



Dr David Oehme

NEUROSURGEON & SPINE SURGEON

CURRICULUM VITAE

PERSONAL INFORMATION

Dr David Anthony Oehme
MBBS (Hons) PhD FRACS
Neurosurgeon & Spine Surgeon

Suite B, Level 2, Healy Wing
St Vincent's Hospital
41 Victoria Pde
Fitzroy, Vic, Australia 3056

Phone: 1800 DO SPINE (1800 367 746) or 03 9021 8855
Fax: 03 9005 2811

contact@doneurology.com
www.doneurology.com

D.O.B. 19/11/1979
AGE 38

REGISTRATIONS

AHPRA Reg – MED0001201314
Provider No – 261862LX (St Vincent's Hospital Fitzroy)

<https://twitter.com/drdauidoehme>
<https://au.linkedin.com/in/david-ohme-99a651113>
https://www.researchgate.net/profile/David_Oehme

CURRENT APPOINTMENTS

2016-18	St Vincent's Public & Private Hospitals Fitzroy, Melbourne, Australia Consultant Neurosurgeon & Spine Surgeon
2016-18	St John of God Private Hospital Berwick Consultant Neurosurgeon & Spine Surgeon
2016-18	Waverley Private Hospital Mt Waverley Consultant Neurosurgeon & Spine Surgeon
2016-18	Epworth Hospital Richmond Consultant Neurosurgeon & Spine Surgeon
2016-18	Epworth Eastern Box Hill Consultant Neurosurgeon & Spine Surgeon
2016-18	Eastern Health/Box Hill Hospital Consultant Neurosurgeon & Spine Surgeon

PAST APPOINTMENTS

2016/17	Keyhole Neurosurgery Melbourne Consultant Neurosurgeon & Spine Surgeon
2016-17	PhD Supervisor Hudson Institute of Medical Research/Monash University
2015	Royal Melbourne Hospital Parkville, Melbourne, Australia 6 th year Accredited Neurosurgery Registrar
2015	Royal Children's Hospital Parkville, Melbourne, Australia 6 th year Accredited Neurosurgery Registrar
2014	St Vincent's Hospital Victoria Pde Fitzroy, Melbourne, Australia 5 th year – Accredited Registrar (Resident) Neurosurgery
2011-14	Doctorate of Philosophy (PhD) Monash Institute of Medical Research Monash University. 27-31 Wright Street Clayton Vic 3168

- 2010 – 2013 Monash Medical Centre - Southern Health
Clayton Rd Monash
Year 3 & 4 – Accredited Registrar Neurosurgery
- 2009 Alfred Hospital Bayside Health
Commercial Rd Prahran Vic 3181
Year 2 – Accredited Registrar Neurosurgery
- 2008 Alfred Hospital – Bayside Health
Commercial Rd Prahran Vic 3181
Year 1 – Accredited Registrar Neurosurgery
- 2007 Alfred Hospital – Bayside Health
Commercial Rd Prahran Vic 3181
HMO 3 (Registrar Neurosurgery) – BST 2
- 2006 Alfred Hospital – Bayside Health
Commercial Rd Prahran Vic 3181
HMO 2 Resident – BST 1
- 2005 Alfred Hospital – Bayside Health
Commercial Rd Prahran Vic 3181
PGY1 – Intern

EDUCATION

POSTGRADUATE DEGREES

- 2016 Fellowship Royal Australasian College of Surgeons
(FRACS) - Neurosurgery
- 2015 Doctorate of Philosophy (PhD)
Monash University
“Mesenchymal Precursor Cell Mediated Lumbar
Intervertebral Disc Regeneration”

POST GRADRADUATE EDUCATION

- 2015 Royal Australasian College of Surgeons
Fellowship examination in Neurosurgery

2015	Neurosurgery Board Review Course Chicago, Illinois, USA
2008 - 2015 (SET Years 1-6)	Royal Australasian College of Surgeons Advanced Neurosurgical Trainee
2007 – 2008	Royal Australasian College of Surgeons – BST trainee Basic Sciences and Clinical Examination
2008	RACS Critical Literature Evaluation & Research (C.L.E.A.R.) Course.
2007	RACS Basic Surgical Skills Course
2007	RACS Care of the Critically Ill Patient Course (CRISP)
2007	RACS EMST – Early Management of Severe Trauma Course

ECFMG (United States Medical Licensing Examination – USMLE)

2015	USMLE Step 3
2014	USMLE Step 2CS
2012	USMLE Step 2CK
2007	USMLE Step 1

UNDERGRADUATE DEGREES

2004	Bachelor of Medicine/Bachelor of Surgery (Honours) Monash University Clayton Victoria Australia
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SECONDARY SCHOOL EDUCATION

1997	V.C.E. De La Salle College Malvern, Melbourne, Australia T.E.R. 99.55
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AWARDS & SCHOLARSHIPS

- 2017 Sher I, **Oehme DA**, Daly C, et al. Histological, Radiological, Immuno-Histochemical and Birefringence Investigation of the Mechanisms of Action of Mesenchymal Progenitor Stem Cells (MPCs) in the Early Repair of Degenerative Disc Disease Using the Ovine Annulotomy Injury Model. Best Paper NASS 2017.
- 2015 Peter Leech Memorial Prize 2015
Awarded for best scientific manuscript presented at Neurosurgical Society of Australasia annual scientific meeting Qld Australia. (\$5000)
- 2015 Morgan Travelling Fellowship for 2016 (\$10,000) awarded by RACS Board of Surgical Research for
- 2015 Monash University School of Clinical Sciences Head of School's PhD Excellence Award.
- 2015 *Basic Science Award*. 66th Southern Neurosurgical Society Annual Meeting. March 2015. Naples Florida. USA. In Vivo MRI Tracking Of Mesenchymal Precursor Cells Labeled With Iron Oxide Fluorescent Nanoparticles (IODEX) In An Ovine Model Of Disc Degeneration.
- 2014 Peter Ryan Research Prize 2014
St Vincent's Hospital Surgical Forum
Awarded to best scientific manuscript and presentation
- 2013 Peter Leech Memorial Prize 2013
Awarded for best scientific manuscript presented at Neurosurgical Society of Australasia annual scientific meeting Qld Australia. (\$5000)
- 2012 Surgical Research Society of Australasia Travel Grant –
Awarded for oral presentation “Lumbar Intervertebral Disc Regeneration at the time of Microdiscectomy.” (\$750)
- 2012 Royal Australasian College of Surgeons Foundation for Surgery Research Scholarship (\$60,000)
- 2011 NSA (Neurosurgical Society of Australasia) Research Scholarship (Sponsored by Synthes - \$35,000)

SCIENTIFIC PEER REVIEWED PUBLICATIONS

Published Articles and Articles Accepted for Publication

1. Daly CD, Ghosh P, Zannettino ACW, Badal T, Shimmon R, Jenkin G, **Oehme D**, Jain K, Sher I, Vais A, Cohen C, Chandra RV, Goldschlager T. Mesenchymal progenitor cells primed with pentosan polysulfate promote lumbar intervertebral disc regeneration in an ovine model of microdiscectomy. *Spine J*. October 2017.
doi:10.1016/j.spinee.2017.10.008
2. Lim K-Z, Daly CD, Ghosh P, Jenkin G, **Oehme D**, Cooper-White J, et al. Ovine Lumbar Intervertebral Disc Degeneration Model Utilizing a Lateral Retroperitoneal Drill Bit Injury. *J Vis Exp*. 2017 May 25;(123).
3. Daly C, Ghosh P, Jenkin G, **Oehme D**, Goldschlager T. A Review of Animal Models of Intervertebral Disc Degeneration: Pathophysiology, Regeneration, and Translation to the Clinic. *Biomed Res Int* 2016;2016(3):5952165–14.
4. **David Oehme**, Peter Ghosh, S. Shimmon, J. Wu, C. McDonald, J, Troupis, Tony Goldschlager, Jeffrey V. Rosenfeld, Graham Jenkin. Reconstitution of degenerated ovine lumbar discs by STRO-3-positive allogeneic mesenchymal precursor cells combined with pentosan polysulfate. *Journal of Neurosurgery Spine* Jan 2016.
5. Chris Daly, Peter Ghosh, Graham Jenkin, **David Oehme**, Tony Goldschlager. A Review of Animal Models of Intervertebral Disc Degeneration: Pathophysiology, Regeneration, and Translation to the Clinic," *BioMed Research International*, vol. 2016, Article ID 5952165, 14 pages, 2016. doi:10.1155/2016/5952165
6. **David Oehme**, Peter Ghosh, Tony Goldschlager, Susan Shimmon, Jiehua Wu, Stephen Stuckey, Mark Williamson, Jeffrey V. Rosenfeld, Graham Jenkin. Radiological, morphological, histological and biochemical changes of lumbar discs in an animal model of disc degeneration suitable for evaluating the potential regenerative capacity of novel biological agents. *J Tissue Science & Engineering* 2015 6:2.
7. **David Oehme**, Tony Goldschlager, Peter Ghosh, Jeffrey V. Rosenfeld, Graham Jenkin. Cell-Based Therapies Used to Treat Lumbar Degenerative Disc Disease: A Systematic Review of Animal Studies and Human Clinical Trials. *Stem Cells International*, 2015. Vol 2015 p. 956031

8. Yap, Kiryu, **Oehme, David**, Han, Tiew. Images in Neuroscience: Headache, dysphasia and a left temporal lobe mass. *Journal of Clinical Neuroscience*. Accepted 2015. In press.
9. Courtney A McDonald, **David Oehme**, Yen Pham, Kilian Kelly, Silviu Itescu, Anne Gibbon and Graham Jenkin. Evaluation of the safety and tolerability of a high dose intravenous infusion of allogeneic mesenchymal precursor cells. *Cytotherapy*, 2015. Vol. 17(9) pp 1178-1187.
10. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Peter Ghosh, Graham Jenkin. The role of stem cell therapies in degenerative lumbar spine disease: a review. *Neurosurgical Reviews*. 2015 vol. 38 (3) pp. 429–445.
11. Charles Handley, Tony Goldschlager, **David Oehme**, Peter Ghosh and Graham Jenkin. Mesenchymal Stem Cell Tracking in the Intervertebral Disc. *World Journal of Stem Cells*. 2015 7(1):65-74.
12. **David Oehme**, Peter Ghosh, Susan Shimmon, Jiehua Wu, Courtney McDonald, John Troupis, Tony Goldschlager, Jeffrey V. Rosenfeld, Graham Jenkin. Mesenchymal progenitor cells combined with pentosan polysulfate can mediate disc regeneration at the time of microdiscectomy. A preliminary study in an ovine model. *Journal of Neurosurgery Spine* 2014 vol 20 (6) page 657-669.
13. **David Oehme**, Tony Goldschlager, Peter Ghosh, Jeffrey V. Rosenfeld, Graham Jenkin. Concern over the use of recombinant bone morphogenetic protein in spinal fusion surgery. Are stem cells and alternative? *ANZ Journal of Surgery* 2014 vol. 84(8) 302-303.
14. Tony Goldschlager, **David Oehme**, Peter Ghosh, Andrew Zannettino, Jeffrey V. Rosenfeld, Graham Jenkin. Current and future applications for stem cell therapies in spine surgery. *Curr Stem Cell Res Ther*. 2013; 8(5) 381-393.
15. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Andrew Danks, Peter Ghosh, Anne Gibbon, Graham Jenkin. Lateral surgical approach to lumbar intervertebral discs in an ovine model. *ScientificWorldJournal*, 2012. Vol 2012. p. 873726.
16. **Oehme, D**, Madan, A, Rosenfeld, J.V. Headache, Collapse and Coma. Deep Cerebral Venous Sinus Thrombosis. *J of Clin Neurosci* 2011 Jul;18(7):946

INVITED and PEER REVIEWED ORAL PRESENTATIONS

1. **David Oehme**, Prof Peter Ghosh, Dr Tony Goldschlager, Chris Daly, Dr John Troupis, Dr Courtney McDonald, Prof Graham. Disc Regeneration Using STRO-3+ Immunoselected Allogeneic Mesenchymal Precursor Cells Combined with Pentosan Polysulfate.” Oral presentation at the Annual Scientific Meeting of the Neurosurgical Society of Australasia. Sydney, NSW, Australia Sept 2016.
2. **David Oehme**, Prof Peter Ghosh, Dr Tony Goldschlager, Prof Jeffrey V. Rosenfeld, Dr John Troupis, Dr Courtney McDonald, Prof Graham. Mesenchymal progenitor cells combined with pentosan polysulfate can mediate disc regeneration at the time of microdiscectomy. A preliminary study in an ovine model. Neurosurgical Society of Australasia (NSA) Annual Scientific Meeting Auckland NZ, October 2015 (Oral Presentation – Peter Leech Prize awarded for best scientific manuscript).
3. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Peter Ghosh, Graham Jenkin. Disc regeneration using STRO-3+ immunoselected mesenchymal precursor cells combined with pentosan polysulfate. North American Spine Society Annual Meeting. San Francisco, US, November 2014. (Oral Presentation)
4. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Peter Ghosh, Graham Jenkin. Stem Cell Therapies Used to Treat Lumbar Degenerative Disc Disease. A Systematic Review. Spine Society of Australasia Annual Meeting. Brisbane, Australia April 2014.
5. **Oehme, D.** Stem Cells in Neurosurgery. Monash University Health Week. Monash University and Southern Health, Clayton, Melbourne, Australia. November 2013.
6. **Oehme, D**, Ghosh P, Goldschlager, T, Rosenfeld, J, Jenkin, G. Radiological, histological and biochemical findings in a three level ovine annular injury model of lumbar disc degeneration. Neurosurgical Society of Australasia (NSA) Annual Scientific Meeting Gold Coast Australia, October 2013 (Oral Presentation).
7. **David Oehme**, Prof Peter Ghosh, Dr Tony Goldschlager, Prof Jeffrey V. Rosenfeld, Dr John Troupis, Dr Courtney McDonald, Prof Graham. Mesenchymal Precursor Cell Mediated Disc Regeneration at the Time of Lumbar Microdiscectomy. Global Spine Congress 2013. April 4-6th 2013, Hong Kong, Hong Kong. (Oral Presentation).

8. **Oehme, David.** The Role of Mesenchymal Progenitor Cells in Treating Degenerative Conditions of the Spine. Invited speaker at Orthopaedic Unit and Medical School, University of China Hong Kong, HK. April 3rd 2013.
9. **Oehme, D,** Ghosh, P, Goldschlager, T, Rosenfeld, JVR, Danks, A, Troupis, J, McDonald, C, Jenkin, G. Insertion of Mesenchymal Progenitor Cells and Pentosan Polysulfate in a gelatin/fibrin glue matrix at the time of lumbar microdiscectomy increases proteoglycan content of the nucleus pulposus in an ovine model. Neurosurgical Society of Australasia (NSA) Annual Scientific Meeting Gold Coast Australia, October 2012 (Oral Presentation).
10. **Oehme, D,** Ghosh, P, Goldschlager, T, Rosenfeld, JVR, Danks, A, Troupis, J, McDonald, C, Jenkin, G. Lumbar Intervertebral Disc Regeneration at the Time of Microdiscectomy. Surgical Research Society of Australasia Annual Scientific Meeting, Adelaide Australia November 2012. (Oral Presentation)
11. **Oehme, D,** Ghosh P, Goldschlager, T, Rosenfeld, J, Jenkin, G. Lumbar disc degeneration induced by annular injury in an ovine model. Radiological analysis and comparison with biochemical changes. Congress of Neurological Surgeons (CNS) Chicago US, October 2012. (Oral presentation)

PEER REVIEWED ABSTRACTS, PRESENTATIONS & SCIENTIFIC POSTERS

Abstracts

1. Daly CD, Ghosh P, Badal T, Shimmon R, Ghosh I, Jenkin G, **Oehme D,** Sher I, Vais A, Cohen C, Goldschlager T. Pentosan polysulfate primed mesenchymal progenitor cells promote intervertebral disc repair following microdiscectomy in an ovine model. Presented at the Monash Health Translation Precinct Research Week, November 2017, Melbourne, Australia. (Oral Presentation)
2. Daly CD, Ghosh P, Badal T, Shimmon R, Ghosh I, Jenkin G, **Oehme D,** Sher I, Vais A, Cohen C, Goldschlager T. Pentosan polysulfate primed mesenchymal progenitor cells promote intervertebral disc repair following microdiscectomy in an ovine model. Presented at the North American Spine Society 32nd Annual Meeting, October 2017, Orlando USA. (Oral Presentation)

3. Sher I, **Oehme D**, Daly CD, Chandra RV, Sher M, Fulcher A, et al. Histological, Radiological, Immuno-Histochemical and Birefringence Investigation of the Mechanisms of Action of Mesenchymal Progenitor Stem Cells (MPCs) in the Early Repair of Degenerative Disc Disease Using the Ovine Annulotomy Injury Model. Presented at the North American Spine Society 32nd Annual Meeting, October 2017, Orlando USA. (Oral Presentation)
4. Sher I, Daly CD, **Oehme D**, Chandra RV, Ghosh P, Sher M, et al. Could the Transitional Zone be the Key to Predicting Degenerative Disc Disease? Presented at the North American Spine Society 32nd Annual Meeting, October 2017, Orlando USA. (Poster Presentation)
5. Daly CD, Ghosh P, Badal T, Shimmon R, Ghosh I, Jenkin G, **Oehme D**, Sher I, Vais A, Cohen C, Goldschlager T. Intervertebral disc repair following microdiscectomy mediated by pentosane polysulfate primed mesenchymal progenitor cells in an ovine model. Presented at the Congress of Neurological Surgeons 2017 Annual Meeting, October 2017, Boston USA. (Oral Presentation)
6. Daly CD, Ghosh P, Badal T, Shimmon R, Ghosh I, Jenkin G, **Oehme D**, Sher I, Vais A, Cohen C, Goldschlager T. Pentosan polysulfate primed mesenchymal progenitor cells promote intervertebral disc repair following microdiscectomy in an ovine model. Presented at the Neurosurgical Society of Australasia Annual Scientific Meeting 2017 Adelaide, Australia. (Oral Presentation)
7. Daly CD, Ghosh P, Badal T, Shimmon R, Ghosh I, Jenkin G, **Oehme D**, Sher I, Vais A, Cohen C, Goldschlager T. Mesenchymal progenitor cells primed with pentosan polysulfate mediate disc repair following microdiscectomy in an ovine model. Presented at the Global Spine Congress, May 2017, Milan. (Oral Presentation)
8. Sher I, Daly C, Goldschlager T, **Oehme D**, Chandra R, Ghosh P. 9.4T MRI complements the Pfirrmann grade through better differentiation of the NP/AF. Presented at the Global Spine Congress, May 2017, Milan. (Oral Presentation)
9. Daly CD, Ghosh P, Badal T, Shimmon R, Ghosh I, Jenkin G, **Oehme D**, Cooper-White J, Naidoo T, Sher I, Jain K, Oehme D, Goldschlager T. Radiological, Histological, Morphological and Biochemical Comparison of two Ovine Lumbar Intervertebral Disc Injury Models. Presented at the Global Spine Congress, May 2017, Milan. (Oral Presentation)
10. Sher I, Sher M, Daly C, Fulcher A, **Oehme D**, Ghosh P, Smith J, Goldschlager T. Detailed analysis of intervertebral disc structure using the 9.4T MRI and polarized light microscopy facilitates understanding of disc biomechanics. Presented at the Spine Society of Australia Annual Scientific Meeting 2017, Hobart. (Oral Presentation)

11. Daly C, **Oehme D**, Ghosh P, Goldschlager, Rosenfeld J, Troupis J, McDonald C, Jenkin G. Mesenchymal progenitor cells combined with pentosan polysulfate can mediate disc regeneration at the time of microdiscectomy. Presented at the XIIth annual Adelaide Centre for Spinal Research Symposium Adelaide 2014. (Oral Presentation)
12. Sher I, Daly CD, Goldschlager T, **Oehme D**, Chandra R, Ghosh P. The intermediate zone. A novel prognostic indicator of intervertebral disc degeneration. Poster. Monash University Research Week.
13. **David Oehme** Disc Regeneration Using STRO-3+ Immunoselected Allogeneic Mesenchymal Precursor Cells Combined with Pentosan Polysulfate." Oral presentation at the Annual Scientific Meeting of the Neurosurgical Society of Australasia. Sydney, NSW, Australia Sept 2016.
14. Johanne Summers, **David Oehme** et al. In Vivo Mri Tracking Of Mesenchymal Precursor Cells Labeled With Iron Oxide Fluorescent Nanoparticles (IODEX) In An Ovine Model Of Disc Degeneration. The Spine Journal 2015 15(3), Supp S69.
15. Johanne Summers, **David Oehme** et al. In Vivo Mri Tracking Of Mesenchymal Precursor Cells Labeled With Iron Oxide Fluorescent Nanoparticles (IODEX) In An Ovine Model Of Disc Degeneration. 66th Southern Neurosurgical Society Annual Meeting. March 2015. Naples Florida. USA. *Basic Science Award*.
16. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Peter Ghosh, Graham Jenkin. Disc regeneration using STRO-3+ immunoselected mesenchymal precursor cells combined with pentosan polysulfate. North American Spine Society Annual Meeting. San Francisco, US, November 2014. (Oral presentation)
17. Bae, H, **Oehme, David**, Goldschlager, Tony et al. A phase II study demonstrating the efficacy and safety of mesenchymal precursor cells in low back pain due to disc degeneration. North American Spine Society Annual Meeting. San Francisco, US November 2014.
18. **David Oehme**, Peter Ghosh, Susan Shimmon, Jiehua Wu, Courtney McDonald, Stephen Stuckey, Mark Williamson, Tony Goldschlager, Jeffrey V. Rosenfeld, Graham Jenkin. A novel three level ovine annular injury model of lumbar disc degeneration. Marshall Research Prize, Southern Health, Monash Medical Centre, Melbourne Australia, November 2013.

19. **David Oehme**, Peter Ghosh, Tony Goldschlager, Jeffrey V. Rosenfeld, John Troupis, Courtney McDonald, Graham Jenkin. Mesenchymal Precursor Cell Mediated Disc Regeneration at the Time of Lumbar Microdiscectomy. 13th Annual Canadian Spine Society (CSS) Meeting 2013, Tremblant, Canada. (Abstract and Oral Presentation by Dr Tony Goldschlager)
20. **David Oehme**, Peter Ghosh, Tony Goldschlager, Jeffrey V. Rosenfeld, John Troupis, Courtney McDonald, Graham Jenkin. Mesenchymal Precursor Cell Mediated Disc Regeneration at the Time of Lumbar Microdiscectomy. Global Spine Congress 2013. April 4-6th 2013, Hong Kong, Hong Kong. (Oral Presentation)
21. Peter Ghosh, **David Oehme**, Susan Shimmon, Jiehua Wu, Ian Ghosh, Tony Goldschlager, Graham Jenkin. Intervertebral disc regeneration in vivo using mesenchymal stem cells combined with the chondrogenic agent pentosan polysulfate. International Cartilage Repair Society (ICRS) 2013 annual conference. Turkey 2013. (Academic poster).
22. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Peter Ghosh, Graham Jenkin. Radiological, histological and biochemical findings in a three level ovine annular injury model of lumbar disc degeneration. Neurosurgical Society of Australasia (NSA) Annual Scientific Meeting Gold Coast Australia, October 2013 (Oral Presentation).
23. **David Oehme**, Peter Ghosh, Tony Goldschlager, Jeffrey V. Rosenfeld, John Troupis, Courtney McDonald, Graham Jenkin. Lumbar Intervertebral Disc Regeneration at the Time of Microdiscectomy. Surgical Research Society of Australasia Annual Scientific Meeting, Adelaide Australia November 2012. (Oral Presentation)
24. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Peter Ghosh, Graham Jenkin. Lumbar disc degeneration induced by annular injury in an ovine model. Radiological analysis and comparison with biochemical changes. Congress of Neurological Surgeons (CNS) Chicago US, October 2012. (Oral presentation)
25. **David Oehme**, Tony Goldschlager, Jeffrey V. Rosenfeld, Andrew Danks, Peter Ghosh, Anne Gibbon, Graham Jenkin. Congress of Neurological Surgeons (CNS) Chicago US, October 2012. (Academic Poster)
26. **David Oehme**, Peter Ghosh, Tony Goldschlager, Jeffrey V. Rosenfeld, Andrew Danks, John Troupis, Courtney McDonald, Graham Jenkin. Insertion of Mesenchymal Progenitor Cells and Pentosan Polysulfate in a gelatin/fibrin glue matrix at the time of lumbar microdiscectomy increases proteoglycan content of the nucleus pulposus in an ovine model. Neurosurgical Society of Australasia (NSA) Annual Scientific Meeting Gold Coast Australia, October 2012 (Oral Presentation).

Invited Presentations

1. **David Oehme.** The Role of Mesenchymal Progenitor Cells in Treating Degenerative Conditions of the Spine. Invited speaker at Orthopaedic Unit and Medical School, University of China Hong Kong, HK. April 3rd 2013.
2. **David Oehme.** The role of stem cells in neurosurgery. Monash Health Research Week. Southern Health, Monash Medical Centre, Melbourne Australia, November 2013.

PREVIOUS RESEARCH EXPERIENCE

Unfunded Research

2011-14 Postgraduate PhD candidate - "Mesenchymal Precursor Cell Mediated Lumbar Intervertebral Disc Regeneration". Thesis submitted January 2014.

Sponsored Research

2013 -15 Iron-oxide nano-particle labelled Mesenchymal Precursor Cells on the repair of Repair and Reconstitution of the Extracellular Matrix of Degenerate Intervertebral Discs Using an Ovine Model. (Co-primary investigator, \$75,000.00 sponsored research agreement from Mesoblast Ltd).

2011-13 A Study to Evaluate the Safety and Efficacy of Different Formulations of STRO-3⁺ Immunoselected Allogeneic Mesenchymal Precursor Cells on the Repair and Reconstitution of the Extracellular Matrix of Degenerate Intervertebral Discs Using an Ovine Model. (Co-primary investigator, \$670,000.00 sponsored research agreement from Mesoblast Ltd).

2011 Evaluation of the safety and tolerability of a single high dose intravenous infusion of allogeneic Mesenchymal Precursor Cells (MPCs) in sheep. (Co-Investigator, \$200,000.00 sponsored research agreement from Mesoblast Ltd).

2011 Evaluation of the relative effectiveness of Allogeneic Mesenchymal Precursor Cells (MPCs) alone or formulated with Pentosan Polysulfate to heal full depth osteochondral defects in ovine cartilages. (Co-Investigator, \$65,000.00 sponsored research agreement from Mesoblast Ltd).

Clinical Trials

2012 Co-primary Investigator - A Prospective, Multicentre, Double Blind, Controlled Study Evaluating Safety and Preliminary Efficacy of a Single Injection of Adult Allogeneic Mesenchymal Precursor Cells Combined with Hyaluronan in Subjects with Chronic Discogenic Lumbar Back Pain. (Primary Investigator for Australian Centre).

2011-12 Fulltime Postgraduate PhD student - "Lumbar Intervertebral Disc Regeneration Using Mesenchymal Progenitor Cells"

2010 Co-investigator A Phase 1b/2a, Randomized, Single-Blinded, Controlled Study Evaluating Safety and Preliminary Efficacy of NeoFuse™ when Combined with MasterGraft® Matrix in Patients Undergoing Multi-Level Anterior Cervical Discectomy and Fusion with Anterior Cervical Plate Fixation.

2010 Co-investigator Conscious-3 study. A prospective, multicentre, double-blinded, randomised, placebo controlled study to assess the efficacy and safety of Clazosentan in reducing vasospasm related morbidity and all cause mortality in adult patients with aneurysmal SAH treated by endovascular coiling.

2008 Co-investigator Conscious-2 study. *Clazosentan* in Reducing Vasospasm-Related Morbidity and All-Cause Mortality in Adult Patients With Aneurysmal Subarachnoid Hemorrhage Treated by Surgical Clipping.

OTHER ACADEMIC PRESENTATIONS

2014 Arterial exposure in the floor of the middle fossa.
(Neurosurgery SET Trainee Conference Auckland)

2012 Spinal AVMs
(Neurosurgery SET Trainee Conference Gold Coast)

2011 Lumbar Disc Regeneration Using Mesenchymal Progenitor Cells
(Monash Institute of Medical Research Colloquium)

Surgery for Back Pain and Biological Therapies
(Monash Medical Centre Grand Round)

Image Guidance in Spine Surgery
(Neurosurgery SET Trainee Conference Melbourne)

- 2010 Pre-operative Investigations in Epilepsy Surgery
 (Neurosurgery SET Trainee Conference Gold Coast)
- NCS & EMG in Peripheral Nerve Disorders
 (Neurosurgery SET Trainee Conference Adelaide)
- 2009 Developmental States of the Child
 (Neurosurgery SET Trainee Conference Perth)
- Thiopentone in Head Injuries
 (Neurosurgery SET Trainee Conference Hobart)
- Base of Skull Fractures
 (Neurosurgery SET Trainee Conference Hobart)

PROFESSIONAL MEMBERSHIPS

- Royal Australasian College of Surgeons
- Neurosurgical Society of Australasia
- AO Spine
- Congress of Neurological Surgeons (CNS)
- North American Spine Society (NASS)
- AMA