CURRICULUM VITAE
of
Professor R J Flower

Personal Details

Name: Roderick John Flower
Date of Birth:
Place of Birth:
Marital Status:
Address (home):

Address (work):

Graduate education and degrees obtained

1968-71 University of Sheffield. **B.Sc**. Physiology, Honours 1st class.
1971-73 University of London. **Ph.D**. obtained 1974.
1985 University of London. **D.Sc.** 'Anti-inflammatory Drug Action'.
2011 University of Bath. **LL.D** (honorary).
2016 University of Sheffield. **D.Sc.** (honorary).

Posts and Appointments

1966-68 Laboratory technician at the Department of Pharmacology, Royal College of Surgeons of England, Lincoln's Inn Fields, London.
1973-84 Research scientist at Wellcome Research Laboratories, Beckenham, Kent Promoted to Senior Scientist in 1975.
1984-89 Professor of Pharmacology. University of Bath. Head of the School of Pharmacy and Pharmacology, 1987-1989.
1989-94 Lilly Professor of Biochemical Pharmacology, The Medical College of Saint Bartholomew's Hospital, London.
1993-96 Acting head of Clinical Pharmacology, The Medical College of St. Bartholomew's Hospital, London (part time).
1989-2013 A Director and a founding member of The William Harvey Research Institute (Company No. 2472965, Charity No. 803012) and William Harvey Research Ltd (Company No.2437946).
1998-2002 Head of William Harvey Research Institute (Division of Pharmacology, St. Bartholomew's & the Royal London School of Medicine and Dentistry), QMW College, London.
1994-2007 Wellcome Trust Principal Research Fellow.
1994-2010 Joint head of the Dept. of Biochemical Pharmacology, The William Harvey Research Institute, St Bartholomew's and the Royal London School of Medicine and Dentistry at Queen Mary and Westfield College, Charterhouse Square, London, EC1M 6BQ.
2010-2015 Part time Professor of Pharmacology (3/5) at the William Harvey.

2016-present Emeritus Professor of Pharmacology at the William Harvey.

Awards and Honours

1972 Thomas Woodcock Physiology Prize (University of Sheffield).
1978 Sandoz Prize (awarded by The British Pharmacological Society).
1980 Invited lecture tour of Australia, representing The British Pharmacological Society.
1986 Gaddum Memorial Lecture and Medal (awarded by The British Pharmacological Society).
1999 Elected a Fellow of the Academy of Medical Sciences.
2002 Elected a fellow of Academia Europaea.
2003 William Withering Prize of the Royal College of Physicians.
2003 Elected as a Fellow of the Royal Society
2004 Elected a Fellow of the British Pharmacological Society.
2005 Lifetime Achievement Award of the International Society of Inflammation Associations.
2006 Bayliss-Starling Prize Lecture of the Physiological Society
2008 Honorary Fellowship of the School of Pharmacy
2010. Elected a fellow of the Society of Biology.
2011. William Harvey Medal of the William Harvey Research Institute.
2012. Osler Lecture of the Association of Physicians.
2013. Welcome Gold Medal of the British Pharmacological Society.

Professional and Learned Societies

- University of Sheffield Physiology Society: Chairman, (1971).
- European Society for Biochemical Pharmacology. Chairman, (1976-1979).
- The Biochemical Society. Ordinary member since 1983.
- The Royal Society
    - Sectional and Fellowship Committee work, 2003- 2006.
    - Chair of the standing committee on Scientific Aspects of International Security 2006 - 2010.
    - Elected to Council, 2006-2009.
- The British Pharmacological Society:
    - Elected to ordinary membership of in 1974.
    - Served as a member of the committee 1977-1981.
    - Appointed Chairman of committee 1989-1992.
    - Meetings Secretary from 1997-2000.
    - President 2000-2003.

Scientific Advisory Boards

- Celltech Therapeutics 1993 – 2003.
- NicOx 1998 – 2004.
- Antibe Pharmaceuticals 2004 – present.
- Sosei 2005 – 2008.
- Palau Pharma (Chairman of SAB) 2006-2010.
- Moria Pharmaceuticals 2012-2014.

Other professional activities

Editorial Boards and Editorial Advisory Boards

- *British Journal of Pharmacology*. 1998 - 2008.
- Reviews Editor for *Mediators of Inflammation*. 1996 - 2007.
- Editorial Advisory board *Nature Reviews Drug Discovery*. 2001 – 2008.
- Editorial Advisory Board, *Current Opinions in Pharmacology*. 2001-2011.

External Academic Appointments

1. External examining appointments since 1995.

- University College London (1996 - 1999).
- Imperial College London (1999 – 2001).
- University of Manchester (2003 – 2010).

2. Visiting Professorships

- University of Kuwait (1987)
- University of Malaysia, Penang, (1994).

3. Other.

- School of Pharmacy (London) Board of Governors, 2000-2007.

Grant and other external panels.

- I have twice served as an assessor on the HEFCE Basic Medical Sciences Panel (1992 and 1996).
- Scientific advisory board of AMRC from 1993-1998
- The Wellcome Trust Physiology and Pharmacology Panel from 1995 - 2000 (Vice chairman of panel during final year).
- Scientific Board of the Oliver Bird Fund (1997-2003).
- ARC Scientific Advisory Board (1992 – 1995).
- I chaired of the Scientific Advisory Board of Diabetes UK (2007-2010).
- Chair of the Royal Society's *Scientific Aspects of International Security* committee (2006-2010).
- Chair of the Royal Society's *Brain Waves* (module 3) panel (2010-2012).
- Chair of the Royal Society's *Industrial Fellowship Scheme* panel (2008-2013)

Directorships/ Trustees.

- The William Harvey Research Institute (a company limited by guarantee; charity no. 803012).
- William Harvey Research Ltd (company number 2437946) (1991-2013)
- The British Pharmacological Society (charity number 1030623) 1998 – 2003.
- The Biomedical Research Education Trust (charity number 292366) (2001 – present; currently Chairman)

Selected Plenary and Invited Lectures (since 2000)

- Pharmacological Correction of Endothelial Dysfunction. Krakow, Poland 2002.
- 7th European Symposium in Calcium Binding Proteins in Named and Transformed cells. Brussels, June 2002.
- Molecular Mechanism of Inflammation. Schloss Elmau, Germany, 2002.
- 2nd International Meeting on Annexins, Banff, Canada, 2003.
- Annual 'Pfizer lecturer', University of Bath, 2003.

- Jagiellonian Medical Club, Krakow, Poland, September, 2004.
- Annual KZB Lecture, University of Munster, Germany, October, 2004.
- Nature sponsored conference 'Case studies' (Chair of one section), Boston, USA, October, 2005.
- John Hurley Oration, International Society of Inflammation Associations, Melbourne, Australia; August, 2005.
- Rocha e Silva Memorial Lecture, Sao Paulo, Brazil, August, 2005.
- 'Anti-inflammatory drugs', French Society for the Study of Antioxidants', Paris, October, 2005.
- 60th Anniversary meeting of the Danish Society of Pharmacology and Toxicology, Copenhagen, November, 2005.
- IUPHAR, Beijing, China, July, 2006.
- International Kinin Conference, Berlin, May 2007.
- University of Bath Centenary celebrations, July 2007.
- IVth International Conference on Annexins, Catalina, California, September 2007.
- Tocris Lecture (British Pharmacological Society 2007.
- International Inflammo-pharmacology meeting 2008, Queens' College Cambridge, UK
- Jagiellonian Medical Club, Krakow, Poland, May, 2009.
- FASEB meeting, New Orleans, USA, April 2009.
- Vth International Conference on Annexins, Bordeaux, France, September 2009.
- VIth International Conference on Annexins, Barcelona, Spain, September, 2011.
- XVI° Seminario SIF per Dottorandi ed Assegnisti di Ricerca, Rimini, Italy, September 2012.
- Jagiellonian Medical Club, Krakow, Poland, September, 2012.
- British Association of Neuroscience. London, April 2013.
- 8th Biannual Meeting For Basic And Clinical Pharmacology. Athens, May 2014
- Academic visitor and lecturer in the University of "G. d'Annunzio" University, Chieti, Italy, June 2014.
- 81st Course: Eicosanoids and Related Compounds, Erice, Sicily, September 2014.
- The 17th World Congress of Basic &Clinical Pharmacology, Cape Town, S. Africa, July 2014
- President, and Key Note speaker, The 12th World Congress of Inflammation, Boston, USA, August 2015.
- Royal College of Physicians Christmas Lecture 2015.

Research Papers and other publications

>350 peer reviewed papers in peer reviewed journals. In ISI's Most Cited list; >250 other publications including reviews, books, book chapters, abstracts, conference proceedings, editorials, and published correspondence. Co-author of several books including the 'Rang & Dale Pharmacology' textbook series (since 2005).

Patents

I am the holder of several patents including UK patent 1516642, European patents 10374, US patents 4110432 and 4319194 and Swiss patent 614221 these are inventions relating to platelet aggregometry and to novel drugs. New preliminary patents (PCTGB99/02391 and PCT9816235.7) have been filed recently to cover anti-inflammatory peptides discovered recently.

RJ Flower: a short biography.

I began my career in science as a laboratory technician in the Dept of Pharmacology at the Royal College of Surgeons in London, where I worked with John Vane and Gus Born. I left the Department in 1968 to read physiology at the University of Sheffield, graduating with a first class honours degree in 1971.

I returned to the Royal College of Surgeons for my postgraduate training with John Vane and was awarded my PhD by the University of London in 1974. I continued working with John Vane and other colleagues for 11 years at the Wellcome Foundation in Kent before moving to the University of Bath to take up the Chair of Pharmacology in the School of Pharmacy and Pharmacology in 1985.

In 1990, I moved to (what was then) St. Bart's Hospital Medical School and together with John Vane and other colleagues, he founded the William Harvey Research Institute, serving as Institute Director from 2000 - 2004.

The 'Centre for Biochemical Pharmacology' that I set up to progress his personal research increased in size over the years and now comprises some 40-50 postgraduate students, post-docs and HEFCE staff. The scientific output was funded by a succession of programme grants, mainly from the Wellcome Trust as well as from industrial partners. Since my retirement, the Centre has been run by my close colleague, Prof Mauro Perretti.

I have spent the majority of my scientific career working on inflammation and anti-inflammatory drug mechanisms. My most long-standing project has been elucidating the mechanism of action of the non-steroidal anti-inflammatory drugs, the anti-inflammatory glucocorticoid steroids and (more recently) the cromone anti-allergic drugs. With my colleagues, I discovered that glucocorticoids produce their anti-inflammatory (and neuroendocrine feedback) effects partly by releasing a protein 'Annexin-A1' from target cells. Recently we have demonstrated that this mechanism is also shared by the anti-allergic cromones. Annexin-A1, and peptides derived from its N-terminal domain, produce potent anti-inflammatory and pro-resolution effects by acting through cell surface GPCR receptors of the formylpeptide family offering potential new targets for anti-inflammatory therapy.

I also have an interest in eicosanoid pharmacology and platelet function. I contributed to the discovery of prostacyclin (PGI_2) in 1976 and devised a novel type of platelet 'aggregometer' which could function in whole blood. This machine has since been commercialised and is in routine use by hospitals and research labs around the world.

I have a continuing commitment to 'Science and Security' issues. I chaired the Royal Society's *Scientific Aspects of International Security* committee from 2006-2010 and have frequently collaborated with the American Academy of Sciences and other organisations to review issues surrounding the misuse of science.

In this connection, I chaired the Royal Society's *Brain Waves* project that dealt with *Neuroscience, conflict and security*. I served on an advisory panel to the Organisation for Prevention of Chemical Weapons from 2012-2014 and more recently have chaired meetings in Warsaw and Geneva that aimed to provide an effective vehicle for the input of advice to the Biological Weapons Convention on behalf of the Royal Society. I currently also chair a UK Government scientific advisory panel dealing with the medical implications of less lethal weapons on behalf of the UK Ministry of Defence.

Published peer reviewed articles (from PubMed).

1. Berry, H. and R.J. Flower, *The assay of endogenous cholecystokinin and factors influencing its release in the dog and cat.* Gastroenterology, 1971. **60**(3): p. 409-20.
2. Collier, J.G. and R.J. Flower, *Effect of aspirin on human seminal prostaglandins.* Lancet, 1971. **2**(7729): p. 852-3.
3. Flower, R., et al., *Effects of anti-inflammatory drugs on prostaglandin biosynthesis.* Nat New Biol, 1972. **238**(82): p. 104-6.
4. Flower, R.J., et al., *Metabolism and transfer of choline in hamster small intestine.* J Physiol, 1972. **226**(2): p. 473-89.
5. Flower, R.J., et al., *The metabolite formed during choline transfer by the intestine.* J Physiol, 1972. **222**(2): p. 146P-147P.
6. Flower, R.J. and J.R. Vane, *Inhibition of prostaglandin synthetase in brain explains the anti-pyretic activity of paracetamol (4-acetamidophenol).* Nature, 1972. **240**(5381): p. 410-1.
7. Flower, R.J., *Aspirin-like drugs and prostaglandins.* Am Heart J, 1973. **86**(6): p. 844-6.
8. Flower, R.J., H.S. Cheung, and D.W. Cushman, *Quantitative determination of prostaglandins and malondialdehyde formed by the arachidonate oxygenase (prostaglandin synthetase) system of bovine seminal vesicle.* Prostaglandins, 1973. **4**(3): p. 325-41.
9. Eggenton, J., et al., *Proceedings: Prostaglandins and intestinal function.* J Physiol, 1974. **238**(1): p. 79p-80p.
10. Ferreira, S.H., et al., *Letter: Reduction of the inflammatory response in rats immunized against prostaglandins.* Prostaglandins, 1974. **8**(5): p. 433-7.
11. Flower, R.J., *Drugs which inhibit prostaglandin biosynthesis.* Pharmacol Rev, 1974. **26**(1): p. 33-67.
12. Flower, R.J. and J.R. Vane, *Inhibition of prostaglandin biosynthesis.* Biochem Pharmacol, 1974. **23**(10): p. 1439-50.
13. Armstrong, J.M., et al., *Proceedings: Possible contribution of prostaglandins to genetic hypertension in rats: identification of biochemical lesion.* Br J Pharmacol, 1975. **55**(2): p. 244P.
14. Blackwell, G.J., et al., *Factors influencing the turnover of prostaglandin synthetase.* Br J Pharmacol, 1975. **53**(3): p. 467P-468P.
15. Blackwell, G.J., R.J. Flower, and J.R. Vane, *Rapid reduction of prostaglandin 15-hydroxy dehydrogenase activity in rat tissues after treatment with protein synthesis inhibitors.* Br J Pharmacol, 1975. **55**(2): p. 233-8.
16. Blackwell, G.J., R.J. Flower, and J.R. Vane, *Some characteristics of the prostaglandin synthesizing system in rabbit kidney microsomes.* Biochim Biophys Acta, 1975. **398**(1): p. 178-90.
17. Collier, J.G., R.J. Flower, and S.L. Stanton, *Seminal prostaglandins in infertile men.* Fertil Steril, 1975. **26**(9): p. 868-71.
18. Flower, R.J. and W.P. Kingston, *Proceedings: Prostaglandin D1 inhibits the increase in vascular permeability in rat skin produced by prostaglandin E1, E2 and D2.* Br J Pharmacol, 1975. **55**(2): p. 239P-240P.
19. Flower, R.J. and W.O. McClure, *A simple isotope derivative assay for prostaglandins and prostaglandin metabolites. I. Assay of e-type prostaglandins.* Anal Biochem, 1975. **68**(2): p. 436-47.
20. Armstrong, J.M., et al., *Genetic hypertension in rats is accompanied by a defect in renal prostaglandin catabolism.* Nature, 1976. **260**(5552): p. 582-6.
21. Blackwell, G.J. and R.J. Flower, *A rapid method for the estimation of prostaglandin 15-hydroxydehydrogenase*

activity and its application to pharmacology. Br J Pharmacol, 1976. **57**(4): p. 589-97.

22. Blackwell, G.J. and R.J. Flower, *Proceedings: Effects of steriod hormones on tissue levels of prostaglandin 15-hydroxydehydrogenase in the rat.* Br J Pharmacol, 1976. **56**(3): p. 343P-344P.
23. Blackwell, G.J., R.J. Flower, and A.G. Herman, *Effect of endotoxin on 15-hydroxyprostaglandin dehydrogenase in the rabbit jejunum and lung.* Arch Int Pharmacodyn Ther, 1976. **220**(2): p. 325-6.
24. Flower, R.J. and G.J. Blackwell, *The importance of phospholipase-A2 in prostaglandin biosynthesis.* Biochem Pharmacol, 1976. **25**(3): p. 285-91.
25. Flower, R.J., E.A. Harvey, and W.P. Kingston, *Inflammatory effects of prostaglandin D2 in rat and human skin.* Br J Pharmacol, 1976. **56**(2): p. 229-33.
26. Flower, R.J., et al., *Some properties of rabbit aorta contracting substance-releasing factor (RCS-RF) [proceedings].* Br J Pharmacol, 1976. **57**(3): p. 461P-462P.
27. Gryglewski, R.J., et al., *Arterial walls are protected against deposition of platelet thrombi by a substance (prostaglandin X) which they make from prostaglandin endoperoxides.* Prostaglandins, 1976. **12**(5): p. 685-713.
28. Nijkamp, F.P., et al., *Partial purification of rabbit aorta contracting substance-releasing factor and inhibition of its activity by anti-inflammatory steroids.* Nature, 1976. **263**(5577): p. 479-82.
29. Blackwell, G.J., et al., *The distribution and metabolism of arachidonic acid in rabbit platelets during aggregation and its modification by drugs.* Br J Pharmacol, 1977. **59**(2): p. 353-66.
30. Blackwell, G.J., et al., *Phospholipase A2 activity of guinea-pig perfused lungs: stimulation and inhibition by anti-inflammatory steroids [proceedings].* Br J Pharmacol, 1977. **59**(3): p. 441P.
31. Cottee, F., et al., *Synthesis of 6-keto-PGF1alpha by ram seminal vesicle microsomes.* Prostaglandins, 1977. **14**(3): p. 413-23.
32. Flower, R.J., *The role of prostaglandins in inflammatory reactions.* Naunyn Schmiedebergs Arch Pharmacol, 1977. **297 Suppl 1**: p. S77-9.
33. Flower, R.J., *Prostaglandins and related compounds.* Agents Actions Suppl, 1977(3): p. 99-105.
34. Flower, R.J., *The role of prostaglandins in parturition, with special reference to the rat.* Ciba Found Symp, 1977(47): p. 297-318.
35. Blackwell, G.J. and R.J. Flower, *1-phenyl-3-pyrazolidone: an inhibitor of cyclo-oxygenase and lipoxygenase pathways in lung and platelets.* Prostaglandins, 1978. **16**(3): p. 417-25.
36. Blackwell, G.J. and R.J. Flower, *1-Phenyl-3-pyrazolidone: an inhibitor of arachidonate oxidation in lung and platelets [proceedings].* Br J Pharmacol, 1978. **63**(2): p. 360P.
37. Blackwell, G.J., et al., *Phospholipase A2 activity of guinea-pig isolated perfused lungs: stimulation, and inhibition by anti-inflammatory steroids.* Br J Pharmacol, 1978. **62**(1): p. 79-89.
38. Blackwell, G.J., et al., *1-n-Butylimidazole: a potent and selective inhibitor of 'thromboxane synthetase' [proceedings].* Br J Pharmacol, 1978. **64**(3): p. 435P.
39. Blackwell, G.J., et al., *Prostacyclin is produced in whole blood [proceedings].* Br J Pharmacol, 1978. **64**(3): p. 436P.
40. Blackwell, G.L., J.F. Burka, and R.J. Flower, *On the preparation of highly purified slow reacting substance of anaphylaxis (SRS-A) from biological extracts [proceedings].* Br J Pharmacol, 1978. **63**(2): p. 365P-366P.
41. Flower, R., *Steroidal antiinflammatory drugs as inhibitors of phospholipase A2.* Adv Prostaglandin Thromboxane Res, 1978. **3**: p. 105-12.

42. Flower, R.J., *Biosynthesis of prostaglandins.* Ciba Found Symp, 1978(65): p. 123-42.

43. Flower, R.J., *Biochemistry of prostaglandins.* Biochem Soc Trans, 1978. **6**(4): p. 713-4.

44. Hardcastle, J., et al., *The effect of bradykinin on the electrical activity of rat jejunum.* Experientia, 1978. **34**(5): p. 617-8.

45. Salmon, J.A., et al., *Further studies on the enzymatic conversion of prostaglandin endoperoxide into prostacyclin by porcine aorta microsomes.* Biochim Biophys Acta, 1978. **523**(1): p. 250-62.

46. Burka, J.F. and R.J. Flower, *Effects of modulators of arachidonic acid metabolism on the synthesis and release of slow-reacting substance of anaphylaxis.* Br J Pharmacol, 1979. **65**(1): p. 35-41.

47. Cardinal, D.C. and R.J. Flower, *The study of platelet aggregation in whole blood [proceedings].* Br J Pharmacol, 1979. **66**(1): p. 94P-95P.

48. Cardinal, D.C. and R.J. Flower, *The 'electronic platelet aggregometer' [proceedings].* Br J Pharmacol, 1979. **66**(1): p. 138P.

49. Flower, R.J. and G.J. Blackwell, *Anti-inflammatory steroids induce biosynthesis of a phospholipase A2 inhibitor which prevents prostaglandin generation.* Nature, 1979. **278**(5703): p. 456-9.

50. Higgs, G.A., R.J. Flower, and J.R. Vane, *A new approach to anti-inflammatory drugs.* Biochem Pharmacol, 1979. **28**(12): p. 1959-61.

51. Blackwell, G.J., et al., *On the preparation of highly purified slow reacting substance of anaphylaxis (SRS-A) from biological extracts.* Br J Pharmacol, 1980. **68**(1): p. 33-46.

52. Blackwell, G.J., et al., *Macrocortin: a polypeptide causing the anti-phospholipase effect of glucocorticoids.* Nature, 1980. **287**(5778): p. 147-9.

53. Cardinal, D.C. and R.J. Flower, *The electronic aggregometer: a novel device for assessing platelet behavior in blood.* J Pharmacol Methods, 1980. **3**(2): p. 135-58.

54. Flower, R.J., *Regulation of pulmonary arachidonic acid metabolism by anti-inflammatory steroids.* Ciba Found Symp, 1980. **78**: p. 185-201.

55. Mullane, K.M. and R.I. Flower, *The interaction of anti-inflammatory drugs with arachidonic acid metabolism.* Mater Med Pol, 1980. **12**(3): p. 195-206.

56. O'Grady, J., et al., *Effects of intravenous infusion of prostacyclin (PGI2) in man.* Prostaglandins, 1980. **19**(2): p. 319-32.

57. Blackwell, G.J. and R.J. Flower, *Glucocorticoids, lungs and prostaglandins.* Bull Eur Physiopathol Respir, 1981. **17**(4): p. 595-607.

58. Carnuccio, R., et al., *The inhibition by hydrocortisone of prostaglandin biosynthesis in rat peritoneal leucocytes is correlated with intracellular macrocortin levels.* Br J Pharmacol, 1981. **74**(2): p. 322-4.

59. Narumiya, S., et al., *Arachidonic acid 15-lipoxygenase from rabbit peritoneal polymorphonuclear leukocytes. Partial purification and properties.* J Biol Chem, 1981. **256**(18): p. 9583-92.

60. Russell-Smith, N.C., R.J. Flower, and D.C. Cardinal, *Measuring platelet and leucocyte aggregation/adhesion responses in very small volumes of whole blood.* J Pharmacol Methods, 1981. **6**(4): p. 315-33.

61. Blackwell, G.J., et al., *Glucocorticoids induce the formation and release of anti-inflammatory and anti-phospholipase proteins into the peritoneal cavity of the rat.* Br J Pharmacol, 1982. **76**(1): p. 185-94.

62. Hirata, F., et al., *Identification of several species of phospholipase inhibitory protein(s) by radioimmunoassay for lipomodulin.* Biochem Biophys Res Commun, 1982. **109**(1): p. 223-30.

63. Narumiya, S., et al., *Purification and properties of arachidonate-15-lipoxygenase from rabbit peritoneal polymorphonuclear leukocytes.* Adv Prostaglandin Thromboxane Leukot Res, 1982. **9**: p. 77-82.

64. Salmon, J.A. and R.J. Flower, *Extraction and thin-layer chromatography of arachidonic acid metabolites.* Methods Enzymol, 1982. **86**: p. 477-93.

65. Salmon, J.A. and R.J. Flower, *Preparation and assay of prostacyclin synthase.* Methods Enzymol, 1982. **86**: p. 91-9.

66. Blackwell, G.J., et al., *Suppression of arachidonate oxidation by glucocorticoid-induced antiphospholipase peptides.* Adv Prostaglandin Thromboxane Leukot Res, 1983. **11**: p. 65-71.

67. Blackwell, G.J. and R.J. Flower, *Inhibition of phospholipase.* Br Med Bull, 1983. **39**(3): p. 260-4.

68. Rothhut, B., et al., *Further characterization of the glucocorticoid-induced antiphospholipase protein "renocortin".* Biochem Biophys Res Commun, 1983. **117**(3): p. 878-84.

69. Di Rosa, M., et al., *Anti-phospholipase proteins.* Prostaglandins, 1984. **28**(4): p. 441-2.

70. Parente, L., et al., *Relationship between the anti-phospholipase and anti-inflammatory effects of glucocorticoid-induced proteins.* Eur J Pharmacol, 1984. **99**(2-3): p. 233-9.

71. Flower, R.J., *The lipocortins and their role in controlling defense reactions.* Adv Prostaglandin Thromboxane Leukot Res, 1985. **15**: p. 201-3.

72. Parente, L. and R.J. Flower, *Hydrocortisone and 'macrocortin' inhibit the zymosan-induced release of lyso-PAF from rat peritoneal leucocytes.* Life Sci, 1985. **36**(13): p. 1225-31.

73. Flower, R.J., *The mediators of steroid action.* Nature, 1986. **320**(6057): p. 20.

74. Flower, R.J., *Background and discovery of lipocortins.* Agents Actions, 1986. **17**(3-4): p. 255-62.

75. Flower, R.J., et al., *A comparison of the acute inflammatory response in adrenalectomised and sham-operated rats.* Br J Pharmacol, 1986. **87**(1): p. 57-62.

76. Parente, L., et al., *The effect of glucocorticoids on lyso-PAF formation in vitro and in vivo.* Agents Actions, 1986. **17**(3-4): p. 312-3.

77. Cirino, G. and R.J. Flower, *Human recombinant lipocortin 1 inhibits prostacyclin production by human umbilical artery in vitro.* Prostaglandins, 1987. **34**(1): p. 59-62.

78. Cirino, G., et al., *Recombinant human lipocortin 1 inhibits thromboxane release from guinea-pig isolated perfused lung.* Nature, 1987. **328**(6127): p. 270-2.

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81. Flower, R.J., *Eleventh Gaddum memorial lecture. Lipocortin and the mechanism of action of the glucocorticoids.* Br J Pharmacol, 1988. **94**(4): p. 987-1015.

82. Peers, S.H., D. Moon, and R.J. Flower, *Reversal of the anti-inflammatory effects of dexamethasone by the glucocorticoid antagonist RU 38486.* Biochem Pharmacol, 1988. **37**(3): p. 556-7.

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85. Cirino, G., et al., *A study of phospholipase A2-induced oedema in rat paw.* Eur J Pharmacol, 1989. **166**(3): p. 505-10.

86. Flower, R., *Lipocortin.* Biochem Soc Trans, 1989. **17**(2): p. 276-8.

87. Goulding, N.J., et al., *Autoantibodies to recombinant lipocortin-1 in rheumatoid arthritis and systemic lupus erythematosus.* Ann Rheum Dis, 1989. **48**(10): p. 843-50.

88. Beutler, B. and R.J. Flower, *Consensus and confusion among the Contradas. Molecular and Cellular Biology of IL-1, TNF, and Lipocortins in Inflammation and Differentiation, sponsored by Sclavo Research Center, Siena, Italy, October 22-25, 1989.* New Biol, 1990. **2**(3): p. 249-53.

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92. Goulding, N.J., et al., *Hydrocortisone induces lipocortin 1 production by peripheral blood mononuclear cells in vivo in man.* Biochem Soc Trans, 1990. **18**(2): p. 306-7.

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94. Peers, S.H. and R.J. Flower, *The role of lipocortin in corticosteroid actions.* Am Rev Respir Dis, 1990. **141**(2 Pt 2): p. S18-21.

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(NB: no abstracts have been included other than those cited by PubMed. However, I have published some 200).