

CURRICULUM VITAE : PHILIP CALDER

Present appointment:

Professor of Nutritional Immunology, Faculty of Medicine, University of Southampton, Southampton, UK (since 2002)

Previous posts:

1982-1987 Assistant Lecturer, Department of Biochemistry, University of Auckland, New Zealand
 1987-1991 Nuffield Medical Fellow, Department of Biochemistry, University of Oxford
 1991-1995 Departmental Lecturer, Department of Biochemistry, University of Oxford
 1995-1998 Lecturer in Human Nutrition, University of Southampton
 1998-2002 Reader in Human Nutrition, University of Southampton
 2018-2025 Head of School of Human Development and Health, Faculty of Medicine, University of Southampton

Qualifications:

1980; BSc(Hons) (1st class), Biochemistry, Massey University, Palmerston North, New Zealand
 1987; PhD, Biochemistry, University of Auckland, Auckland, New Zealand
 1994; DPhil, Biochemistry, University of Oxford, Oxford

Prizes, awards etc:

1987 Oxford Nuffield Medical Fellowship
 1995 Sir David Cuthbertson Medal, Nutrition Society
 2004 Belgian Danone Institute Chair
 2007 Nutricia International Award
 2008 Cuthbertson Award & Lecture, European Society for Clinical Nutrition & Metabolism
 2009 Muriel Bell Award, New Zealand Nutrition Society
 2011 Louisiana State University Chancellor's Award in Neuroscience and Medicine
 2012 Normann Medal, German Society for Fat Science
 2015 Ralph T. Holman Lifetime Achievement Award, American Oil Chemists' Society
 2015 Pennington Lecture, British Association for Parenteral and Enteral Nutrition
 2015 British Nutrition Foundation Prize
 2016 Danone International Prize for Nutrition
 2016 British Nutrition Foundation Lecture
 2017 Distinguished Lecturer and Scholar, Texas A&M University
 2017 DSM Award for Lifetime Achievement in Human Nutrition
 2017 National Dairy Council Lecture
 2019 NUTRIM Award, Maastricht University
 2021 Rank Prize Fund Lecture
 2021 European Lipid Science Award 2021, European Federation for Lipid Science & Technology
 2021 80th Anniversary Award, The Nutrition Society
 2023 Stephen S. Chang Award, American Oil Chemists' Society
 2023 Hagler Fellowship, Texas A&M University (for 5 years)
 2024 Lifetime Achievement Award, Global Organisation for EPA and DHA
 2024 Honorary Membership; European Society for Clinical Nutrition & Metabolism
 2025 Alexander Leaf Lifetime Achievement Award, International Society of the Study of Fatty Acids and Lipids

Other esteem markers:

2007 Fellow of the Higher Education Academy
 2011 Fellow of the Royal Society of Biology
 2012 Fellow of the Association for Nutrition,
 2018 Fellow of the International Society for the Study of Fatty Acids and Lipids

President, International Society for the Study of Fatty Acids and Lipids (2009-2012)
 Vice-President, International Society of Immunonutrition
 Chair, Scientific Committee, European Society for Clinical Nutrition and Metabolism (2012-2016)
 President, Nutrition Society (2016-2019)
 President, International Life Sciences Institute European Branch (2019-2021)
 President, Federation of European Nutrition Societies (2019-2023)

Editor in Chief, British Journal of Nutrition (2006-2013)
 Editor in Chief, Lipids (since 2024)
 Associate Editor Journal of Nutrition (since 2014)
 Associate Editor Clinical Science (since 2004)
 Associate Editor Annals of Nutrition and Metabolism
 Associate Editor Frontiers in Immunology
 Member of several other editorial boards: Current Opinion in Clinical Nutrition and Metabolic Care (since 1998;
 Section Editor since 1998; Hot Topics Editor since 2023), European Journal of Nutrition, Prostaglandins
 Leukotrienes and Essential Fatty Acids
 Previously member of several editorial boards (British Journal of Nutrition (1998-2004), International Journal of
 Biochemistry and Cell Biology (2003-2007), Journal of Nutrition (2004-2009), Nutrition, Annual Review of Nutrition
 (2008-2012), Clinical Nutrition (including as Associate Editor 2014-2019), Biochimica et Biophysica Acta Molecular

& Cell Biology of Lipids, Lipids (Associate Editor 2005-2020), Nutrition Research (Associate Editor 2021-2023))

Co-author on European Guidelines for “parenteral nutrition in intensive care” (2009) and “clinical nutrition in the intensive care unit” (2019)

More than 600 invited, guest, special, plenary or keynote lectures at national and international congresses and symposia

Listed as a Highly Cited Researcher in every edition since 2011.

In 2020, ranked 250th in the Plos Biology/Mendeley analysis of approximately 8 million scientists who have published more than 5 papers – this was the all-time/all-fields ranking (top 0.0032% of all researchers). Based on the most recent complete single year at that time (2019) ranked 131st.

In 2024 Research.com assessed researchers across 26 disciplines ranking them nationally and internationally based upon citations of their publications. In Medicine, Calder ranked 83rd in the UK and 770th in the world. In Biology and Biochemistry, Calder ranked 8th in the UK and 158th in the world. See under “Best Scientists Ranking” at <https://research.com>.

In 2023 ScholarGPS assessed about 30 million researchers by field and specialities ranking them according to all-time citations and citations over the previous 5 years. Over all-time and all disciplines, Calder was ranked 216th in the world (194th over the last five years). Calder was ranked 1st in fatty acid research, 3rd in nutrition and 8th in clinical nutrition over all time (1st, 1st and 6th over the last five years). See <https://scholargps.com/scholars>.

Current funded research projects:

1. Effect of vitamin D and probiotics alone and together on immune function in older people. Principal investigator. Human trial. Funded by UK Medical Research Council.
2. Effect of corn fibre on gut microbiota and biomarkers of inflammation and immunity. Principal investigator. Human trial. Funded by Tate & Lyle.
3. Diet and Health Research Innovation Hub. Principal investigator. Funded by UK Biotechnology and Biological Sciences Research Council.

Graduate student supervision:

1. Supervised 22 students to completion of DPhil or PhD; currently supervising 2 PhD students.
2. Supervised 2 students to completion of DM.
3. Co-supervised 9 students to completion of PhD.

Publications:

As of 6 July 2025: Published 457 research papers, 221 review articles in journals, 35 expert group reports/guidelines, 114 editorials/commentaries/comments, 13 letters to the editor and 79 book and text-book chapters. Co-edited 4 books.

PubMed lists 781 publications for “Calder PC”.

Web of Science lists 924 publications, with more than 67,000 citations (> 72 citations per article) and an h-index of 128.

Google Scholar lists more than 124,000 citations with an h-index of 164 and an i-10 index of 706.

Publications:

1. Baker, E.N., Boland, M.J., Calder, P.C. and Hardman, M.J., The specificity of actinidin and its relationship to the structure of the enzyme. *Biochimica et Biophysica Acta*, 616, 1980, 30-34.
2. Calder, P.C. and Geddes, R., Ordered synthesis and degradation of liver glycogen involving 2-amino-2-deoxy-D-glucose. *Carbohydrate Research*, 118, 1983, 233-238.
3. Calder, P.C. and Geddes, R., Glycogen of high molecular weight from mammalian muscle. *Carbohydrate Research*, 135, 1985, 249-256.
4. Calder, P.C. and Geddes, R., The proteoglycan nature of mammalian muscle glycogen. *Glycoconjugate Journal*, 2, 1985, 365-373.
5. Calder, P.C. and Geddes, R., Digestion of the protein associated with muscle and liver glycogens. *Carbohydrate Research*, 148, 1986, 173-177.
6. Calder, P.C., Geddes, R. and Leech, H.F., The heterogeneity of the protein content of liver and muscle glycogens. *Glycoconjugate Journal*, 3, 1986, 331-338.
7. Calder, P.C. and Geddes, R., Starvation of phosphorylase kinase deficient rats is accompanied by partial hepatic glycogen depletion. *Biochemical Journal*, 252, 1988, 927-928.
8. Blows, J.M.H., Calder, P.C., Geddes, R., and Wills P.R., The structure of placental glycogen. *Placenta*, 9, 1988, 493-500.
9. Calder, P.C. and Geddes, R., The structure of the rat liver glycogen backbone protein. *Biochemistry International*, 17, 1988, 711-717.
10. Calder, P.C. and Geddes, R., Rat skeletal muscle lysosomes contain glycogen. *International Journal of Biochemistry*, 21, 1989, 561-567.
11. Calder, P.C. and Geddes, R., Regulation of lysosomal glycogen metabolism: studies of the actions of mammalian α -glucosidases. *International Journal of Biochemistry*, 21, 1989, 569-576.
12. Calder, P.C. and Geddes, R., Acarbose is a competitive inhibitor of mammalian α -glucosidases. *Carbohydrate Research*, 191, 1989, 71-78.

13. Calder, P.C. and Geddes, R., Skeletal muscle glycogen content, structure and metabolism are normal in rats with hepatic glycogen phosphorylase kinase deficiency. *Biochemistry International*, 19, 1989, 1231-1239.
14. Goodwin, G.M., Cowen, P.J., Parry-Billings, M., Calder, P.C. and Newsholme, E.A., Decreased plasma tryptophan levels in dieting man. *British Medical Journal*, 300, 1990, 1499-1500.
15. Calder, P.C., Bond, J.A., Harvey, D.J., Gordon, S. and Newsholme, E.A., Uptake and incorporation of saturated and unsaturated fatty acids into macrophage lipids and their effect upon macrophage adhesion and phagocytosis. *The Biochemical Journal*, 269, 1990, 807-814.
16. Calder, P.C. and Geddes, R., Post mortem glycogenolysis is a combination of phosphorolysis and hydrolysis. *International Journal of Biochemistry*, 22, 1990, 847-856.
17. Parry-Billings, M., Evans, J., Calder, P.C. and Newsholme, E.A., Does glutamine contribute to immunosuppression after major burns? *The Lancet*, 336, 1990, 523-525.
18. Calder, P.C., Bond, J.A., Bevan, S.J., Hunt, S.V. and Newsholme, E.A., Effect of fatty acids on the proliferation of concanavalin A-stimulated rat lymph node lymphocytes. *International Journal of Biochemistry*, 23, 1991, 579-588.
19. Calder, P.C., Glycogen structure and biogenesis. *International Journal of Biochemistry*, 23, 1991, 1335-1352.
20. Calder, P.C. and Geddes, R., Heterogeneity of glycogen synthesis upon refeeding following starvation. *International Journal of Biochemistry*, 24, 1992, 71-77.
21. Calder, P.C., Bevan, S.J. and Newsholme, E.A., The inhibition of T-lymphocyte proliferation by fatty acids is via an eicosanoid-independent mechanism. *Immunology*, 75, 1992, 108-115.
22. Calder, P.C. and Newsholme, E.A., Polyunsaturated fatty acids suppress human peripheral blood lymphocyte proliferation and interleukin-2 production. *Clinical Science*, 82, 1992, 695-700.
23. Calder, P.C. and Newsholme, E.A., Unsaturated fatty acids suppress interleukin-2 production and transferrin receptor expression by concanavalin A-stimulated rat lymphocytes. *Mediators of Inflammation*, 1, 1992, 107-115.
24. Dimitriadis, G., Parry-Billings, M., Dunger, D., Bevan, S., Colquhoun, A., Taylor, A., Calder, P.C., Krause, U., Wagener, G. and Newsholme, E.A., Effects of in vivo administration of insulin-like growth factor I on the rate of glucose utilization in the soleus muscle of the rat. *Journal of Endocrinology*, 133, 1992, 37-43.
25. Calder, P.C., Harvey, D.J., Pond, C.M. and Newsholme, E.A., Site-specific differences in the fatty acid composition of human adipose tissue. *Lipids*, 27, 1992, 716-720.
26. Parry-Billings, M., Budgett, R., Koutedakis, Y., Blomstrand, E., Brooks, S., Williams, C., Calder, P.C., Pilling, S., Baigrie, R. and Newsholme, E.A., Plasma amino acid concentrations in the overtraining syndrome: possible effects on the immune system. *Medicine and Science in Sports and Exercise*, 24, 1992, 1353-1358.
27. Calder, P.C. and Newsholme, E.A., Influence of antioxidant vitamins on fatty acid inhibition of lymphocyte proliferation. *Biochemistry and Molecular Biology International*, 29, 1993, 175-183.
28. Pond, C.M., Mattacks, C.A., Calder, P.C. and Evans, J., Site-specific properties of human adipose depots homologous with those of other mammals. *Comparative Biochemistry and Physiology*, 104A, 1993, 819-824.
29. Curi, R., Bond, J.A., Calder, P.C. and Newsholme, E.A., Propionate regulates lymphocyte proliferation and metabolism. *General Pharmacology*, 24, 1993, 591-597.
30. Calder, P.C. and Newsholme, E.A., The effects of omega-3 fatty acids on lymphocyte functions, In: Drevon, C.A., Baksaas, I. and Krokan, H.E., eds. *Omega-3 Fatty Acids: Metabolism and Biological Effects*, Basel, Birkhauser Verlag, 1993, pp. 293-303.
31. Newsholme, E.A., Calder, P.C. and Yaqoob, P., The regulatory, informational and immunomodulatory roles of fat fuels. *American Journal of Clinical Nutrition*, 55, 1993, S738-S751.
32. Calder, P.C., The effects of fatty acids on lymphocyte functions. *Brazilian Journal of Medical and Biological Research*, 26, 1993, 901-917.
33. May, C.L., Southworth, A.J. and Calder, P.C., Inhibition of lymphocyte protein kinase C by unsaturated fatty acids. *Biochemical and Biophysical Research Communications*, 195, 1993, 823-828.
34. Yaqoob, P. and Calder, P.C., The effects of fatty acids on lymphocyte functions. *International Journal of Biochemistry*, 25, 1993, 1705-1714.
35. Calder, P.C., Yaqoob, P. and Newsholme, E.A., Triacylglycerol metabolism by lymphocytes and the effect of triacylglycerols on lymphocyte proliferation. *The Biochemical Journal*, 298, 1994, 605-611.
36. Dimitriadis, G., Parry-Billings, M., Leighton, B., Piva, T., Dunger, D., Calder, P., Bond, J. and Newsholme, E., Studies on the effects of growth hormone administration in vivo on the rates of glucose transport and utilisation in rat skeletal muscle. *European Journal of Clinical Investigation*, 24, 1994, 161-165.
37. Calder, P.C., Yaqoob, P., Harvey, D.J., Watts, A. and Newsholme, E.A., The incorporation of fatty acids by lymphocytes and the effect on fatty acid composition and membrane fluidity. *The Biochemical Journal*, 300, 1994, 509-518.
38. Yaqoob, P., Newsholme, E.A. and Calder, P.C., The effect of dietary lipid manipulation on rat lymphocyte subsets and proliferation. *Immunology*, 82, 1994, 603-610.
39. Calder, P.C., Glutamine and the immune system. *Clinical Nutrition*, 13, 1994, 2-8.
40. Calder, P.C., Sherrington, E.J., Askanazi, J. and Newsholme, E.A., Inhibition of lymphocyte proliferation in vitro by two lipid emulsions with different fatty acid compositions. *Clinical Nutrition*, 13, 1994, 69-74.
41. Yaqoob, P., Newsholme, E.A. and Calder, P.C., Inhibition of natural killer cell activity by dietary lipids. *Immunology Letters*, 41, 1994, 241-247.
42. Power, G.W., Yaqoob, P., Harvey, D.J., Newsholme, E.A. and Calder, P.C., The effect of dietary lipid manipulation on hepatic phospholipid fatty acid composition and carnitine palmitoyltransferase I activity. *Biochemistry and Molecular Biology International*, 34, 1994, 671-684.
43. Castell, L.M., Bevan, S.J., Calder, P.C. and Newsholme, E.A., The role of glutamine in the immune system

- and in intestinal function in catabolic states. *Amino Acids*, 7, 1994, 231-243.
44. Calder, P.C., Glutamine action in cells of the immune system. In: Cynober, L., Furst, P. and Lawin, P., eds. *Pharmacological Nutrition-Immune Nutrition*, Munich, Zuckschwerdt Verlag, 1995, pp. 10-20.
45. Calder, P.C., Costa-Rosa, L.F.B.P. and Curi, R., Effects of feeding lipids of different fatty acid compositions upon rat lymphocyte proliferation. *Life Sciences*, 56, 1995, 455-463.
46. Yaqoob, P., Newsholme, E.A. and Calder, P.C., The effect of fatty acids on leucocyte subsets and proliferation in whole blood. *Nutrition Research*, 15, 1995, 279-287.
47. Yaqoob, P., Newsholme, E.A. and Calder, P.C., Influence of cell culture conditions on diet-induced changes in lymphocyte fatty acid composition. *Biochimica et Biophysica Acta*, 1255, 1995, 333-340.
48. Yaqoob, P., Sherrington, E.J., Jeffery, N.M., Sanderson, P., Harvey, D.J., Newsholme, E.A. and Calder, P.C., Comparison of the effects of a range of dietary lipids upon serum and tissue lipid composition in the rat. *International Journal of Biochemistry and Cell Biology*, 27, 1995, 297-310.
49. Calder, P.C., Fuel utilisation by cells of the immune system. *Proceedings of the Nutrition Society*, 54, 1995, 65-82.
50. Calder, P.C., Fatty acids, dietary lipids and lymphocyte functions. *Biochemical Society Transactions*, 23, 1995, 302-309.
51. Yaqoob, P. and Calder, P.C., Effects of dietary lipid manipulation upon inflammatory mediator production by murine macrophages. *Cellular Immunology*, 163, 1995, 120-128.
52. Sanderson, P., Yaqoob, P. and Calder, P.C., Effects of dietary lipid manipulation upon rat spleen lymphocyte functions and the expression of lymphocyte surface molecules. *Journal of Nutritional and Environmental Medicine*, 5, 1995, 119-132.
53. Berthou, L., Saladin, R., Yaqoob, P., Branellec, D., Calder, P., Fruchart, J-C., Deneffe, D., Auwerx, J. and Staels, B., Regulation of rat liver apolipoprotein A-I, apolipoprotein A-II and acyl CoA oxidase gene expression by fibrates and dietary fatty acids. *European Journal of Biochemistry*, 232, 1995, 179-187.
54. Sanderson, P., Yaqoob, P. and Calder, P.C., Effects of dietary lipid manipulation upon graft vs. host and host vs. graft responses in the rat. *Cellular Immunology*, 164, 1995, 240-247.
55. Yaqoob, P. and Calder, P.C., The effects of dietary lipid manipulation on the production of murine T-cell-derived cytokines. *Cytokine*, 7, 1995, 548-553.
56. Calder, P.C., Can n-3 polyunsaturated fatty acids be used as immunomodulatory agents? *Biochemical Society Transactions*, 24, 1996, 211-220.
57. Jeffery, N.M., Yaqoob, P., Newsholme, E.A. and Calder, P.C., The effects of olive oil upon rat serum lipid levels and lymphocyte functions appear to be due to oleic acid. *Annals of Nutrition and Metabolism*, 40, 1996, 71-80.
58. Jeffery, N.M., Yaqoob, P., Wiggins, D., Gibbons, G.F., Newsholme, E.A. and Calder, P.C., Characterisation of lipoprotein composition in rats fed different dietary lipids and the effect of lipoproteins upon lymphocyte proliferation. *Journal of Nutritional Biochemistry*, 7, 1996, 282-292.
59. Calder, P.C., Effects of fatty acids and dietary lipids on cells of the immune system. *Proceedings of the Nutrition Society*, 55, 1996, 127-150.
60. Jeffery, N.M., Sanderson, P., Sherrington, E.J., Newsholme, E.A. and Calder, P.C., The ratio of n-6 to n-3 polyunsaturated fatty acids in the rat diet alters serum lipid levels and lymphocyte functions. *Lipids*, 31, 1996, 737-745.
61. Calder, P.C., Sir David Cuthbertson Medal Lecture: Immunomodulatory and anti-inflammatory effects of omega-3 polyunsaturated fatty acids. *Proceedings of the Nutrition Society*, 55, 1996, 737-774.
62. Calder, P.C., Bioactive lipids in foods. *Biochemical Society Transactions*, 24, 1996, 815-824.
63. Mirzoeva, O.K., Yaqoob, P., Knox, K.A. and Calder, P.C., Inhibition of ICE-family cysteine proteases rescues murine lymphocytes from lipoxygenase inhibitor-induced apoptosis. *FEBS Letters*, 396, 1996, 266-270.
64. Mirzoeva, O. and Calder, P.C., Effect of propolis and its components on eicosanoid production during the inflammatory response. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 55, 1996, 441-449.
65. Calder, P.C. and Yaqoob, P., N-3 polyunsaturated fatty acids and the immune system. *Recent Research Developments in Lipids Research*, 1, 1997, 31-61.
66. Jeffery, N.M., Sanderson, P., Newsholme, E.A. and Calder, P.C., Effects of varying the type of saturated fatty acid in the rat diet upon serum lipid levels and spleen lymphocyte functions. *Biochimica et Biophysica Acta*, 1345, 1997, 223-236.
67. Jeffery, N.M., Cortina, M., Newsholme, E.A. and Calder, P.C., Effects of variations in the proportions of saturated, monounsaturated and polyunsaturated fatty acids in the rat diet upon spleen lymphocyte functions. *British Journal of Nutrition*, 77, 1997, 805-823.
68. Power, G., Calder, P.C. and Newsholme, E.A., The influence of dietary fatty acids on the activity and metabolic control of peroxisomal carnitine palmitoyltransferase in the liver. *Nutrition Research*, 17, 1997, 847-860.
69. Cavglieri Felipe, C.R., Calder, P.C., Vecchia, M.G., Campos, M.R., Mancini-Filho, J., Newsholme, E.A. and Curi, R., Fatty acid composition of lymphocytes and macrophages from rats fed fiber-rich diets: a comparison between oat bran- and wheat bran-enriched diets. *Lipids*, 32, 1997, 587-591.
70. Jeffery, N.M., Newsholme, E.A. and Calder, P.C., The level of polyunsaturated fatty acids and the n-6 to n-3 polyunsaturated fatty acid ratio in the rat diet both affect serum lipid levels and lymphocyte functions. *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 57, 1997, 149-160.
71. Yaqoob, P. and Calder, P.C., Glutamine requirement of proliferating T lymphocytes. *Nutrition*, 13, 1997, 646-651.
72. Newsholme, E.A. and Calder, P.C., The proposed role of glutamine in some cells of the immune system and

- speculative consequences for the whole animal. *Nutrition*, 13, 1997, 728-730.
73. Calder, P.C., N-3 polyunsaturated fatty acids and immune cell function. *Advances in Enzyme Regulation*, 37, 1997, 197-237.
74. Zanutto, F.P., Gouveia, S.M., Simpson, S.J., Raubenheimer, D. and Calder, P.C., Nutritional homeostasis in locusts: is there a mechanism for increased energy expenditure during carbohydrate overfeeding? *Journal of Experimental Biology*, 200, 1997, 2437-2448.
75. Mirzoeva, O.K., Grishanin, R.N. and Calder, P.C., Antimicrobial action of propolis and some of its components: the effects on growth, membrane potential and motility of bacteria. *Microbiology Research*, 152, 1997, 239-246.
76. Calder, P.C., N-3 polyunsaturated fatty acids and cytokine production in health and disease. *Annals of Nutrition and Metabolism*, 41, 1997, 203-234.
77. Calder, P.C., N-3 polyunsaturated fatty acids as pharmacological agents: a fishy tale? *Nutrition*, 13, 1997, 1002-1004.
78. Sanderson, P., MacPherson, G.G., Jenkins, C.H. and Calder, P.C., Dietary fish oil diminishes the antigen presentation activity of rat dendritic cells. *Journal of Leukocyte Biology*, 62, 1997, 771-777.
79. Yaqoob, P., Knapper, J., Webb, D., Williams, C., Newsholme, E.A. and Calder, P.C., Effect of olive oil on immune function in middle-aged men. *American Journal of Clinical Nutrition*, 67, 1998, 129-135.
80. Calder, P.C., Davis, J., Yaqoob, P., Pala, H., Thies, F. and Newsholme, E.A., Dietary fish oil suppresses human colon tumour growth in athymic mice. *Clinical Science*, 94, 1998, 303-311.
81. Calder, P.C., The anti-inflammatory effect of propolis and its components. *Central Association of Bee-Keepers*, Kings Lynn, 1998, 14 pp.
82. Calder, P.C. and Deckelbaum, R.J., "New" metabolic pathways and roles for lipids and lipid emulsions. *Current Opinions in Clinical Nutrition and Metabolic Care*, 1, 1998, 139-141.
83. Calder, P.C., Dietary lipids and the immune system. *Nutrition Reviews*, 56, 1998, S70-S83.
84. Peterson, L.D., Jeffery, N.M., Thies, F., Sanderson, P., Newsholme, E.A. and Calder, P.C., Eicosapentaenoic and docosahexaenoic acids alter rat spleen leukocyte fatty acid composition and prostaglandin E₂ production but have different effects on lymphocyte functions and cell-mediated immunity. *Lipids*, 33, 1998, 171-180.
85. Calder, P.C., Immunomodulatory and anti-inflammatory effects of n-3 polyunsaturated fatty acids. *Brazilian Journal of Medical and Biological Research*, 31, 1998, 467-490.
86. Calder, P.C., Fat chance of immunomodulation. *Immunology Today*, 19, 1998, 244-247.
87. Jeffery, N.M., Sanderson, P., Newsholme, E.A. and Calder, P.C., Characteristics of lipid and lymphocytes collected from the lymph of rats fed a low fat diet or high fat diets rich in n-6 or n-3 polyunsaturated fatty acids. *Nutrition Research*, 18, 1998, 299-308.
88. Peterson, L.D., Thies, F., Sanderson, P., Newsholme, E.A. and Calder, P.C., Low levels of eicosapentaenoic and docosahexaenoic acids mimic the effects of fish oil upon rat lymphocytes. *Life Sciences*, 62, 1998, 2209-2217.
89. Sanderson, P. and Calder, P.C., Dietary fish oil diminishes lymphocyte adhesion to macrophage and endothelial cell monolayers. *Immunology*, 94, 1998, 79-87.
90. Miles, E.A., and Calder, P.C., Modulation of immune function by dietary fatty acids. *Proceedings of the Nutrition Society*, 57, 1998, 277-292.
91. Calder, P.C., Dietary fatty acids and the immune system. *Polish Journal of Food and Nutrition Science*, 7/48, 1998, 362-369.
92. Sanderson, P. and Calder, P.C., Dietary fish oil appears to inhibit the activation of phospholipase C- α in lymphocytes. *Biochimica et Biophysica Acta*, 1392, 1998, 300-308.
93. Calder, P.C., N-3 fatty acids and mononuclear phagocyte function. In: Kremer, J.M., ed. *Medicinal Fatty Acids*, Basel, Birkhauser, 1998, pp. 1-27.
94. Calder, P.C., Parenteral lipid emulsions and immune function. In: Dutot, G., ed., *Olive oil: A new lipid concept in parenteral nutrition*, Baxter, 1998, pp. 21-29.
95. Yaqoob, P. and Calder, P.C., Cytokine production by human peripheral blood mononuclear cells: differential sensitivity to glutamine availability. *Cytokine*, 10, 1998, 790-794.
96. Calder, P.C., Dietary fatty acids and the immune system. In: Talwar, G.P., Nath, I., Ganguly, N.K., and Rao, K.V.S., eds. *Proceedings of the 10th International Congress of Immunology*, Bologna, Monduzzi Editore, 1998, pp. 813-819.
97. Calder, P.C., Dietary fatty acids and lymphocyte functions. *Proceedings of the Nutrition Society*, 57, 1998, 487-502.
98. Calder, P.C. and Deckelbaum, R., Dietary lipids: More than just a source of calories. *Current Opinion in Clinical Nutrition and Metabolic Care*, 2, 1999, 105-107.
99. Sadeghi, S., Wallace, F.A. and Calder, P.C., Dietary lipids modify the cytokine response to bacterial lipopolysaccharide in mice. *Immunology*, 96, 1999, 404-410.
100. Thies, F., Peterson, L.D., Powell, J.R., Nebe-von-Caron, G., Hurst, T.L., Matthews, K.R., Newsholme, E.A. and Calder, P.C., Manipulation of the type of fat consumed by growing pigs affects plasma and mononuclear cell fatty acid compositions and lymphocyte and phagocyte functions. *Journal of Animal Science*, 77, 1999, 137-147.
101. Williams, C.M., Francis-Knapper, J.A., Webb, D., Brookes, C.A., Zampelas, A., Tredger, J.A., Wright, J., Meijer, G., Calder, P.C., Yaqoob, P., Roche, H. and Gibney, M.J., Cholesterol reduction using manufactured foods high in monounsaturated fatty acids: a randomized crossover study. *British Journal of Nutrition*, 81, 1999, 439-446.

102. Kew, S., Yaqoob, P., Wallace, F.A., Miles, E.A. and Calder, P.C., Dietary glutamine enhances murine lymphocyte responsiveness. *Journal of Nutrition*, 129, 1999, 1524-1531.
103. Peterson, L.D., Thies, F. and Calder, P.C., Dose-dependent effects of dietary α -linolenic acid on rat spleen lymphocyte functions. *Prostaglandins Leukotrienes and Essential Fatty Acids*, 61, 1999, 19-24.
104. Yaqoob, P., Newsholme, E.A. and Calder, P.C., Comparison of cytokine production in cultures of whole human blood and purified mononuclear cells. *Cytokine*, 11, 1999, 600-605.
105. Calder, P.C., Dietary fatty acids and the immune system. *Lipids*, 34, 1999, S137-S140.
106. Wallace, F.A., Yaqoob, P., Miles, E.A. and Calder, P.C., Dietary fat influences the production of Th1- but not Th2-derived cytokines. *Lipids*, 34, 1999, S141.
107. Wallace, F.A., Miles, E.A. and Calder, P.C., The effect of dietary fat on cytokine production by murine macrophages in different activation states. *Lipids*, 34, 1999, S145.
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109. Calder, P. C., and Yaqoob, P., Glutamine and the immune system. *Amino Acids*, 17, 1999, 221-241.
110. Wells, S.M., Kew, S., Yaqoob, P., Wallace, F.A. and Calder, P.C., Dietary glutamine enhances cytokine production by murine macrophages. *Nutrition*, 15, 1999, 881-884.
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