

# Professor Barry V L Potter FMedSci

## Publications & Patents (1979 - 2022)

*Papers in refereed journals, patents, reviews, proceedings, book chapters and data depositions*

### JOURNAL PAPERS

1. The effect of  $^{17}\text{O}$  and the magnitude of the  $^{18}\text{O}$  isotope shift in  $^{31}\text{P}$  nuclear magnetic resonance spectroscopy.  
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## PATENTS

*BVLP is a senior co-inventor on ca 770 patent filings prosecuted worldwide; ca 400 of these have been formally granted to date, including 45 USPs, 25 EPs and 10 JPs, from diverse families.*

*Core patent families are shown below:*

1. New substituted (8R,9S,13S,14S)-17-hydroxy-13-methyl-7,8,9,11,12,13,14,15,16,17 decahydro-6H-cyclopenta(a)phenanthren-16-yl compounds useful as contraceptives, and in hormone replacement therapy. WO2014122480-A1; EP2953959-A1; Assignee: UNIV BATH; Inventor(s): POTTER B V L.
2. New 1,4-dimethyl-2,5-dimethylene-piperazine compound useful in the preparation of an agent for the treatment of microbial infection including bacterial infection. WO2013088162-A1; Assignee: UNIV SWANSEA, UNIV BATH; Inventor(s): NIGAM Y, DUDLEY E, BEXFIELD A et al, POTTER B V L
3. New inositol phosphate derivatives, are phosphoinositide-dependent kinase-1 modulators, useful for treating e.g. cancer, which is a drug resistant cancer, breast cancer, pancreatic cancer, prostate cancer, and colorectal cancer. WO2011064559-A2; WO2011064559-A3; Assignee: QUEEN MARY&WESTFIELD COLLEGE, UNIV BATH; Inventor(s): FALASCA M, RILEY A M, GODAGE H Y, POTTER B V L
4. New substituted phenyl compounds are sulfatase inhibitors, useful for treating e.g. cancer including breast cancer, ovarian cancer, endometrial cancer, sarcomas, melanomas, prostate cancer and pancreatic cancer. WO2011023989-A1; EP2470512-A1; CN102596919-A; ... Assignee: STERIX LTD, WOO L W L, BUBERT C, *et al.* Inventor(s): BUBERT C, POTTER B V L, PUROHIT A, et al.
5. New polymorph of 6-oxo-6,7,8,9,10,11-hexahydrocyclohepta(c)chromen-3-yl sulfamate having specific particle size, is steroid sulfatase inhibitor, useful to treat cancer and hormone-dependent cancers e.g. breast cancer. FR2942225-A1; WO2010092260-A2; WO2010092260-A3; ... Assignee: IPSEN PHARMA SAS; Inventor(s): DELAHAYE D, DIOLEZ C, ROLLAND A, POTTER B V L *et al.*
6. New heterocyclic compounds useful for treating e.g. diabetes, obesity, hypertension, glaucoma, arthritis, asthma, osteoporosis, cancer, polycystic ovary syndrome, acne, Cushing's syndrome and endometrial cancer. WO2009106817-A2; WO2009106817-A3; MX2010009370-A1; ... Assignee: STERIX LTD; Inventor(s): POTTER B V L, PRADAUX-CAGGIANO F, SU X, *et al.*
7. New bis-phenyl amine derivatives useful for treating e.g. prostate cancer, hirsutism, polycystic ovary syndrome, acne, Type II diabetes, obesity, inflammation, fever, myocardial infarction, cachexia, anorexia, migraine, and osteoarthritis. WO2009066072-A2; WO2009066072-A3; AU2008327709-A1; ... Assignee: STERIX LTD, UNIV BATH CLAVERTON DOWN; Inventor(s): BAILEY H V, DAY J M, HEATON W, *et al* POTTER B V L.
8. Use of fused nitrogen-containing heterocyclic compound in the manufacture of medicament for preventing and inhibiting tumour growth WO2008117061-A2; WO2008117061-A3; AU2008231569-A1; ...; Assignee: STERIX LTD; Inventor(s): JOURDAN F, KIMBERLEY M, LEESE M, *et al*, POTTER B V L.

9. Composition for treating cancer e.g. solid tumor, breast cancer comprising glycolytic inhibitor and compound containing ring system substituted with at least one of sulphamate group and alkoxy group. WO2008096155-A1; EP2117530-A1; US2010144652-A1; ...; Assignee: STERIX LTD; Inventor(s): TAGG S L C, FOSTER P A, NEWMAN S P, *et al*, POTTER B V L.
10. Use of a compound capable of inhibiting steroid sulfatase enzyme to treat cancer e.g. breast cells overexpress aromatase enzyme WO2008065428-A2; WO2008065428-A3; EP2101758-A2; ...; Assignee: STERIX LTD; Inventor(s): REED M J, PUROHIT A, FOSTER P A, *et al*, POTTER B V L.
11. New pyridinium derivatives useful for treating e.g. rheumatoid arthritis, multiple sclerosis, myasthenia gravis, lupus erythematosus, Type II diabetes, and obesity. WO2007132179-A2; WO2007132179-A3; Assignee: UNIV BATH; Inventor(s): POTTER B V L, DOWDEN J, GALIONE A, *et al*.
12. New tetracyclic derivatives useful for treating e.g. cancer, multiple sclerosis, myasthenia gravis, thyroiditis, vasculitis, ulcerative colitis and Crohn's disease. WO2007099304-A1; EP1996604-A1; IN200806281-P1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, WOO L W L, *et al*.
13. Novel benzene ring-containing compound useful for manufacturing medicament for treating disease associated with 17beta-hydroxysteroid dehydrogenase, such as cancer, Alzheimer's disease, periodontal disease or conjunctivitis. WO2007096647-A2; WO2007096647-A3; EP2013176-A2; ...; Assignee: STERIX LTD; Inventor(s): VICKER N, ALLAN G M, LAWRENCE H R, *et al*, POTTER B V L.
14. New 1,2,4-triazol-1-yl bisphenyl derivatives useful for treatment of e.g. cancer, autoimmune disorders, or inflammatory disorders. WO2007068905-A1; EP1966166-A1; US2008319037-A1; ...; Assignee: STERIX LTD, WOO L W L, JACKSON T, *et al*; Inventor(s): WOO L W L, JACKSON T, PUROHIT A, *et al*, POTTER B V L.
15. New cyclic compounds are 17-beta-hydroxysteroid dehydrogenase type 3 inhibitors, useful for the treatment of e.g. prostate cancer, androgen dependent neoplasms, benign prostatic hyperplasia and alopecia. WO2007003934-A2; EP1960347-A2; CA2613226-A1; ...; Assignee: STERIX LTD; Inventor(s): VICKER N, DAY J M, BAILEY H V, *et al*, POTTER B V L.
16. Use of steroid sulfatase inhibitor compound for inhibiting steroid sulfatase enzyme in the preparation of a medicament for inhibiting in vivo synthesis of androstenedione or testosterone which is useful for the treatment of, e.g. hirsutism. WO2006129076-A1; EP1901737-A1; US2008146656-A1; ...; Assignee: STERIX LTD; Inventor(s): REED M J, PUROHIT A, WOO L W L, *et al*, POTTER B V L.
17. New polycyclic compounds are beta-hydroxysteroid dehydrogenase inhibitors useful to treat e.g. hypertension, glaucoma, cancer and obesity. WO2006100502-A1; EP1861384-A1; JP2008536818-W; ...; Assignee: STERIX LTD, VICKER N, SU X, *et al*; Inventor(s): VICKER N, SU X, PRADAUX F, *et al*, POTTER B V L.
18. New steroidal compounds used for treating e.g. rheumatoid arthritis, type I and II diabetes, systemic lupus erythematosus, ulcerative colitis and cancer. WO2006032885-A2; EP1794176-A2; US2007225256-A1; ...; Assignee: STERIX LTD; Inventor(s): LEESE M, PUROHIT A, REED M J, *et al*, POTTER B V L.

19. New phenyl-sulfamate derivatives, useful to treat autoimmune diseases, cancer, hormonal conditions, cachexia, anorexia, acute infection, HIV infection migraine and angiogenesis, are aromatase inhibitors. WO2005118560-A1; EP1753732-A1; US2007117855-A1; ...; Assignee: STERIX LTD; Inventor(s): WOO L W L, JACKSON T, BUBERT C, *et al*, POTTER B V L.
20. New sulfamic acid ester compounds useful for the prevention and treatment of cancer e.g. breast cancer; diabetes type I and II. WO2005115996-A1; EP1765792-A1; US2007213383-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, WOO L W L, *et al*.
21. New phenylsulfonamide derivatives useful for treating e.g. diabetes, obesity, hypertension, glaucoma, arthritis, asthma and cancer. WO2005103023-A1; EP1756078-A1; US2007244108-A1; Assignee: STERIX LTD; Inventor(s): VICKER N, GANESHAPILLAI D, PUROHIT A, *et al*, POTTER B V L.
22. New pyridinium compounds are intercellular calcium release modulators used for treating autoimmune diseases e.g. thyroiditis, multiple sclerosis, myasthenia gravis, rheumatoid arthritis and type II diabetes. WO2005054198-A2; EP1689714-A2; AU2004295178-A1; ...; Assignee: UNIV BATH; Inventor(s): POTTER B V L, DOWDEN J, GALIONE A, *et al*.
23. New phenyl carboxamide and sulfonamide derivatives useful for treating e.g. diabetes, obesity, hypertension, glaucoma, arthritis, asthma, immune disorders, osteoporosis, hirsutism, acne, Cushing's syndrome and breast cancer. WO2005042513-A1; US2005227987-A1; EP1675844-A1; ...; Assignee: STERIX LTD; Inventor(s): VICKER N, SU X, GANESHAPILLAI D, *et al*, POTTER B V L.
24. New estrogen derivatives comprising steroidal ring are glucose uptake inhibitors, useful to treat or inhibit cell cycling, cell growth and tumor angiogenesis. WO2004085459-A1; EP1608671-A1; BR200408703-A; ...; Assignee: STERIX LTD; Inventor(s): LEESE M, PUROHIT A, REED M J, *et al*, POTTER B V L.
25. Use of new and known hexadecahydro-cyclopenta(a)phenanthrene derivatives as 17-beta-hydroxysteroid dehydrogenase inhibitors for treatment of e.g. hormone dependent/independent cancers. WO2004085457-A2; AU2004224061-A1; EP1631579-A2; ... Assignee: STERIX LTD; Inventor(s): VICKER N, LAWRENCE H R, ALLAN G M, *et al*, POTTER B V L.
26. New heterocyclic compounds are 11-beta-hydroxy steroid dehydrogenase type 1 and 2 inhibitors useful in medicaments for the treatment of e.g. metabolic disorders, cardiovascular disorders, glaucoma, inflammatory disorders and immune disorder. WO2004037251-A1; US2004143124-A1; AU2003274373-A1; ...; Assignee: STERIX LTD; Inventor(s): VICKER N, SU X, GANESHAPILLAI D, *et al*, POTTER B V L.
27. Reducing or increasing salt and fluid secretion in subject, useful for treating e.g., asthma and cystic fibrosis, comprises increasing or decreasing the activity of inositol 1,3,4,5,6 pentakisphosphate 1-phosphatase in a subject. WO2003080804-A2; AU2003222030-A1; US2006035810-A1; ...; Assignee: US DEPT HEALTH & HUMAN SERVICES, UNIV BATH; Inventor(s): SHEARS S B, RILEY A M, POTTER B V L.
28. Use of carbocyclic derivatives in the manufacture of a medicament for use in the therapy of a condition associated with aromatase. WO2003045925-A1; US2004019016-A1; AU2002339192-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, WOO L W L, PUROHIT A, *et al*.

29. New steroid derivatives, useful as steroid sulfatase inhibitors for treating cancer. WO2003033518-A; WO2003033518-A1; EP1448592-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, WOO L W L, *et al.*
30. Use of polycyclic heterocyclic sulfamates to prepare medicaments for preventing autoimmune diseases. GB2380939-A; GB2380939-B; Assignee: STERIX LTD; Inventor(s): REED M J, POTTER B V L.
31. New sulfamate compounds having esterone sulfatase inhibitory and aromatase inhibitory activity are useful for treatment of breast and endometrial cancers. US6506792-B1; Assignee: STERIX LTD; Inventor(s): REED M J, POTTER B V L.
32. Use of an ADP-ribosyl cyclase inhibitor for the manufacture of a medicament useful for the treatment of immunodeficiency disorders e.g. organ specific autoimmune disorders such as multiple sclerosis. WO200298397-A2; GB2392095-A; EP1395267-A2; ...; Assignee: UNIV BATH; Inventor(s): POTTER B V L, GUSE A H, MAYR G W, *et al.*
33. Composition useful in manufacture of medicament for treating e.g. cancer, inflammation, dermatological disorders, fever, cardiovascular effects, hemorrhage, comprises compound containing sulfamate group and apoptosis inducer. WO200298511-A1; EP1399221-A1; AU2002310605-A1; ...; Assignee: STERIX LTD; Inventor(s): PACKHAM G K, REED M J, *et al.*, POTTER B V L.
34. Use of glycyrrhetic acid derivatives, progesterone or its derivatives in the manufacture of a medicament to inhibit 11-beta-hydroxysteroid dehydrogenase. WO200272084-A2; EP1381357-A2; AU2002238737-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, PUROHIT A, REED M J, *et al.*
35. Use of steroid derivative containing sulfamate, (thio)phosphonate, sulfonate or sulfonamide group for inhibiting steroid sulfatase and steroid dehydrogenase, to treat e.g. cancer, inflammation and dermatological and autoimmune disorders. WO200232409-A2; AU200210687-A; AU2002210687-A8; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J.
36. New thioether sulfamate steroids are steroid sulfatase inhibitors, useful for treating conditions associated with cell cycling, apoptosis or cell growth, e.g. cancer. WO200216394-A; EP1311534-A; WO200216394-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, LEESE M P.
37. New substituted steroidal compounds, useful for treating conditions associated with cell cycling, apoptosis or cell growth, e.g. cancer, are inhibitors of steroid sulfatase. WO200216393-A; EP1311533-A; WO200216393-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, LEESE M P, *et al.*
38. New cyclic, especially polycyclic compounds are steroid sulfatase inhibitors used in treatment of e.g. cancer. WO200216392-A; EP1311532-A; WO200216392-A1; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, PUROHIT A, *et al.*
39. Use of 2-substituted estradiol derivatives, some new, for inhibiting superoxide dismutase. WO200215910-A; WO200215910-A1; AU200179955-A; ...; Assignee: STERIX LTD; Inventor(s): POTTER B V L, REED M J, PACKHAM G K, *et al.*

40. Modulation of T cell activity useful in the treatment of an autoimmune disease involves modulating the intracellular concentration of nicotinic acid adenine dinucleotide phosphate or its bioisostere. WO200211736-A; EP1305035-A; WO200211736-A1; ...; Assignee: UNIV BATH; Inventor(s): POTTER B V L, GUSE A H, MAYR G W, *et al.*
41. Composition useful as oral contraception in cancer comprises a cyclic compound containing a ring system and a sulfamate group in a specified amount to provide a specified dosage. WO200151055-A2; AU200125331-A; US2001021707-A1; ...; Assignee: STERIX LTD, SCHERING AG; Inventor(s): POTTER B V L, REED M J, ELGER W, *et al.*
42. New hydrocarbon ring compounds e.g. steroids used to treat e.g. cancers, autoimmune disorders, inflammatory and allergic conditions, neurodegeneration or cardiovascular disorders, are steroid sulfatase inhibitors. WO200144268-A1; AU200121906-A; EP1237902-A1; ...; Assignee: STERIX LTD; Inventor(s): REED M J, POTTER B V L, HEJAZ H, *et al.*
43. Use of agents that alter microtubule stability such as Paclitaxel, to inhibit basal aromatase activity, but greatly reduce tumor necrosis factor alpha, useful in the inhibition of breast cancer. WO200076487-A2; AU200052346-A; US2002055462-A1; ...; Assignee: STERIX LTD; Inventor(s): REED M J, POTTER B V L.
44. Cyclic compounds substituted by sulfonate, phosphonate or sulfonamido groups are useful for preventing cell cycling and for treating especially breast cancer. WO200066095-A; EP1173182-A; WO200066095-A2; ...; Assignee: STERIX LTD; Inventor(s): REED M J, POTTER B V L.
45. Use of compounds capable of antagonizing sustained cADPR-mediated rises in intracellular calcium ion levels in T cell in manufacture of medicaments for use in modulating T cell activity. WO200037089-A; EP1140118-A; WO200037089-A1; ...; Assignee: UNIV BATH; Inventor(s): POTTER B V L, GUSE A H, SCHULZE-KOOPS H, *et al.*
46. Composition for use in the treatment of cancers, especially breast cancer. WO9964013-A1; AU9942807-A; EP1085876-A1; ...; Assignee: STERIX LTD; Inventor(s): REED M J, POTTER B V L, REED M, *et al.*
47. New sulphamate compounds are oestrone sulphatase inhibitors. WO9927935-A; EP1051177-A; GB2331988-A; ...; Assignee: IMPERIAL COLLEGE SCI TECHNOLOGY & MED, UNIV BATH, STERIX LTD; Inventor(s): REED M J, POTTER B V L.
48. New sulphamate compounds are oestrone sulphatase inhibitors. WO9927936-A; EP1051178-A; GB2331987-A; ...; Assignee: IMPERIAL COLLEGE SCI TECHNOLOGY & MED, UNIV BATH, STERIX LTD; Inventor(s): REED M J, POTTER B V L.
49. New sulphamate compounds - useful as inhibitors of oestrone sulphatase, for treating e.g. breast cancer and autoimmune diseases. WO9824802-A; EP942919-A; WO9824802-A2; ...; Assignee: IMPERIAL COLLEGE SCI TECHNOLOGY & MED; Inventor(s): REED M J, POTTER B V L.
50. Sulphamate compounds useful as oestrone sulphatase and aromatase inhibitors - may be used in treatment of endocrine-dependent tumours, such as breast and endometrial cancer. WO9732872-A1; AU9722255-A; EP885211-A1; ...; Assignee: IMPERIAL COLLEGE SCI TECHNOLOGY & MED, UNIV BATH, STERIX LTD; Inventor(s): REED M J, POTTER B V L.

51. New non-steroidal sulphamate derivatives which have a polycyclic ring structure - used to treat breast cancer and non-malignant conditions, e.g. they prevent autoimmune diseases. WO9730041-A1; AU9718041-A; EP880514-A1; ...; Assignee: IMPERIAL COLLEGE SCI TECHNOLOGY & MED, UNIV BATH, STERIX LTD; Inventor(s): REED M J, POTTER B V L *et al.*
52. New sulphamic acid ester(s) of polycyclic alcohol(s) - are steroid sulphatase inhibitors useful for treating oestrogen dependent tumours, esp. breast cancers. WO9305064-A1; AU9224905-A; FI9400903-A...; Assignee: IMPERIAL COLLEGE SCI TECHN MED; Inventor(s): REED M J, POTTER B V L.
53. New sulphonate and phosphonate ester which inhibits steroid sulphatase - useful for treating oestrogen dependent tumours, such as breast cancer; WO9305063-A; EP602123-A; WO9305063-A1...; Assignee: IMPERIAL COLLEGE SCI TECHN MED; Inventor(s): REED M J, POTTER B V L.
54. Partially protected *myo*-inositol derivs. - used in prepn. of phosphate or phosphorothioate ester(s) by (thio)phosphorylation. EP579957-A; WO8900156-A1; WO8900156-A ...; Assignee: RESEARCH CORP LTD, 3I RES EXPL LTD Inventor(s): GIGG R H, POTTER B V L
55. New inositol phosphorothioate ester(s) - useful for biochemical research and therapy. WO8807047-A; EP354904-A; JP2502535-W...; Assignee: RESEARCH CORP LTD, 3I RES EXPL LTD; Inventor(s): POTTER B V L.

## CRYSTAL STRUCTURE DATA DEPOSITIONS

### Worldwide Protein Data Bank (PDB) and Cambridge Crystallographic Data Centre (CCDC)

1. RILEY, A.M., MAHON, M.F. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 1998, CCDC 100275.
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3. FISCHER, D.S., WOO, L.W.L., MAHON, M.F., PUROHIT, A., REED, M.J. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 2003, CCDC 211567.
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5. MILLS, S.J., RILEY, A.M., LIU, C., MAHON, M.F. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 2004, CCDC 199689.
6. LLOYD, M.D., THIYAGARAJAN, N., HO, Y.T., WOO, L.W.L., SUTCLIFFE, O.B., PUROHIT, A., REED, M.J., ACHARYA, K.R. and POTTER, B.V.L., Structure of human carbonic anhydrase II with 4-[4-*O*-sulfamoylbenzyl](4-cyanophenyl)amino]-4H-[1,2,4]-triazole. *Worldwide Protein Data Bank*, 2005, 1XPZ.



7. LLOYD, M.D., THIYAGARAJAN, N., HO, Y.T., WOO, L.W.L., SUTCLIFFE, O.B., PUROHIT, A., REED, M.J., ACHARYA, K.R. and POTTER, B.V.L., Structure of human carbonic anhydrase II with 4-[(3-bromo-4-*O*-sulfamoylbenzyl)(4-cyanophenyl)amino]-4*H*-[1,2,4]-triazole. *Worldwide Protein Data Bank*, 2005, 1XQ0.
8. ALLAN, G.M., LAWRENCE, H.R., CORNET, J., BUBERT, C., FISCHER, D.S., VICKER, N., SMITH, A., TUTILL, H.J., PUROHIT, A., DAY, J.M., MAHON, M.F., REED, M.J. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 2006, CCDC 278452.
9. ALLAN, G.M., LAWRENCE, H.R., CORNET, J., BUBERT, C., FISCHER, D.S., VICKER, N., SMITH, A., TUTILL, H.J., PUROHIT, A., DAY, J. M., MAHON, M.F., REED, M.J. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 2006, CCDC 278453.
10. ALLAN, G.M., LAWRENCE, H.R., CORNET, J., BUBERT, C., FISCHER, D.S., VICKER, N., SMITH, A., TUTILL, H.J., PUROHIT, A., DAY, J. M., MAHON, M.F., REED, M.J. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 2006, CCDC 278454.
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14. LEESE, M.P., HEJAZ, H.A.M., MAHON, M.F., NEWMAN, S.P., PUROHIT, A., REED, M.J. and POTTER, B.V.L., Experimental Crystal Structure Determination. *Cambridge Structural Database*, 2006, CCDC 260115.
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