

RESUME

Sydney David CULLIS-HILL
BVSc, MRCVS, DVR, FACVS

Qualifications

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| 1968-1974 | Bachelor of Veterinary Science (BVSc)
University of Sydney (NSW, Australia)
Faculty of Veterinary Science |
| 1976 | Member of the Royal College of Veterinary Surgeons
(MRCVS) |
| 1978 | Diploma of Veterinary Radiology (DVR)
Royal College of Veterinary Surgeons
Cambridge University (United Kingdom)
Faculty of Veterinary Science |
| 1983 | Fellow of the Australian College of Veterinary Scientists
(FACVS) |

Positions

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| 1988-present | Chairman
Biopharm Australia Pty Ltd
Sydney, Australia |
| 1973-1988 | Principal, Waverley Veterinary Hospital
Sydney, Australia |
| 1985-1989 | Examiner, Australian College of
Veterinary Scientists (Radiology) |
| 1984-1998 | Honorary Research Fellow
Raymond Purves Laboratories
Department of Orthopaedics
The University of Sydney at
The Royal North Shore Hospital of Sydney
Australia |

Research Interests

Joint development
Joint lubrication and synovial fluid rheology
Osteoarthritis and allied diseases
Sulphated polysaccharides and their therapeutic
application
Human clinical trial design

Publications

Cullis-Hill, D and Ghosh, P

"The role of hyaluronic acid in joint stability - A hypothesis for hip dysplasia and allied disorders".

Report of the Medical Research Council, The Royal North Shore Hospital of Sydney, 1984-85.

Cullis-Hill, D and Ghosh, P

"The role of synovial fluid hyaluronate in joint integrity and development".

XVth International Congress of Rheumatology, Sydney, 1985.

Cullis-Hill, D

"The role of hyaluronic acid in joint development and integrity".

Journal of Veterinary Radiology, Vol. 27, No. 1, 1986.

Cullis-Hill, D and Ghosh, P

"The role of hyaluronic acid in synovial joint lubrication".

Connective Tissue Society of Australia and New Zealand, Annual Meeting, Monash University, Victoria, December 1986

Cullis-Hill, D

"The role of hyaluronic acid in joint lubrication".

Symposium on Osteoarthritis, London, UK, September 1987.

Cullis-Hill, SD and Ghosh, P

"The role of hyaluronic acid in joint stability - an hypothesis for hip dysplasia and allied disorders".

Medical Hypothesis, 23, 171-185, 1987.

Cullis-Hill, D

"Factors affecting joint development, stability, integrity and function".

8th International Veterinary Radiology Association, Sydney, 1988.

Hutadilok, N, Smith, MM, Cullis-Hill, D, Brooks, PM and Ghosh, P

"Pentosan polysulphate stimulates hyaluronate and DNA synthesis in synovial fibroblasts and partially reduces the suppressive effect of hydrocortisone on fibroblast metabolism".

Current Therapeutic Research, 44 (5), 1-16, 1988.

Cullis-Hill, D

"Pathophysiology and biomechanics of OA and the effects of pentosan polysulphate".

Australian College of Veterinary Scientists Scientific Meeting, Sydney, July 1989.

Cullis-Hill, D and Ghosh, P

"The role of hyaluronic acid in joint lubrication".

Journal of Veterinary Radiology, Vol 29, No 4, 1988.

Ghosh, P, Hutadilok, N and Cullis-Hill, D

"The role of hyaluronic acid in the physiopathology of the articular milieu".

Rheumatismo, Vol 42: 9, 1990.

Cullis-Hill, SD

"The pathophysiology of osteoarthritis and a review of the therapeutic effects of pentosan polysulphate (Cartrophen Vet)".

The British Small Animal Veterinary Association Congress, Birmingham, 4-7 April 1991.

Read, R and Cullis-Hill, SD

"A double blind dose response study of pentosan polysulphate by subcutaneous injection in osteoarthritis of the geriatric dog".

4th Interscience World Conference on Inflammation, Geneva, Switzerland, April 1991.

Cullis-Hill, D and Ghosh, P

"The role of hyaluronan in joint lubrication and stability - A new rheological hypothesis".

19th Symposium of the European Society of Osteoarthrology, Noordwijkerhout, The Netherlands, 24-27 May 1992.

Read, RA and Cullis-Hill, SD

"The systemic use of the chondroprotective agent pentosan polysulphate in the treatment of osteoarthritis - Results of a double blind clinical trial in dogs".

Vet Orthop Soc, 20th Annual Conference, Lake Louise, Canada, Feb 27-Mar 6, 1993.

Cullis-Hill, D and Ghosh, P

"Pentosan polysulphate (Cartrophen Vet®) a new disease modifying anti-osteoarthritic drug (DMOAD) for the treatment of osteoarthritis in the dog".

Joint Convention of L'Ordre des médecins vétérinaires du Québec and the Canadian Veterinary Medical Association, Québec City, Canada, July 6-9, 1994.

Verbruggen, G, Veys, EM, Ghosh, P and Cullis-Hill, D

"Pentosanpolysulfate treatment in osteoarthritis, serological parameters which could correlate with clinical response".

21 Symposium of the European Society for osteoarthrology, Gent, Belgium September 25-28, 1996. Osteoarthritis and Cartilage, Vol 2, Supp 1, December 1994.

- Cullis-Hill, D, Bellenger, C, Bowman, L and Ghosh, P
"Calcium pentosan polysulphate (CaPPS) an orally-active pleotropic osteoarthritis drug (POD) stimulates the release of superoxide dismutase (SOD) and Lipases into canine plasma".
XIIIth European Congress of Rheumatology – 8th ERASS Congress, Amsterdam, The Netherlands, 18-23 June 1995.
- Cullis-Hill, D and Ghosh, P
"What is Osteoarthritis? Cartrophen Vet Injection - the Risks and Benefits for the Treatment of Osteoarthritis in the Dog"
Irish Veterinary Times, Vol 2, Issue III, April 1995, pp 61-62
- Adam, N, Ghosh, P, Swain, M, Cullis-Hill, D, Rasaratnam, I and Ryan, P
"Pentosan Polysulphate (PPS) Increases the Molecular Weight of Hyaluronan and the Rheological Properties of Synovial Fluid in Patients with Osteoarthritis"
Connective Tissue Society of Australia and New Zealand Conference, Terrigal, NSW, October 1-5, 1995
- Read, RA, Cullis-Hill, SD and Jones, MP
"Systemic use of pentosan polysulfate in the treatment of osteoarthritis".
Journal of Small Animal Practice, 37: 108-114, 1996
- Verbruggen G, Ghosh P, Cullis-Hill D and Veys EM
"Calcium pentosan polysulphate has 'SMOAD'-activities in patients with inflammatory finger joint OA"
Proceedings of Société Internationale de Chirurgie Orthopédique et de Traumatologie (SICOT) 21st Triennial World Congress, Sydney, Australia p128, 1999
- Smith JG, Hannon RL, Brunberg L, Gebiski V, Cullis-Hill D
"A randomised, double blind, comparator clinical study of the efficacy of sodium pentosan polysulfate injection and carprofen capsules in arthritic dogs."
Osteoarthritis and Cartilage 9 (Suppl B): S21-S22, 2001
- Smith JG, Hannon RL, Brunberg L, Gebiski V, Cullis-Hill D
"A multicentre clinical study of the efficacy of sodium pentosan polysulfate and carprofen in canine osteoarthritis (osteoarthrosis)"
Veterinärmed 123-130, 2002
- Hannon RH, Smith JG, Cullis-Hill D, Ghosh P, Cawdery MH.
"Safety of Cartrophen Vet in the dog: review of adverse reaction reports in the UK"
Journal of Small Animal Practice 44: 202-208, 2003

McEwan JF, Windsor ML and Cullis-Hill SD

“Antibodies to prion protein inhibit human colon cancer cell growth
Tumor Biology 30:141-147, 2009

McEwan JF and Cullis-Hill SD

“Prion ‘virus’ particles caused by lysosomal storage disease?”
Bioscience Hypotheses, in press, 2009

Cullis-Hill, D

"High purity hyaluronic acid from synovial fluid".
Australian Patent 58198/86.

Cullis-Hill, D and Ghosh, P

"Anti-inflammatory compounds and compositions".
European Patent 88902773.6

Cullis-Hill, D

"Use of a topical formulation for the treatment of viral infections and
neoplastic disorders".
US Patent 07/786880.

Cullis-Hill, D

“Treatment of osteoporosis”
US Patent 09/716818
International patent PCT/AU01/01492
Australian patent 2002214835

Cullis-Hill, D

Prion Protein (PrP) and Glypican -1: a functional relationship: an hypothesis - Part I.
Prion 2009, Thessaloniki Greece. Poster Abstract

Cullis-Hill, D

Prion protein (PrP) and Glypican: a functional relationship: an hypothesis Part II.
Prion 2009, Thessaloniki Greece. Poster Abstract

Cullis-Hill, D

Prion protein (PrP) and Glypican -1 – a functional relationship: an hypothesis – Part
III. Prion 2009, Thessaloniki Greece. Poster Abstract

McEwan J, Singh J, Windsor M, Cullis-Hill D.

Prion protein regulates Heparan Sulfate Expression. Prion 2009, Thessaloniki Greece.
Poster Abstract.

Pigott RF, Windsor ML, Singh J, McEwan JF, Smith MM, Cullis-Hill SD

Calcium xylopyranose polysulfate potentiates irinotecan anti-tumour activity via
putative AP-1 interaction. British Cancer Council Meeting, Birmingham UK
2009. Poster Abstract

Cullis-Hill, D

Synthesis and trafficking of Heparan Sulfate by Prion Protein guides Neurite outgrowth & Synaptic stability. Prion Canada 2010, Ottawa Canada. Poster Abstract

Cullis-Hill D, McEwan J, Singh J, Villavedra-Sierra M, Mason K, Windsor M. Preliminary data using PCMA demonstrates prion misfolding (PrP^{Sc}) activity of the high-purity heparan sulfate fraction. Prion Canada 2010, Ottawa Canada. Poster Abstract

Kibondo A, Talbot D, Cullis-Hill D, Maag K, Cunningham A and Carter NM
“Perfusates: Their properties and usage for the maintenance and storage of organs for transplantation.”
Current Anaesthesia & Critical Care 21: 216-219, 2010

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Is a species specific heparan sulfate sequence the infectious agent in prion related disease? Prion 2010, Salzburg Austria. Poster Abstract.

Windsor, M and Cullis-Hill, D

Normal synovial fibroblasts express both prion and shadoo:
Immunofluorescence colocalization studies. Prion 2010, Salzburg Austria.
Poster Abstract.

Windsor M, Hester P, Cullis-Hill D

Shadoo is found in nuclear speckles, has high affinity for quadruplex DNA and induces DNA conformational change. Prion Canada 2012, Amsterdam, The Netherlands. Poster Abstract

Cullis-Hill, D

Heparan sulfate levels reduced in PrP knockout mice. Prion Canada 2013, Alberta Canada. Poster Abstract