2256.
91. John W Banks and David O'Hagan
The Enzymatic Resolution of an α -Fluoroamide by an Acylase.
J. Fluorine Chem., 2000, **102**, 235-238.
92. Rosa Duran-Patron, David O'Hagan, John G. T. Hamilton and Chi W. Wong,
Biosynthetic studies on the tropane ring system of the tropane alkaloids from *Datura stramonium*.
Phytochemistry, 2000, **53**, 777-784.
93. David O'Hagan*, Clair Bilton, Judith A. K. Howard, Lee Knight and David J. Tozer,
The preferred conformation of N- β -fluoroethylamides. Observation of the fluorine amide gauche effect.
J. Chem. Soc., Perkin Trans. 2., 2000, 605 - 607.
94. Martina Runge, David O'Hagan and Guenter Haufe,
Lipase-catalysed polymerisation of fluorinated lactones and fluorinated hydroxycarboxylic Acids.
J. Polymer Sci. A-Polymer. Chem., 2000, **38**, 2004-2012.
95. David O'Hagan, Frederique Royer and Mustafa Tavasli
A synthesis of (*S*)- α -(Fluorodiphenylmethyl)alkylamines by HF/pyridine treatment of 4-alkyl-5,5-diphenyl-oxazolidinones.
Tetrahedron Asymmetry, 2000, **11**, 2033-2036.
96. David O'Hagan
Pyrrole, pyrrolidine, pyridine, piperidine and tropane alkaloids,
Natural Product Reports, 2000, **17**, 435 - 446.
97. Steven J Moss, Cormac D. Murphy, John T. G. Hamilton, W. Colin McRoberts, David O'Hagan, Christoph Schaffrath and D. B. Harper
Fluoroacetaldehyde: a precursor of both fluoroacetate and 4-fluorothreonine in *Streptomyces cattleya*.
Chem. Comm., 2000, 2281.
98. Andrei S. Batsanov, Judith A. K. Howard, David O'Hagan and Mustafa Tavasli
1-(1,3-Dithane-2-yl)-2-phenylethanone,
Acta Cryst. , 2000, **C56**, e567 – e568.
99. Andrei S. Batsanov, Judith A. K. Howard, David O'Hagan and Mustafa Tavasli
3 α -Tosyloxymethyltropane(N^8 -B)borane,
Acta Cryst., 2000, **C56**, e512 – e513.
100. Cormac D Murphy, Steven J Moss and David O'Hagan
Isolation of an aldehyde dehydrogenase involved in the oxidation of fluoroacetaldehyde to fluoroacetate in *Streptomyces cattleya*.
Applied and Environmental Microbiol., 2001, **67**, 4919 - 4921.
101. David O'Hagan and Graham Sandford,
The taming of fluorine.
Chem Br., 2001, 37 (19), 32 - 35.
102. Andrew Humphrey and David O'Hagan
Tropane Alkaloid Biosynthesis (Millenium Review)
Natural Product Reports, 2001, **18**, 494 - 502.
103. Christoph Schaffrath, Cormac D Murphy, John T. G. Hamilton, David O'Hagan
Biosynthesis of fluoroacetate and 4-fluorothreonine in *Streptomyces cattleya*. Incorporation of oxygen-18 from [2- H , 2- ^{18}O]-glycerol and the role of serine metabolites in fluoroacetaldehyde biosynthesis. *J. C. S. Perkin Trans., I*, 2001, 3100 - 3105.

- 104 Christoph Schaffrath, Cormac D Murphy, and David O'Hagan
 Identification of a PLP-Dependent Threonine Transaldolase
Angew Chem, Int. Ed., 2001, **40**, 4479 – 4481.
105. Stephen Patterson and David O'Hagan
 Isotopically labelled tropane alkaloids. The synthesis of (*RS*)-[3',3'-²H₂]- and (*RS*)-[1'-¹³C, 3', 3'-²H₂]-hyoscyamines for metabolism studies in plants.
J. Label Compds., Radiopharm., 2002, **45**, 191 - 198.
- 106 Marcello Nicoletti, David O'Hagan, Alexandra M Z Slawin
 The Asymmetric Bischler-Napieralski reaction: Preparation of 1,3,4-trisubstituted 1,2,3,4-tetrahydroisoquinolines.
J. Chem. Soc. Perkin Trans. 1, 2002, 116 - 121.
- 107 David O Hagan, Christoph Schaffrath, Stephen L Cobb, John T. G. Hamilton and Cormac D Murphy
 Enzyme catalysed organofluorine synthesis.
Nature, 2002, 416, 279.
- 108 Mustafa Tavasli, Jacques Courtieu, Rebecca J. M. Goss, Abdelkrim Meddour*, David O'Hagan
 Extreme enantiomeric discrimination of fluoroalkanes using deuterium NMR in chiral liquid crystalline media.
Chem. Commun, 2002, 844 -845.
- 109 Mustafa Tavasli, Michael Petty, Christopher Pearson, David O'Hagan
 The fluorine gauche effect. Langmuir isotherms report the relative conformational stability of (\pm)-*erythro*- and (\pm)-*threo*-9,10-difluorostearic acids.
Chem. Commun, 2002, 1226 – 1227.
- 110 David O'Hagan and Stephen Patterson,
 Biosynthetic studies on the tropane alkaloid hyoscyamine in *Datura stramonium*; hyoscyamine is stable *in vivo* and is not derived from litorine via a vicinal interchange process.
Phytochemistry, 2002, **61**, 323-329.
- 111 Petr Beier and David O'Hagan
 Enantiomeric partitioning using fluorous biphasic methodology for lipase-mediated esterifications.
Chem. Comm., 2002, 1680 – 1681.
- 112 Christoph Schaffrath, Steven L Cobb and David O'Hagan
 Cell-free biosynthesis of fluoroacetate and 4-fluorothreonine in *Streptomyces cattleya*
Angew. Chemie., 2002, **41**, 3193 - 3195
- 113 David O'Hagan, Rebecca J. M. Goss, Abdelkrim Meddour and Jacques Courtieu,
 An assay for the enantiomeric analysis of [²H₁]—fluoroacetic acid: Insight into the Stereochemical course of fluorination during fluorometabolite biosynthesis in *Streptomyces cattleya*.
J. Am. Chem. Soc., 2003, **125**, 379 – 387.
- 113 Cormac D. Murphy, Christoph Schaffrath and David O'Hagan
 Fluorinated Natural Products: The Biosynthesis of Fluoroacetate and 4-Fluorothreonine in *Streptomyces cattleya*.
Chemosphere, 2003, **52**, 455-461.
- 115 The C-F bond as a tool in the conformational control of amides
 Caroline R. S. Briggs, David O'Hagan, Judith A. K. Howard, and Dmitrii S Yufit
J. Fluorine Chem., 2003, **119**, 9-13.
- 116 David B Harper, David O'Hagan and Cormac B Murphy,
 Fluorinated Natural products: Occurrence and Biosynthesis,
Handbook of Environmental Chem., 2003, **3(P)**, 141 – 169.

- 117 Ian Cummins, David O'Hagan, Istvan Jablonkai, David J. Cole, Alain Hehn, Danièle Werck-Reichardt and Robert Edwards,
Cloning, characterization and regulation of a family of phi class glutathione transferases from wheat.
Plant Mol. Biol., 2003, **52**, 591 – 603.
- 118 Christoph Schaffrath, Hai Deng and David O'Hagan
Isolation and characterisation of 5'-fluorodeoxyadenosine synthetase, a fluorination enzyme from *Streptomyces cattleya*.
FEBS Letts., 2003, **547**, 111-114.
- 119 Changjiang Dong, Hai Deng, Mark Dorward, Christoph Schaffrath, David O'Hagan and James H Naismith.
Crystallization and X-ray diffraction of the 5'-fluoro-5'-deoxyadenosine synthetase, a fluorination enzyme from *Streptomyces cattleya*.
Acta Crystallographic Section D, 2003, **D59**, 2292.
- *120. Laurent Martarello, Christoph Schaffrath, Hai Deng, Antony D Gee Andrew Lockhart and David O'Hagan
The First Enzymatic Method for C-¹⁸F bond formation: The synthesis of 5'-[¹⁸F]-Fluoro-5'-Deoxyadenosine for Imaging with PET.
J. Label Compds., Radiopharm., 2003, **46**, 1181 – 1189.
121. Caroline R S Briggs, David O'Hagan, Henry S Rzepa and Alexandra M Z Slawin
Solid state and theoretical evaluation of β-fluoroethyl esters indicate a fluorine ester *gauche* effect.
J. Fluorine Chem., 2004, **125**, 19-25.
- 122 Caroline RS Briggs, Mark J Allen, David O'Hagan David J. Tozer Alexandra M. Z. Slawin, Andrés E Goeta and Judith A. K. Howard
The observation of a large *gauche* preference when 2-fluoroethylamine and 2-fluoroethanol become protonated.
Org. Biomol. Chem., 2004, **2**, 732 - 740.
- 123 Changjiang Dong, Fung Lu Huang, Hai Deng, Christoph Schaffrath, Jonathan B. Spencer, David O'Hagan & James H. Naismith
Crystal structure and mechanism of a bacterial fluorinating enzyme.
Nature, 2004, **427**, 561 – 565.
- 124 Steven L Cobb Hai Deng, John T. G. Hamilton, Ryan P McGlinchey and David O'Hagan
Identification of 5-fluoro-5-deoxy-D-ribose-1-phosphate as an intermediate in fluorometabolite biosynthesis in *Streptomyces cattleya*.
Chem Commun, 2004, 592-593.
- 125 Cosimo Cadicamo, Jacques Courtieu, Hai Deng, Abdelkrimm Meddour, David O'Hagan,
The stereochemical course of the fluorination enzyme in *Streptomyces cattleya* operates with an inversion of configuration consistent with an S_N2 reaction mechanism.
ChemBioChem, 2004, **5**, 685 - 690.
- 126 Kenny Tenza, Julian Northen, David O'Hagan and Alexandra M. Z. Slawin,
The role of fluorine in directing alkylation reactions via lithium chelation.
J. Fluorine Chem., 2004, **125**, 1779-1790.
- 127 Petr Beier, David O'Hagan and Alexandra M Z Slawin
Lipase mediated preparation of the enantiomers of 3,3,3-trifluoro-2-methylpropanoic acid,
Tetrahedron Asymmetry, 2004, **15**, 2447 - 2449.
- 128 Ian Shepperson, Silvio Quici,Gianluca Pozzi, Marcello Nicoletti, and David O'Hagan
C₂-Symmetric Fluorous Diamines and Diimines as Ligands for Metal-Catalysed Asymmetric Cyclopropanation of Styrene.
Eur. J. Organic Chem., 2004, **22**, 4545 - 4551 (front cover).

- 129 D. O'Hagan, H. Deng and C. Schaffrath
 Fluorometabolite biosynthesis and the identification of a fluorination enzyme.
Nat. Prod. Rep., 2004, **21**, 773 - 784
- 130 Petr Beier, David O'Hagan, Christopher Pearson, Michael C. Petty and Alexandra M. Z. Slawin.
 The structure and properties of hybrid fluorous-hydrocarbon fatty acids ,
J. Fluorine Chemistry, 2005, **126**, 673 - 682.
- 131 Marcello Nicoletti, David O'Hagan and Alexandra M Z Slawin
 α,β,γ -Trifluoroalkanes: A stereoselective synthesis placing three vicinal fluorines along a hydrocarbon chain.
J. Am. Chem. Soc., 2005, **127**, 482-483.
- 132 Martin Schueler, David O'Hagan and Alexandra M. Z. Slawin,
 The vicinal F-C-C-F motif as a tool for influencing peptide conformation.
Chem Commun 2005, 4324 – 4326.
- 133 Steven L Cobb, Hai Deng, John T. G. Hamilton, Ryan McGlinchey, David O'Hagan and Christoph Schaffrath,
 The identification of 5-fluoro-5deoxyinosine (5'-FDI) as a shunt product in cell free extracts of *Streptomyces cattleya*.
Bioorganic Chem., 2005, **33**, 393 - 401.
- 134 Hans Martin Senn, David O'Hagan, and Walter Thiel,
 Insight Into Enzymatic C–F Bond Formation from QM and QM/MM Calculations
J. Am. Chem. Soc., 2005, **127**, 13643 – 13655.
- 135 Kenny Tenza, Julian S Northen, David O'Hagan and Alexandra M. Z. Slawin,
 Stereoselective α -fluoroamide and α -fluoro- γ -lactone synthesis by an asymmetric aza-Claisen rearrangement.
Beilstein J Org. Chem., 2005, **1**, 13.
- 136 S. Varfolomeyev, E Efremenko, I Beletskava, I Bertini, G. M. Blackburn, A Bogdanov, R Cunin, J Eichler, I Galaeyshev, V Gladyshev, D O'Hagan, T Haertle, J Jarv, A Karyakin, I Kurochkin, M Micolajczyk, V Poroikov, I Sakharov, F Spener, N Voyer, J Wild,
 Postgenome chemistry,
Pure Appl. Chem., 2005, **77**, 1641 – 1654.
- 137 Hai Deng, Steven L. Cobb, Andrew McEwan, Ryan P. McGlinchey, James H. Naismith, David O'Hagan, David A Robinson and Jonathan B Spencer
 The fluorinase from *Streptomyces cattleya* is also a chlorinase.
Angew Chemie, 2006, **45**, 759 – 762.
- 138 Chukwuemeka Isanbor and David O'Hagan,
 Fluorine in Medicinal Chemistry: Anticancer Agents
J. Fluorine Chemistry, 2006, **127**, 303 –319.
- 139 Hai Deng, Steven L. Cobb, Antony D Gee, Andrew Lockhart, Laurent Martarello, Ryan P. McGlinchey, David O'Hagan, and Mayca Onega
 Fluorinase mediated C-¹⁸F bond formation, an enzymatic tool for PET labelling
Chem. Commun, 2006, 652 – 654.
- 140 Steven L. Cobb, Hai Deng , Andrew R McEwan, James H. Naismith, David O'Hagan, David A Robinson.
 Substrate specificity in enzymatic fluorination. The fluorinase from *Streptomyces cattleya* accepts 2'- deoxyadenosine substrates,
Org. Biomol. Chem., 2006, **4**, 1458-1460.
- 141 Fanglu Huang, Stephen F Haydock, Dieter Spiteller, Tatiana Mironenko, Tsung-Lin Li, David O'Hagan, Peter F Leadlay and Jonathan B Spencer,

- Characterisation of a locus involved in fluorometabolite biosynthesis in *Streptomyces cattleya*, *Chem & Biol*, 2006, **13**, 475 - 484.
- 142 Natalie E. J. Gooseman, David O'Hagan, Alexandra M. Z. Slawin, Andrew M Teale, David J Tozer and Robert J. Young
The intramolecular β -fluorine...ammonium interaction in 4- and 8-membered rings
Chem Commun 2006, 3190-3192.
- 143 David O'Hagan,
Recent developments on the fluorinase from *Streptomyces cattleya*.
J. Fluorine chemistry, 2006, **127**, 1479-1483.
- 144 David O'Hagan, Henry S. Rzepa, Martin Schüler and Alexandra M. Z. Slawin.
The vicinal difluoro motif. The synthesis and conformation of *erythro*- and *threo*- diastereoisomers of 1,2-difluorodiphenylethanes, 2,3-difluorosuccinic acids and their derivatives.
Beilstein J. Org. Chem., 2006, **2**, 19.
- 145 Luke Hunter, David O'Hagan and Alexandra M. Z. Slawin
Enantioselective synthesis of an all-syn-four vicinal fluorine motif
J. Am. Chem. Soc., 2006, **128**, 16422 – 16423.
- 146 Mayca Onega, Ryan P McGlinchey, Hai Deng, John T Hamilton, D. O'Hagan.
The identification of (*3R, 4S*)-5-fluoro-5-deoxy-D-ribulose-1-phosphate as an intermediate in fluorometabolite biosynthesis in *Streptomyces cattleya*.
Bioorganic Chem., 2007, **35**, 375 - 385.
- 147 Natalie E. J. Gooseman, David O'Hagan, Michael J. G. Peach, Alexandra M. Z. Slawin, David J. Tozer, and Robert J. Young
An electrostatic *gauche* effect in β -fluoro- and β -hydroxy- N- ethylpyridinium cations.
Angew. Chemie. Int. Ed., 2007, **46**, 5904 - 5908.
- 148 Samson N Patole, Christopher J Baddeley, David O'Hagan and Neville V Richardson, F. Zerbetto, L A Zotti , G Teobaldi and Werner A Hofer
Self assembly of semi-fluorinated n-alkanethiols on {111}-oriented Au investigated with STM experiment and theory.
J. Chem. Phys., 2007, **127**, 024702.
- 149 Vincent A. Brunet, David O'Hagan and Alexandra M. Z. Slawin.
Titanium mediated asymmetric aldol condensations with α -fluoropropionamide enolates.
J. Fluorine Chemistry, 2007, **128**, 1271 - 1279.
- 150 Luke Hunter, Alexandra M. Z. Slawin, Peer Kirsch and David O'Hagan
Synthesis and conformation of multi-vicinal fluoroalkane diastereoisomer
Angew. Chemie, Int Ed., 2007, **46**, 7887 - 7890.
- 151 Xiaofeng Zhu, David A. Robinson, Andrew R. McEwan, David O'Hagan, James H Naismith,
The mechanism of the enzymatic fluorination in *Streptomyces cattleya*,
J. Am. Chem. Soc., 2007, **129** , 14597 -14604.
- 152 Gildas Deniau, Alexandra M. Z. Slawin, Thomas Lebl, Fatima Chorki, Jon P. Issberner, T van Mourik, Judith M. Heygate, Jeremy. J. Lambert Keith T. Sillar, and David O'Hagan
Synthesis, conformation and biological evaluation of the enantiomers of 3-fluoro- γ -aminobutyric acid ((*R*)- and (*S*)- 3F-GABA). An analogue of the neurotransmitter, GABA.
ChemBioChem, 2007, **8**, 2265 - 2274.
153. Marcello Nicoletti, Matthias Bremer, Peer Kirsch, David O'Hagan.
Liquid crystals carrying stereodefined vicinal difluoro- and trifluoro- alkyl motifs.

Chem. Commun., 2007, 5075 - 5077.

154. Nelly Bonnet, David O'Hagan and Georg Hähner
Ionic strength mediated hydrophobic force switching of CF₃ terminated ethylglycol self-assembled monolayers (SAM's) on gold.
Chem Commun 2007, 5066 - 5068.
155. Michael Clift, Haitao Ji, Gildas P Deniau, David O'Hagan, Richard B. Silverman,
The enantiomers of 4-amino-3-fluorobutanoic acid as substrates for γ -aminobutyric acid aminotransferase. Conformational probes for GABA binding.
Biochemistry 2007, **46**, 13819 - 13828.
156. David O'Hagan
Understanding organofluorine chemistry. An introduction to the C–F bond.
Chem. Soc. Rev., 2008, **37**, 308 - 319.
157. Vincent Brunet, David O'Hagan
Catalytic asymmetric fluorination comes of age
Angew. Chemie. Int. Ed., 2008, **47**, 1179 - 1182.
158. Gildas Deniau, Keith T. Sillar and David O'Hagan
Synthesis of fluorinated analogues of the neurosteroid GABA_A receptor antagonist, 17-PA.
J. Fluorine Chem., 2008, **129**, 881-887.
159. Hai Deng, Catherine H. Botting, John T.G. Hamilton, Rupert J. M. Russell, David O'Hagan
S-Adenosyl-L-methionine:hydroxide adenosyltransferase: A SAM enzyme.
Angew. Chemie. Int. Ed., 2008, **47**, 5357 - 5361.
160. Luke Hunter, Peer Kirsch, John T. G. Hamilton and David O'Hagan
The multi-vicinal fluoroalkane motif: An examination of 2,3,4,5-tetrafluorohexane stereoisomers.
Org. Biomol. Chem., 2008, **6**, 3105 - 3108.
161. Luke Hunter and David O'Hagan
Multi-vicinal fluoroalkanes: a new class of organofluorine compounds
Org. Biomol. Chem., 2008, **6**, 2843 - 2848
162. Samson Patole, Christopher J. Baddeley, David O'Hagan, Neville V. Richardson,
Reversible exchange of self assembled monolayers of semi fluorinated n-alkanethiols and n-alkanethiols on Au/mica surfaces
J. Phys. Chem., 2008, **112**, 13997 - 14000
163. Hai Deng and David O'Hagan
The fluorinase the chlorinase and the duf-62 enzymes
Curr. Op. Chem. Biol., 2008, **12**, 582 - 592.
164. Gildas Deniau, Thomas Moraux, David O'Hagan and Alexandra M.Z. Slawin
An efficient synthesis of (*R*)- and (*S*)- 2-(aminomethyl)piperidine dihydrochloride
Tetrahedron Asymmetry, 2008, **19**, 2330 - 2333.
165. Margit Winkler, Juozas Domarkas, Lutz F. Schweiger and David O'Hagan
Fluorinase coupled enzymatic base swaps generate 5'-deoxy-5'-fluoronucleosides from fluoride ion:
Synthesis of [¹⁸F]-5'-deoxy-5'-fluorouridines
Angew. Chemie. Int. Ed., 2008, **47**, 10141 - 10143.
166. Hai Deng, Stuart M Cross, Ryan P McGlinchey, Jack Hamilton and David O'Hagan
In vitro reconstituted biotransformation of 4-fluorothreonine from fluoride ion: Application of the fluorinase.
Chem & Biol., 2008, **15**, 1268 -1276.
167. Samson Patole, Christopher Baddeley, Martin Schueler, David O'Hagan, Neville Richardson

The driving forces underlying the formation of chiral domains of fluorinated diacids on graphite
Langmuir, 2009, **25**, 1412 - 1416.

- 168 Margit Winkler, Hesham A. Khairy, Thomas Moraux, Roderick H. Scott, Alexandra M. Z. Slawin and David O'Hagan
Synthesis and vanilloid receptor (TRPV1) activity of the enantiomers of alpha-fluorinated capsaicin.
ChemBioChem, 2009, **10**, 823 - 828.
169. Stefano Bresciani, David O'Hagan and Alexandra M. Z. Slawin,
A regio- and stereo- isomeric study of allylic alcohol fluorination with a range of reagents.
J. Fluorine Chem., 2009, **130**, 537-543.
- 170 Luke Hunter, Peer Kirsch, Alexandra M. Z. Slawin and David O'Hagan
Synthesis and structure of a multivicinal hexafluoroalkane stereoisomers
Angew. Chemie. Int. Ed., 2009, **48**, 5457 - 5460.
- 171 Mayca Onega, Margit Winkler and David O'Hagan
The fluorinase: A tool for the synthesis of fluorine-18 labelled sugars and nucleosides for positron emission tomography,
Future. Med. Chem., 2009, **1**, 865 - 873
- 172 Pitak Nasomjai, David O'Hagan and Alexandra M Z Slawin
Synthesis of phosphonate and phostone analogues of ribose-1-phosphates.
Beilstein J. Org. Chem., 2009, **5**, 37.
- 173 Pitak Nasomjai, Darwin W Reed, David J Tozer , Michael JG Peach, Alexandra MZ Slawin, Patrick S Covello and David O'Hagan
Mechanistic insights into the cytochrome P450-mediated oxidation and rearrangement of littorine in tropane alkaloid bioynthesis.
ChemBioChem, 2009, **10**, 2382 - 2393
- 174 Hai Deng, Stephen McMahon, Alassendra S. Eustáquio, Bradley S Moore, James H. Naismith, David O'Hagan
Mechanistic insights into water activation in SAM hydroxide adenosyltransferase (duf-62).
ChemBioChem, 2009, **10**, 2455 - 2459.
- 175 Daniel Farran, Alexandra M. Z. Slawin, Peer Kirsch, David O'Hagan,
Diastereoselective Synthesis of Multivicinal 2,3,4,5,6-Pentafluorohexanes
J. Org. Chem., 2009, **74**, 7168–7171.
- 176 Vincent A. Brunet, Alexandra M. Z. Slawin and David O'Hagan
Three step synthesis of single diastereoisomers of the vicinal trifluoro motif.
Beilstein J. Org. Chem., 2009, **5**, 61.
- 177 Mayca Onega, Juozas Domarkas, Hai Deng, Lutz F. Schweiger, Timothy A. D. Smith, Andrew E. Welch, Christoph Plisson, Antony D. Gee and David O'Hagan.
An enzymatic route to 5-deoxy-5-[¹⁸F]-fluoro-D-ribose, a [¹⁸F]-fluorinated sugar for PET imaging.
Chem. Commun., 2010, 139 - 141
- 178 David Y. Buissonneaud, Tanja van Mourik, David O'Hagan
A DFT study on the origin of the fluorine *gauche effect* in substituted fluoroethanes
Tetrahedron, 2010, **66**, 2196 – 2202.
- 179 Nelly Bonnet, David O'Hagan, and Georg Hähner
Protein adsorption onto CF₃-terminated oligo(ethylene glycol) containing self-assembled monolayers (SAMs): The influence of ionic strength and electrostatic forces,
Phys. Chem. Chem. Phys., 2010, **12**, 4367 – 4374.
- 180 Alessandra S. Eustáquio, David O'Hagan, and Bradley S. Moore

- Engineering Fluorometabolite Production: Fluorinase Expression in *Salinispora tropica* Yields Fluorosalinosporamide.
J. Nat. Prod., 2010, **73**, 378 – 382.
- 181 D. O'Hagan, G. Launay, A. M. Z. Slawin
Prins fluorination cyclisations: Preparation of 4-fluoro- pyran and piperidine heterocycles.
Beilstein J. Org. Chem., 2010, **6**, 41.
- 182 J. W. Schmidberger A. B. James, R. Edwards, J. H. Naismith, D. O'Hagan
Halomethane biosynthesis: Structure of a SAM-dependent halide methyltransferase from *Arabidopsis thaliana*,
Angew. Chemie. Int. Ed., 2010, **49**, 3646 – 3648.
- 183 D. O'Hagan, D. Lloyd
The iconic curly arrow
Chem. World, 2010, **7**, 54-57.
184. David O'Hagan and Jason Schmidberger
Enzymes that catalyse S_N2 reaction mechanisms
Nat. Prod. Reports., 2010, **27**, 900-918.
- 185 D. O'Hagan
Fluorine in healthcare: Organofluorine containing blockbuster drugs
J. Fluorine Chem., 2010, **131**, 1071 - 1081.
- 186 S. Bresciani,T. Lebl, A. M. Z. Slawin, D. O'Hagan
Fluorosugars: Synthesis of the 2,3,4-trifluoro-2,3,4-tridehydroxy hexose analogues of D-glucose and D-altrose and assessment of their erythrocyte transmembrane transport.
Chem. Commun., 2010, 5434 – 5436.
- 187 Stefano Bresciani and David O'Hagan
Stereospecific benzylic dehydroxyfluorination reactions using Bio's TMS-amine additive approach with challenging substrates.
Tetrahedron Letts., 2010, **51**, 5795 – 5797.
- 188 Xiang-Guo Li, Juozas Domarkas, David O'Hagan
Fluorinase mediated chemoenzymatic synthesis of [¹⁸F]-fluoroacetate for PET studies
Chem Commun., 2010, **46**, 7819 – 7821.
- 189 Nancy Campbell, Daniel L. Smith, Anthony P. Reszka, Stephen Neidle and David O'Hagan
β-Fluorination of peripheral pyrrolidines attached to acridine ligands affects their interactions with G-quadruplex DNA.
Org. Biomol. Chem., 2011, **9**, 1328 -1331.
- 190 David O'Hagan
3-Fluoro-γ-aminobutyric acid (3F-GABA) enantiomers. Exploring the conformation of GABA binding to GABA_A receptor and GABA aminotransferase.
Future. Med. Chem., 2011, **3**, 189 - 195.
- 191 David O'Hagan, Alexandra M. Z. Slawin, Vaclav Jurcik
Single enantiomer synthesis of α-(trifluoromethyl)-β -lactam
Beilstein J. Org. Chem. 2011, **7**, 759-766
192. David O'Hagan and Nawaf Al-Maharik
Organofluorine Chemistry: Deoxy- and Dehydroxy- fluorination Reagents for C-F Bond Synthesis
Aldrich Chemica Acta, 2011, **44**, 65-75.
193. Izumi Yamamoto, Gildas P. Deniau, Navnath Gavande, Mary Chebib, Graham A.R. Johnston, David O'Hagan.

- Agonist responses of (*R*)- and (*S*)-3-fluoro- γ -aminobutyric acids suggest an enantiomeric fold for GABA binding to GABA_C receptors.
Chem Commun., 2011, **47**, 7956 - 7958.
194. Alastair J Durie, Alexandra M. Z. Slawin, Tomas Lebl, Peer Kirsch, David O'Hagan
Synthesis and structure of all-*syn* 1,2,3,4-tetrafluorocyclohexane.
Chem Commun., 2011, **47**, 8265 - 8267.
195. Maciej Skibinski, Yi Wang, Alexandra M. Z. Slawin, Tomas Lebl, Peer Kirsch and David O'Hagan.
Alicyclic ring structure: Conformational influence of the CF₂ group in cyclododecanes
Angewandte Chemie Int. Ed., 2011, **50**, 10581 - 10584.
196. Matheus P. Freitas, Michael Bühl and David O'Hagan
1,2-Difluoroethane: The angular dependence on ¹*J*_{CF} coupling constants is independent of hyperconjugation
Chem Commun., 2012, **48**, 2433 - 2435.
197. David O'Hagan, Yi Wang, Maciej Skibinski and Alexandra M. Z. Slawin.
The influence of the difluoromethylene group (CF₂) on the conformation and properties of selected organic compounds
J. Pure. Appl. Chem., 2012, **84**, 1587 - 1595.
198. Matheus P. Freitas, Michael Bühl, David O'Hagan, Rodrigo A. Cormanich, Cláudio F. Tormena
Stereoelectronic interactions and the one-bond C-F coupling constant in sevoflurane
J. Phys. Chem. A, 2012, **116**, 1677–1682.
199. Qingzhi Zhang, K. Saki Raheem, Nigel P. Botting, Alexandra M.Z Slawin, Colin D. Kay and David O'Hagan.
Flavonoid metabolism: The synthesis of phenolic glucuronides and sulfates as candidate metabolites for bioactivity studies of dietary flavonoids.
Tetrahedron, 2012, **68**, 4194-4201.
200. Kwan K J Chan and David O'Hagan
The rare fluorinated natural products and biotechnological prospects for fluorine enzymology.
Methods Enzymol., 2012, **516**, 219-235.
201. Xiang-Guo Li, Sergio Dall'Angelo, Lutz F. Schweiger, Matteo Zanda, David O'Hagan
[¹⁸F]-5-Fluoro-5-deoxyribose, an efficient peptide bioconjugation ligand for positron emission tomography (PET) imaging.
Chem. Commun., 2012, **48**, 5247 - 5249.
202. David O'Hagan
Organofluorine chemistry: Synthesis and conformation of vicinal fluoromethylene motifs
J. Org. Chem., 2012, **77**, 3689–3699.
203. Poh Wai Chia, Matthew R. Livesey, Alexandra M. Z. Slawin Tanja van Mourik, David J. A. Wyllie
David O'Hagan
3-Fluoro-N-methyl-D-aspartic acid (3F-NMDA) stereoisomers as conformational probes for exploring agonist binding at the NMDA site of the glutamate receptor
Chem. Eur. J., 2012, **18**, 8813-8819.
204. Chunhua Zhao, Zixin Deng; Hong-Yu Ou; Ryan P McGlinchey, David O'Hagan,
Insights into fluorometabolite biosynthesis in Streptomyces cattleya DSM46488 through knockout mutants,
Bioorganic. Chem., 2012, **44**, 1-7.
205. Yi Wang, Peer Kirsch, Thomas Lebl, Alexandra M. Z. Slawin, David O'Hagan
The preferred conformation of *erythro*- and *threo*-1,2-difluorocyclododecanes

- 206 Malgorzata Adamkiewicz, Tony O'Hara, David O'Hagan, Georg Hähner
A vapor phase deposition of self-assembled monolayers: Vinyl-terminated films of volatile silanes on silicon oxide substrates.
Thin Solid Films., 2012, **520**, 6719 - 6723.
- 207 Alastair J. Durie, Alexandra M. Z. Slawin, Tomas Lebl, Peer Kirsch and David O'Hagan.
Fluorocyclohexanes: Synthesis and structure of all-*syn*-1,2,4,5-tetrafluorocyclohexane
Chem Commun., 2012, **48**, 9643-9645.
- 208 Poh Wai Chia, Sarah C. Brennan, Alexandra M. S. Slawin, Daniela Riccardi and David O'Hagan
Allosteric agonists of the calcium receptor (CaR): Fluorine and SF₅ analogues of cinacalcet,
Org. Biolmol. Chem., 2012, **10**, 7922 - 7927.
- 209 Alastair J. Durie, Alexandra M. Z. Slawin, Tomas Lebl and David O'Hagan
The synthesis of η -1,2,3,4,5,6-hexafluorocyclohexane (benzene hexafluoride) from benzene
Angew. Chemie Int. Ed., 2012, **51**, 10086 - 10088.
- 210 Daniel L. Smith, Alexandra M. Z. Slawin and David O'Hagan
Fluorine in peptides: The synthesis of α -fluoro- β -aminodipeptides by direct deoxofluorination/rearrangement of *N*-seryl dipeptides.
Helv. Chim. Acta., 2012, **95**, 2331- 2347.
- 211 Poh Wai Chia, Davide Bello, Alexandra M. Z. Slawin and David O'Hagan
Fluorinated 5- and 7- membered carbacycle motifs by reaction of difluorocarbene with acetylene ethers.
Chem Commun., 2013, **49**, 2189 - 2191.
- 212 Sergio Dall'Angelo, Nouchali Bandaranayaka, Albert D. Windhorst, Danielle J. Vugts, Dion van der Born, Mayca Onega, Lutz F. Schweiger, Matteo Zanda, David O'Hagan
Tumour imaging by positron emission tomography using fluorinase generated 5-[¹⁸F]fluoro-5-deoxyribose as a novel tracer.
Nuclear Med. Biol., 2013, **40**, 464-470.
- 213 K. K. Jason Chan, Stephen Thompson and David O'Hagan
The mechanisms of radical SAM/cobalamin methylations. An evolving working hypothesis.
ChemBioChem., 2013, **14**, 675 – 677.
- 214 Rudy Wadoux, Xiaowei Lin, Neil Keddie and David O'Hagan
Chiral fluoroacetate: Synthesis of (*R*)- and (*S*)- [²H₁]-fluoroacetate in high enantiopurity
Tetrahedron Asymmetry, 2013, **214**, 719-723.
- 215 Sergio Dall'Angelo, Qingzhi Zhang, Ian Fleming, Monica Piras, Lutz F. Schweiger, David O' Hagan, Matteo Zanda.
Efficient Bioconjugation of 5-Fluoro-5-Deoxy-Ribose (FDR) to RGD Peptides for Positron Emission Tomography (PET) Imaging of $\alpha_v\beta_3$ Integrin Receptor
Org. Biolmol. Chem., 2013, **11**, 4551 - 4558.
- 216 Andrew Nortcliffe, Nigel P. Botting, David O'Hagan
Novel Amino Acids: Synthesis of furoxan and sydnonimine containing amino acids and peptides as potential nitric oxide releasing motifs.
Org. Biolmol. Chem., 2013, **11**, 4657 – 4671.
- 217 Michael J. Corr and David O'Hagan
Fluorosugars: An improved synthesis of the 2,3,4-trideoxy-2,3,4-trifluoro hexose analogue of D-Glucose
J. Fluorine Chem., 2013, **155**, 72-77.
- 218 Cesar A. Urbina-Blanco‡, Maciej Skibiński‡, David O'Hagan and Steven P. Nolan

Accelerating Influence of the *gem*-Difluoromethylene Group in a Ring-Closing Olefin Metathesis reaction.

Chem Commun., 2013, **49**, 7201 – 7203.

- 219 Maciej Skibiński, César A. Urbina-Blanco, Alexandra M. Z. Slawin, Steven P. Nolan, David O'Hagan
Synthesis and structure of large difluoromethylene containing alicycles by ring closing metathesis (RCM).
Org. Biomol. Chem., 2013, **11**, 8209 – 8213.
- 220 J. L. di Gesso, J. S. Kerr, S. K. Yalmanchili, A. Cassidy, N. P. Botting, D. O'Hagan, Q. Zhang, S. Raheem, C. D. Kay, M. A. O'Connell,
Metabolism of dietary flavonoids alters their effect on tumor necrosis factor- α
Cytokine, 2013, **63**, 243 – 341.
221. Yi Wang, Ricardo Callejo, Alexandra M. Z. Slawin, David O'Hagan,
The difluoromethylene (CF_2) group in aliphatic chains: Synthesis and conformational preference of palmitic acids and nonadecane containing CF_2 groups.
Beilstein. J. Org. Chem., 2014, **10**, 18–25.
- 222 Hai Deng, Long Ma, Nouchali Bandaranayaka, Zhiwei Qin, Greg Mann, Kwaku Kyeremeh, Yi Yu, Thomas Shepherd, James H Naismith, David O'Hagan,
Identification of fluorinases from *Streptomyces* sp. MA37, *Nocardia brasiliensis* and *Actinoplanes* sp. N902-109 by gene mining.
ChemBioChem, 2014, **15**, 364-368.
- 223 Andrew Nortcliffe, Alexander G. Ekstrom, James Black, James A. Ross ,Fouad K. Habib, Nigel P. Botting, and David O'Hagan.
Synthesis and biological evaluation of nitric oxide-donating analogues of sulindac for prostate cancer treatment.
Biorg. Med. Chem. Letts., 2014, **22**, 756-761.
- 224 Amy Weeks, Neil Keddie, Rudy Wadoux, David O'Hagan, Michelle Chang,
Molecular recognition of fluorine impacts substrate selectivity in the fluoroacetyl-CoA thioesterase FIK.
Biochemistry, 2014, **53**, 2053-2063.
- 225 Alastair J. Durie, Tomoya Fujiwara, Rodrigo Cormanich, Michael Bühl, Alexandra M. Z. Slawin and David O'Hagan
All-*cis*-1,2,4,5 tetrafluoro-3-phenylcyclohexane, a polar cyclohexane motif.
Chem.. Eur. J., 2014, **20**, 6259-6263.
- 226 Rodrigo A. Cormanich,^aAlastair Durie, Ragnar Bjornsson, Roberto Rittner, David O'Hagan and Michael Bühl
Density functional study of interactions between fluorinated cyclohexanes and arenes,
Helv. Chimica Acta, 2014, **97**, 797-807.
- 227 Nawaf Al-Maharik, Peer Kirsch, Alexandra M. Z. Slawin, David O'Hagan
The influence of vicinal *threo*-difluorination on electro-optic and mesogenic properties of propyleneoxy-linked nematic liquid crystals.
Tetrahedron, 2014, **70**, 4626–4630.
- 228 Malgorzata Adamkiewicz, David O'Hagan, and Georg Hähner,
bis-(Trifluoromethyl)methylene addition to vinyl-terminated SAMs: A gas phase C-C bond forming reaction on a surface.
Langmuir, 2014, **30**, 5422–5428.
- 229 Mohammed Salah Ayoub, David B. Cordes, Alexandra M. Z. Slawin and David O'Hagan

Total synthesis of a reported fluorometabolite from *Streptomyces* sp. TC1 indicates an incorrect assignment. The isolated compound did not contain fluorine.

J. Nat. Prod., 2014, **77**, 1249-1251.

230. Stephen Thompson, Qingzhi Zhang, Mayca Onega, Stephen McMahon, Ian Fleming, Sharon Ashworth, James H. Naismith, Jan Passchier, David O'Hagan
'A localised tolerance in the substrate specificity of the fluorinase enables 'last step' [¹⁸F]-fluorination of a RGD peptide under ambient aqueous conditions'
Angewandte Chemie, Int. Ed., 2014, **53**, 8913-8918.
231. Sheng Huang, Long Ma, Ming Him Tong, Yi Yu, David O'Hagan and Hai Deng
Fluoroacetate biosynthesis from the marine-derived bacterium *Streptomyces xinghaiensis* NRRL B-24674.
Org. Biomol. Chem., 2014, **12**, 4828-4831.
232. Successful fluorine-containing herbicide agrochemicals
Tomoya Fujiwara and David O'Hagan,
J. Fluorine Chem., 2014, **167**, 16-29.
233. Stepwise preparation of all-*cis* 1,3,4-trifluoro-2-phenylcyclohexane, avoiding a phenonium intermediate
Alastair J. Durie Tomoya Fujiwara, Nawaf Al-Maharik, Alexandra M. Z. Slawin and David O'Hagan,
J. Org. Chem., 2014, **79**, 8228-8233.
234. Rodrigo Cormanich, Roberto Rittner, David O'Hagan, Michael Buehl,
Analysis of CF···FC Interactions on Cyclohexane and Naphthalene Frameworks
J. Physical Chem., 2014, **118**, 7901-7910.
235. Andrew Nortcliffe, Ian N. Fleming, Nigel P. Botting, David O'Hagan.
Synthesis and anticancer properties of RGD peptides conjugated to nitric oxide releasing functional groups and abiraterone.
Tetrahedron, 2014, **70**, 8343-8347.
236. Organic chemistry on surfaces: Direct cyclopropanation by dihalocarbene addition to vinyl terminated self-assembled monolayers (SAMs)
Malgorzata Adamkiewicz, David O'Hagan, Georg Hähner,
Beilstein J. Org. Chem., 2014, **10**, 2897-2902.
237. Davide Bello, Rodrigo A. Cormanich, and David O'Hagan,
Fluorovinyl thioethers as putative steric and electronic thioester enolate mimetics: Chemoselective HF addition to acetylene thioethers.
Australian J. Chem., 2015, **68**, 72-79.
238. Enzymatic fluorination and biotechnological developments of the fluorinase
David O'Hagan and Hai Deng
Chem. Rev., 2015, **115**, 634-649.
239. Nathan Absalom, Izumi Yamamoto, David O'Hagan, Luke Hunter and Mary Chebib
Probing the mode of neurotransmitter binding to GABA receptors using selectively fluorinated GABA analogues.
Australian J. Chem., 2015, **68**, 23-30.
240. Long Ma, Axel Bartholome, Ming Him Tong, Zhiwei Qin, Yi Yu, Thomas Shepherd, Kwaku Kyeremeh, Hai Deng and David O'Hagan
Identification of a fluorometabolite from *Streptomyces* sp. MA37: (2R,3S,4S)-5-Fluoro-2,3,4-trihydroxypentanoic acid.
Chem. Sci., 2015, **6**, 1414 – 1419.
241. Fady Nahra, Scott R Patrick, Davide Bello, Marcel Brill, Alan Obled, David B. Cordes, Alexandra M. Z. Slawin, David O'Hagan, Steven P. Nolan,

- Hydrofluorination of alkynes catalysed by gold bifluorides,
ChemCatChem 2015, **7**, 240-244.
242. Neil S. Keddie, Alexandra M. Z. Slawin, Tomas Lebl, Douglas Philp, David O'Hagan
All-*cis* 1,2,3,4,5,6-hexafluorocyclohexane is a facially polarised cyclohexane motif
Nature Chemistry, 2015, **7**, 483-488.
243. Mohammed Salah Ayoup, David B. Cordes, Alexandra M. Z. Slawin and David O'Hagan
Fluorine containing amino acids: Synthesis and peptide coupling of amino acids containing the all-*cis* tetrafluorocyclohexyl motif.
Org. Biolmol. Chem., 2015, **13**, 5621 – 5624.
244. Jessica L. di Gesso, Jason S. Kerr, Qingzhi Zhang, K. Saki Raheem, S. Krishna Yalamanchili, David O'Hagan, Colin D. Kay and Maria A. O'Connell.
Flavonoid metabolites reduce tumour necrosis factor- α secretion to a greater extent than their precursor compounds in human THP-1 monocytes
Mol. Nutr. Food Res., 2015, **59**, 1143-1154.
245. S. Thompson, M. Onega, S. Ashworth I.N. Fleming, J. Passchier, D. O'Hagan
A two-step fluorinase enzyme mediated ^{18}F labelling of an RGD peptide for positron emission tomography.
Chem Commun, 2015, **51**, 13542 - 13545
246. Tetiana Bykova, Nawaf Al-Maharik, Alexandra M. Z. Slawin, David O'Hagan
Synthesis of selectively fluorinated cyclohexanes: The observation of phenonium rearrangements during deoxyfluorination reactions on cyclohexane rings with a vicinal phenyl substituent.
J. Fluorine Chem., 2015, **179**, 188 – 192.
247. Davide Bello and David O'Hagan
Lewis Acid-promoted hydrofluorination of alkynyl sulfides to generate α -fluorovinyl thioethers
Beilstein J. Org. Chem., 2015, **11**, 1902-1909.
248. Rodrigo A. Cormanich, Neil Keddie, Roberto Rittner, David O'Hagan and Michael Bühl
Particularly strong C-H---pi interactions between benzene and all-*cis* 1,2,3,4,5,6-hexafluorocyclohexane.
Phys.Chem.Chem.Phys., 2015, **44**, 29475-29478.
249. Mohammed Salah Ayoup, David B. Cordes, Alexandra M. Z. Slawin, David O'Hagan
Selectively fluorinated cyclohexane building blocks: Derivatives of carbonylated all-*cis* 3-phenyl-1,2,4,5-tetrafluorocyclohexane.
Beilstein J. Org. Chem., 2015, **11**, 2671–2676.
250. Rodrigo A. Cormanich, Roberto Rittner, David O'Hagan and Michael Bühl,
Inter- and intramolecular CF···C=O interactions on aliphatic and cyclohexane carbonyl derivatives
J. Comput. Chem., 2016, **64**, 37-41.
251. Stephen Thompson, Stephen A McMahon, James H Naismith, David O'Hagan
Exploration of a potential difluoromethyl-nucleoside substrate with the fluorinase enzyme.
Bioorg. Chem., 2016, **64**, 37-41.
252. Michael J. Corr, Rodrigo A. Cormanich, Cortney N. von Hahmann, Michael Bühl, Alexandra M. Z. Slawin and David O'Hagan
Fluorine in fragrances: Exploring the difluoromethylene (CF_2) group as a conformational constraint in macrocyclic musk lactones.
Org. Biol. Chem., 2016, **14**, 211 - 219.
253. Tetiana Bykova, Nawaf Al-Maharik, Alexandra M. Z. Slawin, David O'Hagan
Multicomponent reactions of methyl substituted all *cis*-tetrafluorocyclohexane aldehydes
Org. Biolmol. Chem., 2016, **14**, 1117 - 1123.

- 254 David O'Hagan and Robert J Young
 Accurate lipophilicity (LogP) measurements inform on subtle stereoelectronic effects in fluorine chemistry.
Angew. Chemie. Int. Ed., 2016, **55**, 3858 – 3860.
- 255 Stephen Thompson, Ian N. Fleming, David O'Hagan,
 Enzymatic transhalogenation of dendritic RGD peptide constructs with the fluorinase,
Org. Biol. Chem., 2016, **14**, 3120 - 3129.
- 256 Emily F. Warner, Qingzhi Zhang, K. Saki Raheem, David O'Hagan, Maria A. O'Connell, Colin D. Kay.
 Common phenolic metabolites of flavonoids, but not their unmetabolized precursor structures, reduce the secretion of vascular cellular adhesion molecules by human endothelial cells.
J. Nutr., 2016, **146**, 465-473.
- 257 Zeguo Fang, Nawaf Al-Muharik, Alexandra M. Z. Slawin, Michael Bühl, David O'Hagan
 Polar alicyclic rings: Synthesis and structure of all *cis*-1,2,3,4-tetrafluorocyclopentane.
Chem Commun, 2016, **52**, 5116 - 5119.
- 258 Ricardo Callejo, Michael J. Corr, Mingyan Yang, Mingan A. Wang, David B. Cordes, Alexandra M. Z. Slawin, David O'Hagan
 Fluorinated Musk Fragrances: The CF₂ Group as a Conformational Bias Influencing the Odour of Civetone and (R)-Muscone,
Chem Eur. J., 2016, **22**, 8137 -8151.
- 259 Blake E. Ziegler, Michael Lecours, Rick A. Marta, Joshua Featherstone, Eric Fillion, W. Scott Hopkins, Vincent Steinmetz, Neil S. Keddie, David O'Hagan, Terrance B. McMahon.
 Janus Face Aspect of All-cis 1,2,3,4,5,6-Hexafluorocyclohexane Dictates Remarkable Anion and Cation Interactions In the Gas Phase.
J. Am. Chem. Soc., 2016, **138**, 7460 -7463
- 260 Qingzhi Zhang, Sergio Dall'Angelo, Ian N. Fleming, Lutz F. Schweiger, Matteo Zanda, David O'Hagan
 Last-step enzymatic [¹⁸F]-fluorination of cysteine-tethered RGD peptides using modified Barbas linkers.
Chem Eur. J., 2016, **22**, 10998 – 11004.
- 261 Nawaf Al-Maharik, Peer Kirsch, Alexandra M. Z. Slawin, David B. Cordes, David O'Hagan,
 Fluorinated liquid crystals: Evaluation of selectively fluorinated facially polarised cyclohexyl motifs for liquid crystal applications.
Org. Biolmol. Chem., 2016 **14**, 9974-9980.
- 262 Matthew J. Jones, Ricardo Callejo, Alexandra M. Z. Slawin, Michael Bühl and David O'Hagan,
 Organofluorine chemistry: Difluoromethylene motifs spaced 1,3 to each other imparts facial polarity to a cyclohexane ring.
Beilstein J. Org. Chem., 2016, **12**, 2823-2827.
- 263 Axel Bartholomé, Jeffrey E. Janso, Usa Reilly and David O'Hagan.
 Fluorometabolite biosynthesis: Isotopically labelled glycerol incorporations into the antibiotic nucleocidin in *Streptomyces calvus*.
Org. Biol. Chem., 2017, **15**, 61 – 64.
- 264 Michael J. Lecours, Rick A. Marta, Vincent Steinmetz, Neil Keddie, Eric Fillion, David O'Hagan, Terrance B. McMahon, W. Scott Hopkins,
 The Interaction of B₁₂F₁₂²⁻ with all-*cis* 1,2,3,4,5,6-hexafluorocyclohexane in the gas phase.
J. Phys. Chem. Letts., 2017, **8**, 109–113.
- 265 Tetiana Bykova, Nawaf Al-Maharik, Alexandra M. Z. Slawin and David O'Hagan
 Fluorinated cyclohexanes: Synthesis of amine building blocks of the all-*cis* 2,3,5,6-tetrafluorocyclohexylamine motif

- 266 Emily F. Warner, Michael J. Smith, Qingzhi Zhang, K. Saki Raheem, David O'Hagan, Maria A. O'Connell and Colin D. Kay
Signatures of anthocyanin metabolites identified in humans inhibit biomarkers of vascular inflammation in cultured human endothelial cells.
Mol. Nutr. Food Res., 2017, **61**, 1700053.
- 267 Rodrigo A. Cormanich, David O'Hagan and Michael Bühl
Hyperconjugation is the source of helicity in perfluorinated nalkanes
Angew. Chemie. Int. Ed., 2017, **129**, 7975 - 7978.
- 268 Mohd Abdul Fatah Abdul Manan, David B. Cordes, Alexandra M. Z. Slawin, Michael Bühl, Vivian W. Y. Liao, Han. C. Chua, Mary Chebib and David O'Hagan.
The synthesis and evaluation of fluoro-, trifluoromethyl, and iodo- muscimols as GABA agonists.
Chemistry Eur. J. 2017, **23**, 10848–10852.
- 269 Joshua Clark and David O'Hagan
Strategies for radiolabelling antibody, antibody fragments and affibodies with fluorine-18 as tracers for positron emission tomography.
J. Fluorine Chem., 2017, **203**, 31 - 46.
- 270 Phillip T. Lowe, Sergio Dall'Angelo, Thea Mulder-Krieger, Adriaan P. IJzerman, Matteo Zanda and David O'Hagan,
A novel class of fluorinated A_{2A} adenosine receptor agonist with application to last step enzymatic [¹⁸F]fluorination for PET imaging,
ChemBioChem., 2017, **18**, 2156 – 2164.
- 271 Xuan Feng, Nawaf Al Maharik, Axel Bartholomé, Jeffrey E. Janso, Usa Reilly and David O'Hagan.
Incorporation of [²H₁]-(*1R,2R*)- and [²H₁]-(*1S,2R*)- glycerols into the antibiotic nucleocidin in *Streptomyces calvus*.
Org. Biomol. Chem., 2017, **15**, 8006–8008.
- 272 Neil S. Keddie, Pier Alexandre Champagne, Justine Desroches, Jean-François Paquin and David O'Hagan,
Stereochemical outcomes of C–F activation reactions of benzyl fluoride
Beilstein J. Org. Chem., 2018, **14**, 106 - 113.
- 273 Ren Tomita, Nawaf Al-Maharik, Andrea Rodil, Michael Bühl, and David O'Hagan
Synthesis of aryl- α,α -difluoroethyl thioethers a novel structure motif in organic chemistry, and extending to aryl α,α -difluoro oxyethers.
Org. Biomol. Chem., 2018, **16**, 1113–1117.
- 274 Andrea Rodil, Stefano Bosisio, Mohammed Salah Ayoup, Laura Quinn, David B. Cordes, Alexandra M. Z. Slawin, Cormac D. Murphy, Julien Michel and David O'Hagan
Metabolism and hydrophilicity of the polarised ‘Janus face’ all-cis tetrafluorocyclohexyl ring, a candidate motif for drug discovery.
Chem. Sci., 2018, **9**, 3023 – 3028.
- 275 Lucky Ahmed, Yuetian Zhang, Eric Block, Michael Buehl, Michael J. Corr, Rodrigo A. Cormanich, Sivaji Gundala, Hiroaki Matsunami, David O'Hagan, Mehmet Ozbil, Yi Pan, Sivakumar Sekharan, Nicholas Ten, Mingan Wang, Mingyan Yang, Qingzhi Zhang, Ruina Zhang, Victor S. Batista, and Hanyi Zhuang.
Molecular mechanism of activation of human musk receptors OR5AN1 and OR1A1 by (R)-muscone and diverse other musk-smelling compounds.
Proc. Nat. Acad. Sci., 2018, **115**, E3950-E3958.
- 276 D. O'Hagan
An enzymatic method for C-¹⁸F bond formation for PET
J. Label. Compd. Radiopharm., 2018, **61**, 461-462.

- 277 Tetiana Bykova, Nawaf Al-Maharik, Alexandra M. Z. Slawin, Michael Bühl, Tomas Lebl, David O' Hagan.
Benzyllic functionalisation of phenyl all *cis*-2, 3, 5, 6 -tetrafluoro -cyclohexane provides access to new organo-fluorine building blocks.
Chem. Eur. J., 2018, **24**, 13290 - 13296.
- 278 Connor J. Thomson, Qingzhi Zhang, Nawaf Al-Maharik, Michael Buehl, David B. Cordes, Alexandra M. Z. Slawin and David O'Hagan
Fluorinated cyclopropanes: Synthesis and chemistry of the aryl α,β,β -trifluorocyclopropane motif.
Chem. Commun., 2018, **54**, 8415 – 8418.
- 279 Phillip T. Lowe, Sergio Dall'Angelo, Andrew Devine, Matteo Zanda, David O'Hagan
Enzymatic fluorination of biotin and tetrazine bioconjugates for pre-targeting approaches to PET imaging.
ChemBioChem, 2018, **19**, 1969-1978.
- 280 M. A. Fatah, Abdul Manan, David B. Cordes, Alexander. M. Z. Slawin David O'Hagan,
One-pot synthesis of unsymmetrical diaryliodinium tetrafluoroborate salts bearing an isoxazole moiety from aryl borinic acids.
Int. J. Eng. Tech., 2018, **7** (4.14), 158 -162. (Special Issue)
- 281 Davide Bello, Maria Grazia Rubanu, Nouchali Bandaranayaka, Jan. P. Götze, Michael Bühl, David O'Hagan
Acetyl coenzyme A analogues as rationally designed inhibitors of citrate synthase.
ChemBioChem, 2019, **20**, 1174-1182.
- 282 David O'Hagan and R A. Aitken,
The St Andrews periodic table
Chem. World, 2019, **16** (2), 68-69.
- 283 Phillip T. Lowe, Sergio Dall'Angelo, Ian N. Fleming, Monica Piras, Matteo Zanda and David O'Hagan
Enzymatic radiosynthesis of a 18F-Glu-Ureido-Lys-based ligand for the prostate-specific membrane antigen (PSMA).
Org. Biomol. Chem., 2019, **17**, 1480 – 1486
- 284 Qingzhi Zhang, Charlotte S. Teschers, Ricardo Callejo, Mingyan Yang, Mingan Wang, Peter J. Silk, Krista Ryall, Lucas E. Roscoe, David B Cordes, Alexandra M. Z. Slawin, David O'Hagan.
Fluorine in pheromones: Synthesis of fluorinated 12-dodecanolides as Emerald Ash Borer pheromone mimetics
Tetrahedron, 2019, **7**, 2917-2922.
- 285 Andrea Rodil, Alexandra M. Z. Slawin, Nawaf Al-Maharik, Ren Tomita, David O'Hagan
Fluorine containing substituents: metabolism of the α,α -difluoroethyl thioether motif,
Beilstein J. Org. Chem., 2019, **15**, 1441-1447.
- 286 Phillip T. Lowe, Steven L. Cobb and David O'Hagan
An enzymatic Finkelstein reaction: Fluorinase catalyses direct halogen exchange.
Org. Biomol. Chem., 2019, **17**, 7493 - 7496.
- 287 Zeguo Fang, David B. Cordes, Alexandra M. Z. Slawin and David O'Hagan
Fluorine containing cyclopropanes: Synthesis of aryl substituted all-*cis* 1,2,3-trifluorocyclopropanes, a facially polar motif.
Chem. Commun., 2019, **55**, 10539 – 10542.
- 288 Xuan Feng, Davide Bello, Phillip T. Lowe, Joshua Clark and David O'Hagan
Two 3'-O- β -glucosylated nucleoside fluorometabolites related to nucleocidin in *Streptomyces calvus*.
Chem Sci., 2019, **10**, 9501 - 9505.

- 289 Zeguo Fang, Roscoe Z. Gillatt, Alexandra M. Z. Slawin, David B. Cordes, Cameron L. Carpenter-Warren, David O'Hagan
Unexpected α,α' -difluoroethers from Ag(I)F and N-bromosuccinimide reactions of dibenzo[a,e]cyclooctatetraene.
Chem. Commun., 2019, **55**, 14295 – 14298.
- 290 Phillip T. Lowe and David O'Hagan,
A role for fluorine in flavours, fragrances and pheromones?
J. Fluorine Chem., 2020, **230**, 109420.
- 291 Nawaf Al-Maharik, David B. Cordes, Alexandra M. Z. Slawin, Michael Bühl and David O'Hagan,
Probing the helical integrity of multivincinal all-*syn*-fluoro alkanes.
Org. Biomol. Chem., 2020, **18**, 878 – 887.
- 292 Konstantinos Markakis, Phillip T. Lowe, Liam Davison-Gates, David O'Hagan, Susan J. Rosser and Alistair Elfick,
An engineered *E. coli* strain for direct *in vivo* fluorination.
ChemBioChem, 2020, **21**, 1856-1860.
- 293 Polar organofluorine substituents: Placing fluorines along alkyl chains and around alicyclic rings
David O'Hagan,
Chem. Eur. J., 2020, **26**, 7981-7997.
- 294 Zeguo Fang, Nawaf Al-Maharik, Peer Kirsch, Matthias Bremer, Alexandra M. Z. Slawin, David O'Hagan
Synthesis of organic liquid crystal containing selectively fluorinated cyclopropanes
Beilstein J. Org. Chem., 2020, **16**, 674-680.
- 295 B. A. Piscelli, W. Sanders, C. Yu, N. Al Maharik, T. Lebl, R. A. Cormanich, D. O'Hagan,
Fluorine induced pseudo-anomeric effects in methoxycyclohexanes through electrostatic 1,3-diaxial interactions.
Chem. Eur. J., 2020, **26**, 11989-11994.
- 296 Cihang Yu, Agnes Kütt, Gerd-Volker Röschenhaller, Tomas Lebl, David B. Cordes, Alexandra M. Z. Slawin, Michael Bühl, David O'Hagan
Janus face all-*cis* 1,2,4,5-tetrakis(trifluoromethyl)- and all-*cis* 1,2,3,4,5,6-hexakis(trifluoromethyl)-cyclohexanes.
Angewandte Chemie. Int. Ed., 2020, **59**, 19905 – 19909.
- 297 Jianlin Han, Attila Mário Remete, Luca S. Dobson, Lorand Kiss, Kunisuke Izawa, Hiroki Moriwaki, Vadim A. Soloshonok, David O'Hagan,
Next generation organofluorine containing blockbuster drugs
J. Fluorine Chem., 2020, **239**, 109639
- 298 Patricia Calero, Daniel C. Volke, Phillip T. Lowe, Charlotte H. Gotfredsen, David O'Hagan, Pablo I. Nikel
A fluoride-responsive genetic circuit enables *in vivo* biofluorination in engineered *Pseudomonas putida*
Nature Commun., 2020, **11**, 5045.
- 299 Xuan Feng, Davide Bello and David O'Hagan
Isolation of 5'-O-sulfamyladenosine and related 3'-O- β -glucosylated adenosines from the nucleocidin producer *Streptomyces calvus*.
RSC Advances, 2021, **11**, 5291–5294.
- 300 Manuele Musolino, Ian N. Fleming, Lutz F. Schweiger, David O'Hagan, Sergio Dall'Angelo, Matteo Zanda.
Synthesis, radiosynthesis and *in vitro* studies on novel hypoxia PET tracers incorporating [^{18}F]FDR
Eur. J. Org. Chem., 2021, 1429 – 1439.
- 301 Bruno A. Piscelli, David O'Hagan, and Rodrigo A. Cormanich

The contribution of non-classical CH_{ax}···OC hydrogen bonds to the anomeric effect in fluoro and oxamethoxycyclohexanes
PhysChemChemPhys, 2021, **23**, 5845 – 5851.

- 302 Shigeyuki Yamada, Masato Morita, Yizhou Wang, Qingzhi Zhang, David O'Hagan, Tomohiro Agou, Hiroki Fukumoto, Toshio Kubota, Mitsuo Hara, Tsutomu Konno
Effect of fluoroalkyl-substituent in bistolane-based photoluminescence liquid crystals on their physical behaviour.
Crystals, 2021, **11**, 450.
- 303 Joshua L. Clark, Alaric Taylor, Ailsa Geddis, Rifahath M. Neyyappadath, Bruno A. Piscelli, Cihang Yu, David B. Cordes, Alexandra M. Z. Slawin, Rodrigo A. Cormanich, Stefan Guldin, David O'Hagan
Supramolecular packing of alkyl substituted Janus face all-*cis* 2,3,4,5,6-pentafluorocyclohexyl motifs.
Chem. Sci., 2021, **12**, 9712 - 9719.
- 304 Joshua L. Clark, Rifahath M. Neyyappadath, Cihang Yu, Alexandra M. Z. Slawin, David B. Cordes David O'Hagan
Incorporation of Janus all-*cis* 2,3,4,5,6-pentafluorocyclohexyl building blocks into bioactive and medicinal chemistry type products.
Chem. Eur. J., 2021, **27**, 16000 – 16005.
- 305 Yawen Chen, Qingzhi Zhang, Xuan Feng, Marta Wojnowska, David O'Hagan
Streptomyces aureorectus DSM 41692 and *Streptomyces virens* DSM 41465 are producers of the antibiotic nucleocidin and 4'-fluoroadenosine is identified as a co-product.
Org. Biomol. Chem., 2021, **19**, 10081 – 10084.
- 306 Tiiia Kittilä, Patricia Calero, Folmer Fredslund, Phillip T. Lowe, David Teze, Manuel Nieto-Domínguez, David O'Hagan, Pablo I. Nikel, Ditte H. Welner
Oligomerization engineering of the fluorinase enzyme leads to an active trimer that supports synthesis of fluorometabolites *in vitro*.
Microp. Biotechnol., 2022, **15**, 1622 - 1632.
- 307 Mengfan He, Weihong Liu, Chen Zhang, Yingjian Liu, Hanyi Zhuang, David O'Hagan
Selectively Fluorinated Citronellol Analogues Support a Hydrogen Bonding Donor Interaction with the Human OR1A1 Olfactory Receptor.
Org. Lett., 2022, **24**, 4415-4420.
- 308 Thomas J. Poskin, Bruno A. Piscelli, Keigo Yoshida, David B. Cordes, Alexandra M. Z. Slawin, Rodrigo A. Cormanich, Shigeyuki Yamada and David O'Hagan
Janus faced fluorocyclohexanes for supramolecular assembly: Synthesis and solid state structures of equatorial mono-, di- and tri alkylated cyclohexanes and with tri-axial C-F bonds to impart polarity.
Chem. Commun., 2022, **58**, 7968-7971.
- 309 Cihang Yu, Bruno A. Piscelli, Nawaf Al Maharik, David B. Cordes, Alexandra M. Z. Slawin, Rodrigo A. Cormanich, David O'Hagan
Unexpected triaxial preferences in some all-syn 1,3,5-trifluorocyclohexanes.
Chem. Commun., 2022, **58**, 12855 – 12858.
- 310 Phillip T. Lowe and David O'Hagan
4'-Fluoro-nucleosides and nucleotides: From nucleocidin to an emerging class of therapeutics.
Chem Soc. Rev., 2023, **52**, 248–276
- 311 Does perdeuteration increase the polarity of Janus face cycloalkanes?
Zeguo Fang, Cihang Yu, Michael Bühl and David O'Hagan
Helv Chim Acta., 2023, **106**, e202200177
- 312 Bruno Piscelli, David O'Hagan, Rodrigo Cormanich,
The contribution of hyperconjugation and inductive effects to the pseudo-anomeric effect in 4-substituted methoxycyclohexanes
J. Phys. Chem.A, 2023, **127**, 724–728.

- 313 Marta Wojnowska, Xuan Feng, Yawen Chen, Hai Deng, David O'Hagan,
Identification of genes essential for fluorination and sulfamylation within the nucleocidin gene clusters
of *Streptomyces calvus* and *Streptomyces virens*.
Chem Bio Chem 2023, **24**, e202200684 (1 of 9).
- 314 D. O'Hagan
The emergence and properties of selectively fluorinated 'Janus' cyclohexanes.
Chem. Rec., 2023, e202300027(1 of 16).
- 315 Mohd Abdul Fatah Abdul Manan,* David B. Cordes, Alexandra M. Z. Slawin and David O'Hagan
(3-Methoxy-5-(methoxy-carbonyl)-isoxazol-4-yl)(4-methoxy-phenyl)-iodonium 2,2,2-tri-fluoro-acetate.
IUCrData, 2023, **8**, x230300.
- 316 Christian Fischer, Saunak Das, Qingzhi Zhang, Yangbiao Liu, Lothar Weinhardt, David O'Hagan,
Michael Zharnikov, Andreas Terfort,
Lateral dipole moments induced by all-*cis*-pentafluorocyclohexyl groups cause unanticipated effects in self-assembled monolayers.
Nano Res., 2023 in press
- 317 David O'Hagan and Robert J. Young
Future Challenges and Opportunities with Fluorine in Drugs?
Med. Chem. Res., 2023, in press

Patents & Applications

1. David O'Hagan and Xiang-Gu Li;
UK Patent Application No. 1110239.9 PET imaging with 5-(18-fluoro)ribose-protein conjugates
17 June 2011.
2. David O'Hagan,
A Process for Preparing Chiral Amines. A New Route to Chiral Amines from Amino Acids.
UK Patent 5th Dec 1998. Technology licensed to Onyx Scientific Ltd. Sunderland.
3. David O'Hagan and Christoph Schaffrath,
An enzymatic process for the generation of organo-fluorine compounds.
UK British Patent, No 0121439.4 on 4th September 2001.

Other Publications

- 1 **Book Chapter**
D. O'Hagan and D. B. Harper
Natural products Containing Fluorine and Recent Progress in Elucidating the Pathway of
Fluorometabolite Biosynthesis in *Streptomyces cattleya*.
American Chemical Society, Symposium Series 746, ED P. V. Ramachandran, 1999, 210 - 224.
2. H. Deng, F-L Huang, J. H. Naismith, D. O'Hagan, J. B. Spencer, X. Zhu.
Biological Fluorination in *Streptomyces cattleya*: The fluorinase.
Fluorine in Health, Editors A. Tressaud & G. Haufe, Elsevier, 2008, 761 - 777.
- 2 **ACS Abstract**
David O'Hagan, David B. Harper, Steven J. Moss, Jens Nieschalk, Muhammad R. Amin, John T. G. Hamilton,
The rare naturally occurring fluorinated natural products. Biosynthesis of 4-fluoroacetate and
fluorothreonine in *Streptomyces cattleya*.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, 1998, Vol.216, No.Pt1,
pp.10-FLUO

- 3 I. Zabetakis, C. W. Wong, R. Edwards and D. O'Hagan
The Biosynthetic Relationship between Littorine and Hyoscyamine in *Datura Stramonium*, Plant Biotechnology and *In vitro* Biology in the 21st Century:Proceedings of the IXth International Congress of the International Association of Plant Tissue Culture and Biotechnology, Jerusalem, Israel, 14-19th June 1998; . Eds A. Altman, M. Ziv and S. Izhar; 1999, 347 – 350.
- Report**
- 4 D. B. Harper and D O'Hagan
Biological Fluorination
Commissioned by SERC, Biotechnology Directorate, 1990.
- 5 **Encyclopedia entry** (1000 words) on 'Biosynthesis' in McGraw-Hill Encyclopedia of Science & Technology, 1995.
- 6 **Book Review**, (800 words), 'Natural Products: Their Chemistry and Biological Significance'
Longman Scientific & Technical, 1994 by J. Mann, R. S. Davidson, J. B. Hobbs, D. V. Banthrope and J. B. Harborne;
'Nat. Prod. Reps., 1995, **12**, 91.
- 7 **Book Review**, (1000 words), 'Phytochemical Diversity: A Source of New Industrial Products'
Royal Society of Chemistry, Cambridge, 1996, Eds; S. Wrigley, M. Hayes, R. Thomas and E. Chrystal;
'Nat. Prod. Reps., 1997, **14**, 681.
- 8 **Book Review**, (600 words), Enantio-controlled synthesis of fluoro-organic compounds
'Nat. Prod. Reps., 2000, **17**, 214.
9. **Book Review**, (600 word), 'Modern Fluoro-organic Chemistry. Synthesis, Reactivity and Applications' by P. Kirsch *ChemBioChem*, 2005, **6**, 763.
- 10 Book Review (800 words) 'Fluorine in organic Chemistry' by R. D. Chamber for J. Fluorine Chemistry, 2005.
11. Book Review (300 words) Fluorine in medicinal Chemistry and Chemical Biology, Ed I. Ojima, Wiley
for RSC *Chemistry World*. 2009.