Assoc. Prof. Antonio Lauto

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PERSONAL PROFILE

I received my BSc in Physics from the University of Milan, having completed my research project at UCLA under the supervision of Professor Claudio Pellegrini ("Enrico Fermi" Award recipient). I hold a MSc in Physics from Macquarie University and a PhD in Biomedical Engineering from the University of New South Wales. I worked as a research scientist in several distinguished institutions including Cornell University and The Memorial Sloan Kettering Cancer Center (New York, US).

My multidisciplinary research spans across three main areas, namely, Biomedical Nanotechnology, Wireless Technology for biomedical applications, and Mechanobiology (with Atomic Force Microscopes). My research is currently focused on i) development of wireless technologies that are minimally invasive for neural tissue repair and regeneration; ii) implementation of nanotechnology to biomedical devices; iii) mechanobiology and translational research.

My latest invention, the Graft-Antenna, was featured in an editorial by the online magazine *MIT Technology Review*, describing the graft-antenna as an "important work …….of significant potential" (https://www.technologyreview.com/s/611697/nerves-repaired-using-bioscaffold-fitted- with-radio-antenna/).

To date, I have published 82 peer-reviewed papers and hold 8 patents; four of them have been commercialized. My h-index is 31 and I have been cited more than 2540 times (Google Scholar). I have raised 1.5 million dollars from competitive grants. I am an Australian and Italian citizen.

EDUCATION

Doctor of Philosophy, 2005
Graduate School of Biomedical Engineering
University of New South Wales, Australia,
Thesis supervisor: Prof. Albert Avolio

Master of Science (Honours), 1995
Centre for Lasers and Applications (School of Physics)
Macquarie University, Australia
Thesis supervisor: Prof. Jim Piper

BSc/Physics (Honours), 1991
University of Milan, Italy
Thesis supervisor: Prof. Claudio Pellegrini, *Fermi Award recipient*

AWARDS

Excellence in Research Interdisciplinary Team Award, The BENS group (Biomedical Engineering and Neuroscience), Western Sydney University, 2014.

Vice-Chancellor Chancellor Research Fellowship, 2005-7 (210,000 $)
Optical and Biomedical Engineering Laboratory
School of Electrical, Electronic and Computer Engineering
University of Western Australia, Perth, Australia

EMPLOYMENT / RESEARCH EXPERIENCE

Associate Professor in Biomedical Nanotechnology, 2008-current
School of Science
University of Western Sydney (UWS), Australia

Senior Group Leader, Biomedical Engineering and Neuroscience Program, 2012-current
The MARCS Institute
University of Western Sydney (UWS), Australia

Co-joint Lecturer, 2008-current
School of Medicine, UWS, Australia,

Research Associate, 2007-2008
School of Biotechnology and Biomolecular Sciences
University of New South Wales, Sydney, Australia

Research Fellow, 2005- 2007
School of Electrical, Electronic and Computer Engineering and School of Medicine
University of Western Australia, Perth, Australia

Senior Researcher, 2000-2001
Memorial Sloan Kettering Cancer Care Hospital, Department of Medical Physics-MRI
New York, USA

Visiting Fellow, 1997-2000
New York Hospital-Weill Cornell University Medical College
Laboratory for Minimal Invasive Surgery
New York, USA,

Research Officer, 1997
St George Hospital, Department of Orthopaedics and Cancer Center
Sydney, Australia,

Research Officer, 1996
Microsearch Foundation of Australia, University of Sydney
Sydney, Australia

ACADEMIC / TEACHING EXPERIENCE

Unit Coordinator and Lecturer, 2008-current
University of Western Sydney

- **Quantum Physics (third year unit)**
- **Biomedical Physics (third year unit)**
- Classical Physics and Advanced Technologies (second year unit)
- Fabrication of Nanostructured Devices (third year unit)
- Applied Instrumentation in Nanotechnology (second year unit)
- Physics 1 (first year unit)

Physics Sub-Major Coordinator, 2011-current
University of Western Sydney

Postgraduate Supervision, 2009-current
University of Western Sydney: 6 PhD, 7 MSc and 7 Honours students

Pre-Conference Course on Laser Tissue Repair, 2005-2007
International Society for Lasers in Surgery and Medicine, Florence, Italy

Guest Lecturer, 2005-2007
Graduate School of Biomedical Engineering
University of New South Wales, Sydney, Australia

Guest Lecturer, 1997-2000
Cornel University Medical College, New York, USA

GRANTS

Total grants: 1,542,803 $Au
The Morton Cure Paralysis Fund, Minneapolis USA (Chief Investigator, 33,900$,

2021). Title: Evaluation of peripheral stimulation via a novel biocompatible graft-antenna to promote neuronal regeneration, reduce pain and improve functional outcomes.

The Neurosurgical Research Foundation, Adelaide Australia (Chief Investigator, $31,688, 2021. Title: Evaluating the efficacy of peripheral nerve stimulation via a novel graft antenna to reduce neuroinflammation following traumatic spinal cord injury.

Aroa Biosurgery, Auckland New Zealand (Chief Investigator, 9,500$, 2020) Title: Porous chitosan bioadhesives for photochemical tissue bonding.

ARC Discovery Grant # DP190102560 (Chief Investigator, 393,215$, 2019-2021).
Title: Bioelectronics: addressing the biointerface challenge.

UNSW Science Goldstar Award 2018 Project (NHMRC PG, APP1144457,
Co-Investigator, 40,000$)
Title: Proposal Title: A sutureless conductive patch for myocardial repair

UWS Research Grant (Principal Investigator, 24,500$, 2012)
Title: Development of graft-antenna prototype.

"NHMRC Near Miss" UWS grant (Chief Investigator, 30,000$, 2011)
Title: Chitosan adhesive bandages with integrated extracellular matrix for sutureless nerve repair

UWS Research Grant (Chief Investigator, 21,500$, 2010)
Title: Graft-antenna for peripheral nerve repair.

UWS Infrastructure Research Grant (Chief Investigator, 220,000$, 2010).
Title: Bio-AFM for micro-rheology

UWS Research Grant (Chief Investigator, 42,500$, 2009)
Title: Bioadhesives for sutureless nerve anastomosis.

ARC Discovery Grant # DP0772153 (Chief Investigator, 310,000$, 2007-2009).
Title: Development of a light-activated bioadhesive for low temperature tissue repair.

UWA Faculty Grant (Chief Investigator, 29,000$, 2006).
Title: Fabrication of photo-activated drug delivery systems.

UWA Vice-Chancellor Research Fellowship (210,000 $, 2005-2007, University of Western Australia)

UNSW Faculty Grant (Chief Investigator, 18,000$, 2003).
Title: Effect of microwave irradiation on peripheral nerve regeneration using biocompatible conducting polymers.

ARC Discovery Grant #DP0345899 (Chief Investigator, 114,000$, 2002-2004).
Title: Design and characterization of a polysaccharide-based biomaterial for tissue adhesion.

Research Grant of the American Society for Laser Medicine and Surgery (Chief Investigator, 15,000 US$, 2000). Title: Albumin Solder for Laser Tissue-Welding.

PATENTS – PRINCIPAL INVENTOR

1. An improved apparatus and method for treatment of tissue (Australian Standard Patent Application No. 2019204869, 2019). Inventor: **A. Lauto**.

2. Bioadhesive for tissue repair (European Patent EP 1796747 A1; 2017. US Patent 9,029,349; 2015). Inventors: **A. Lauto A**, L.A. Poole-Warren, J.L. Foster. These patents have been licensed to AROAbio in 2015.

3. An apparatus and method for facilitating treatment of tissue (WO 2013106884 A1, 2013). Inventors: **A. Lauto**, G. Gargiulo, U. Gunawardana, R. Salama, R. Lyanapathiran.

4. An attachment means for attaching a medical device to tissue, a system for attaching a medical device to tissue, a medical device having an attachment means, a method of attaching a medical device to tissue, and a method of manufacturing and attachment means (AU Patent #2013903339, Provisional Patent, 2013). Inventors: **A. Lauto**, P. Boughton, L. Boughton.

5. An attachment means for attaching a silastic material to tissue, a method of attaching a silastic material to tissue and an implant device having the attachment means (AU Patent #2012900562, Provisional patent, 2012). Inventors: **A. Lauto**, P. Boughton, L. Boughton.

6. Joining tissue; obtain tissue, adjust and abut tissue edges, apply biodegradable solder, expose solder to laser, monitor tissue for tearing (US Patent # 6,583,117, 2003). Inventors: E.R. Owen, R.I. Tricket, **A. Lauto**, J.M. Dawes, J.A. Piper. This patent was sold to AVASTRA in 2003.

7. Fluid protein solder composition for joining living cells, veins, arteries, vessels, tubes, nerves, organ aggregations, biocompatible surfaces (US patent 6,211,335, 2001). Inventors: E.R. Owen, R.I. Trickett, **A. Lauto**, J.M. Dawes, J.A. Piper. This patent was sold to AVASTRA in 2003.

8. Composition for tissue welding and method of use (U.S. Patent # 6,323,037, 2001). Inventors: **A. Lauto**, D.P. Poppas.

SERVICE - PROFESSIONAL

Laser Safety Consultant and Witness Expert, 2004-current
NewSouth Innovation, UNSW

Reviewer for Several Scientific Journals including:

- Advanced Functional Materials

- Advanced Materials
- Nature Communications
- Journal of Biophotonics
- Tissue Engineering
- Acta Biomaterialia
- Laser in Surgery and Medicine

Reviewer for Research Proposals

- Grant Reviewer for the New Zealand Government (2013-current)
- NHMRC and ARC Grant Reviewer (2010-current)
- Grant Reviewer for the Swiss National Science Foundation (2005-current)

Professional Affiliations

- Member of the scientific and organizing committee for the international congress in laser medicine "Laser Florence" (ISLSM, ISLSM).
- Fellow of the American Society Laser Medicine and Surgery (ASLMS).
- Fellow of the International Academy Laser Medicine and Surgery (IALMS).

Book Chapters

* I am the senior investigator and correspondent author in half of the publications

I have underlined the 5 most significant publications in recent years

1. A. Lauto*, H. Ruprai, J. Hook. Adhesives: Tissue Repair and Reconstruction. Encyclopedia of Biomedical Polymers and Polymeric Biomaterials, Taylor and Francis Group, 2017, 1-18 (ISBN: 978-1-4398-9855-0).

2. D. Mawad, A. Lauto, G.G. Wallace. Conductive Polymer Hydrogels. Polymeric Hydrogels as Smart Biomaterials, Springer International Publishing. 2016, 19-44 (ISBN 978-3-319-25322-0).

Journal Publications

1. Modi Gu, Lorenzo Travaglini, Jonathan Hopkins, Daniel Ta, Antonio Lauto, Pawel Wagner, Klaudia Wagner, Erica Zeglio, Lilli Jephcott, David L Officer, Damia Mawad. Molecular design of an electropolymerized copolymer with carboxylic and sulfonic acid functionalities. Synthetic Metals. 2022; 285, 10.1016/j.synthmet.2022.117029. (IF= 4.0)
2. Alina Bekmukhametova, Mir Muhammad Nasir Uddin, Jessica Houang, Chandra Malladi, Laurel George, Richard Wuhrer, Shital K Barman, Ming J Wu, Damia Mawad, Antonio Lauto. Fabrication and characterization of chitosan nanoparticles using the coffee-ring effect for photodynamic therapy. Lasers Surg Med. 2022; 1–9. https://doi.org/10.1002/lsm.23530. (IF= 4.025)
3. Anu Antony , Jens Coorssen, Neville Ng, Antonio Lauto, Simon Myers. Calcium mediated calpain activation and microtubule dissociation in cell model of Hereditary Sensory Neuropathy Type-1 expressing V144D SPTLC1 mutation. DNA and Cell Biology 41 (2), 225-234, 2022. (IF= 3.311).
4. Jonathan Hopkins, Kristina Fidanovski, Lorenzo Travaglini, Daniel Ta, James M. Hook, Pawel

Wagner, Klaudia K. Wagner, Antonio Lauto, Claudio Cazorla, David L. Officer, Damia Mawad. Design of a phosphonated PEDOT derivative with low oxidation potential for energy-efficient bioelectronic devices. Chemistry of Materials, 34, 1, 140–151, 2021. (IF= 9.811)

5. Yihan Yan, Lorenzo Travaglini, Kieran Lau, Jelena Rnjak-Kovacina, Daniel Ta, Minoo Eslami, Shaohua Yang, Antonio Lauto, David L Officer, Damia Mawad. Impact of Sterilization on a Conjugated Polymer-Based Bioelectronic Patch. ACS Applied Polymer Materials 3 (5), 2541-2552, 2021. (IF= 4.089)
6. Houang, J., Halliday, C., Chen, S., Ho, C.-H., Bekmukhametova, A., Lauto, A. Effective photodynamic treatment of Trichophyton species with Rose Bengal. 2021, 14 (1), e202000340, Journal of Biophotonics. (IF= 3.207)
7. Ruprai H, Shanu A, Mawad D, Hook JM, Kilian K, George L, Wuhrer R, Houang J, Myers S and Lauto A*. Porous chitosan adhesives with L-DOPA for enhanced photochemical tissue bonding. Acta Biomaterialia. 2020, 101:314-326. doi: 10.1016/j.actbio.2019.10.046. (IF= 8.947)
8. Bekmukhametova, A., Ruprai, H., Hook, J.M., Mawad, D., Houang, J., Lauto, A. Photodynamic therapy with nanoparticles to combat microbial infection and resistance. 2020, Nanoscale, 12 (41), 21034-21059. (IF= 7.790)
9. Eslami, M., Zeglio, E., Alosaimi, G., Yan, Y., Ruprai, H., Macmillan, A., Seidel, J., Lauto, A., Joukhdar, H., Rnjak-Kovacina, J., Mawad, D. A One Step Procedure Toward Conductive Suspensions of Liposome-Polyaniline Complexes. 2020, Macromolecular Bioscience, 20 (11). (IF= 4.979)
10. Travaglini, L., Micolich, A.P., Cazorla, C., Zeglio, E., Lauto, A., Mawad, D. Single-Material OECT-Based Flexible Complementary Circuits Featuring Polyaniline in Both Conducting Channels. 2020, Advanced Functional Materials, 2007205. https://doi.org/10.1002/adfm.202007205. (IF= 18.808)
11. Jephcott L, Eslami M,Travaglini L, Lauto A, Mawad D. A conjugatedpolymer-liposome complex: A contiguous water-stable, electronic, and optical interface. VIEW. 2020;20200081. https://doi.org/10.1002/VIW.20200081.
12. Hopkins J, Fidanovski K, Lauto A, Mawad D. All-Organic Semiconductors for Electrochemical Biosensors: An Overview of Recent Progress in Material Design. Front Bioeng Biotechnol. 2019, 25;7:237. doi: 10.3389/fbioe.2019.00237. (IF=5.48)
13. Ruprai H, Romanazzo S, Ireland J, Kilian K, Mawad D, George L, Wuhrer R, Houang J, Ta D, Myers S and Lauto A*. Porous Chitosan Films Support Stem Cells and Facilitate Sutureless Tissue Repair. ACS Appl Mater Interfaces. 2019, 11(36):32613-32622. doi: 10.1021/acsami.9b09123. (IF= 9.229)
14. A. Sliow, Z. Ma, G.G. Gargiulo, D. Mahns, D. Mawad, P. Breen, M. Stoodley, J. Houang, R. Kuchel, G. Tettamanzi, R. D. Tilley, S. J. Frost, J. Morley, L. Longo and A. Lauto*. Stimulation and Repair of Peripheral Nerves Using Bioadhesive Graft-Antenna. Adv Sci. 2019, 3;6(11):1801212. (IF= 16.806)
15. J. Houang, G. Perrone, C. Pedrinazzi, L. Longo, D. Mawad, P. C. Boughton, A. J. Ruys and A. Lauto*. Genetic Tolerance to Rose Bengal Photodynamic Therapy and Antifungal Clinical Application for Onychomycosis. Advanced Therapeutics. https://doi.org/10.1002/adtp.201800105, 2018.
16. A-P Hoang, H Ruprai, K Fidanovski, M Eslami, A Lauto, J Daniels, D Mawad. Porous and sutureless bioelectronic patch with retained electronic properties under cyclic stretching. Applied

Materials Today. 2019, 15, 315-322. https://doi.org/10.1016/j.apmt.2019.02.013. (IF= 10.041)

17. J Hopkins, L Travaglini, A Lauto, T Cramer, B Fraboni, J Seidel, D Mawad. Photoactive Organic Substrates for Cell Stimulation: Progress and Perspectives. Advanced Materials Technologies. 2019, 4(5), 1800744. https://doi.org/10.1002/admt.201800744. (IF= 7.848)
18. C Cui, N Faraji, A Lauto, L Travaglini, J Tonkin, D Mahns, E Humphrey, C Terracciano, JJ Gooding, J Seidel, D Mawad . A flexible polyaniline-based bioelectronic patch. Biomater Sci. 2018, doi: 10.1039/c7bm00880e. (IF= 6.843).
19. Frost SJ, Mawad D, Wuhrer R, Myers S and Lauto A*. Semitransparent bandages based on chitosan and extracellular matrix for photochemical tissue bonding. Biomed Eng Online. 2018, 17(1):7. (IF= 2.819)
20. J Houang, G Perrone, D Mawad, P Boughton, A Ruys and A Lauto*. Light treatments of nail fungal infections. Journal of Biophotonics. 2017, doi: 10.1002/jbio.201700350. (IF= 3.207)
21. L Jiang, C Gentile, A Lauto, C Cui, Y Song, T Romeo, S Silva, O Tang, P Sharma, G Figtree, J Gooding, D Mawad. Versatile fabrication approach of conductive hydrogels via copolymerization with vinyl monomers. 2017, ACS Applied Materials & Interfaces, vol 9, no 50, pp 44124-44133. (IF= 9.229).
22. D. Mawad, C. Mansfield, A. Lauto, F. Perbellini, G. Nelson, J. Tonkin, S. Bello, D. Carrad, A. Micolich, M. Mahat, J. Simonotto, D. Payne, A. Lyon, J. Gooding, S. Harding, C. Terracciano, M.M. Stevens. A conducting polymer with enhanced electronic stability applied on cardiac models. Science Advances. 2016, 2 (11), e1601007. (I.F.= 14.136)
23. D. Mawad, A. Artzy-Schnirman, J. Tonkin, J. Ramos, S. Inal, M.M. Mahat, N. Darwish, L. Zwi-Dantsis, G.G. Malliaras, J.J. Gooding, A. Lauto, M.M. Stevens. Electroconductive hydrogel based on functional poly(ethylene dioxythiophene). Chemistry of Materials. 2016, 28 (17), 6080-6088. (IF= 9.811)
24. S.J. Frost, D. Mawad, M.J. Higgins, H. Ruprai, R. Kuchel, R. Tilley, S. Myers, J.M. Hook and A. Lauto*. Gecko–inspired chitosan adhesive for tissue repair. NPG Asia Materials. 2016, 8, e280. (IF= 10.481)
25. M. Ark, P. Boughton, A. Lauto, G.T. Tran, Y. Chen, P.H. Cosman, C.R. Dunstan. Characterisation of a novel light activated adhesive scaffold: Potential for device attachment. Journal of the Mechanical Behavior of Biomedical Materials. 2016, 62, 433-45. (IF= 3.902)
26. S.E. Stimpson, A. Lauto, J.R. Coorssen, S.J. Myers. Isolation and identification of ER associated proteins with unique expression changes specific to the V144D SPTLC1 mutations in HSN-I. Biochemistry & Analytical Biochemistry. 2016, 5, 248.
27. H. Nguyen, A. Lauto, A. Shanu, S.J. Myers. Chloride intracellular channel protein 1 and its role in neurodegenerative disorders and cancerous tumors. Biochemistry & Analytical Biochemistry 2016, 5, 249.
28. S.J. Frost, D. Mawad, J. Hook and A. Lauto*. Micro-and nanostructured biomaterials for sutureless tissue repair. Advanced Healthcare Materials. 2016, 5, 401-414. (IF= 9.933)
29. S. Shaikh, P. Shortland, A. Lauto, M. Barton, J.M. Morley, D.A. Mahns. Sensory perturbations using suture and sutureless repair of transected median nerve in rats. Somatosensory & Motor Research. 2016, 1-9. (IF= 1.111)
30. D. Mawad, C. Warren, M. Barton, D. Mahns, J. Morley, B. T. Pham, N. T. Pham, S. Kueh and A Lauto*. Lysozyme depolymerization of photo-activated chitosan

adhesive films. Carbohydrate Polymers. 2015, 5, 21, 56-63. (IF= 9.381)

31. M.J. Barton, J. W. Morley, M. A. Stoodley, S. Shaikh, D. A. Mahns and A. Lauto*. Long term recovery of median nerve repair using laser-activated chitosan adhesive films. Journal of Biophotonics. 2015, 8, 196-207. (IF= 3.207), journal cover.
32. M.J. Barton, D.A. Mahns, A. Lauto*, J.W. Morley. Toward a sutureless nerve repair: review. Neurosurgical Review. 2014, 37(4), 585-95. (IF= 3.042)
33. M.J. Barton, J.W. Morley, D.A. Mahns, D. Mawad, R. Wuhrer, D. Fania and A. Lauto*. Tissue repair strength using chitosan adhesives with different physical-chemical characteristics. Journal of Biophotonics. 2014, 7, 948-955. (IF= 3.207)
34. L. Cronin, M. Moffitt, D. Mawad, O.C. Morton, A. Lauto*, C. Stack. An in vitro study of the photodynamic effect of rose bengal on Trichophyton rubrum. Journal of Biophotonics. 2014, 7(6), 410-7. Lauto and Stack had equal contribution in this paper. (IF= 3.207)
35. L.J. Cronin, R.P. Mildren, M. Moffitt, A. Lauto, C.O. Morton, C.M. Stack. An investigation into the inhibitory effect of ultraviolet radiation on Trichophyton rubrum. Lasers in Medical Sciences. 2014, 29(1), 157-63. (IF= 3.161)
36. M. Barton, J.W. Morley, M.A. Stoodley, K.S. Ng, S.C. Piller, H. Duong, D. Mawad, D.A. Mahns, and A. Lauto*. Laser-activated adhesive films for sutureless median nerve anastomosis. Journal of Biophotonics. 2013, 6(11-12), 938-49. (IF= 3.207)
37. C.H. Menzies, A. Lauto, L. Mirto, B.V. Gogh, A. Ruys, P. Boughton. A nested-lumen nerve graft design for neuroengineering. Journal of Biomimetics Biomaterials and Tissue Engineering. 2013, 18 (105), 2.
38. M. Mnatsakanyan, J.J. Thevarajah, R.S. Roi, A. Lauto, M. Gaborieau, P. Castignolles. Separation of chitosan by degree of acetylation using simple free solution capillary electrophoresis. Analytical and Bioanalytical Chemistry. 2013, 1-5, 2013. (IF= 4.142)
39. A. Lauto*, M. Stoodley, M. Barton, J.W. Morley, D.A. Mahns, L. Longo, D. Mawad. Fabrication and application of rose bengal-chitosan films in laser tissue repair. Journal of Visualized Experiments. 2012, 68. (IF= 1.4)
40. M. Barton, S.C. Piller, D.A. Mahns, J.W. Morley, D. Mawad, L. Longo and A. Lauto*. In vitro cell compatibility study of rose bengal-chitosan adhesives. Lasers in Surgery and Medicine. 2012, 44 (9), 762-768. (IF= 4.025)
41. D. Mawad, E.A. Boughton, P. Boughton and A. Lauto*. Advances in hydrogels applied to degenerative diseases. Current Pharmaceutical Design. 2012, 18(18), 2558-2575. (IF=3.116)
42. A. Lauto*, D. Mawad, M. Barton, A. Gupta, S.C. Piller, J. Hook. Photochemical tissue bonding with chitosan adhesive films. BioMedical Engineering Online. 2010, 9, art. no. 47. (IF= 2.819)
43. D. Mawad, A. Lauto, A. Penciu, H. Méhier, B. Fenet, H. Fessi, Y. Chevalier. Synthesis and characterization of novel radiopaque poly(allyl amine) nanoparticles. Nanotechnology. 2010, 21(33), 335603. (IF= 3.874.)
44. A. Lauto*. Integration of extracellular matrix with chitosan adhesive film for sutureless tissue fixation. Lasers in Surgery and Medicine. 2009, 41(5), 366-371. (IF= 4.025)
45. H. Marçal, N.S. Wanandy, V. Sanguanchaipaiwong, C.E. Woolnough, A. Lauto, S. M. Mahler, L.J.R. Foster. BioPEGylation of polyhydroxyalkanoates: Influence on properties and satellite-stem cell cycle. Biomacromolecules. 2008, 9(10), 2719-2726. (IF= 6.988)

46. D. Mawad, L.J.R. Foster and A. Lauto*. Drug-delivery study and estimation of polymer-solvent interaction parameter for bisacrylate ester-modified pluronic hydrogels. International Journal of Pharmaceutics. 2008, 360 (1-2), 231-235. (IF= 5.875)
47. A. Lauto*, L.J. Foster, A. Avolio, D. Sampson, C. Raston, M. Sarris, G. McKenzie, M. Stoodley. Sutureless nerve repair with laser-activated chitosan adhesive: A pilot in vivo study. Photomedicine and Laser Surgery. 2008, 26(3), 227-234. (IF= 2.305)
48. A. Lauto*, D. Mawad, L.J.R. Foster.Adhesive biomaterials for tissue reconstruction. Journal of Chemical Technology and Biotechnology. 2008, 83 (4), 464-472. (IF= 3.174)
49. I.M. Fabbri, A. Lauto, A. Lucianetti. A spiral index profile for high power optical fibers.

    Journal of Optics A: Pure and Applied Optics. 2007, 9(11), 963-971. (IF= 2.516)
50. A. Lauto*, M. Stoodley, H. Marcel, A. Avolio, M. Sarris, G. McKenzie, D.D. Sampson, L.J.R. Foster. In vitro and in vivo tissue repair with laser-activated chitosan adhesive. Lasers in Surgery and Medicine. 2007, 39 (1), 19-27. (IF= 4.025)
51. A. Lauto*, J. Hook, M. Doran, F. Camacho, L.A. Poole-Warren, A. Avolio, L.J.R. Foster. Chitosan adhesive for laser tissue repair: In vitro characterization. Lasers in Surgery and Medicine. 2005, 36(3), 193-201. (IF= 4.025)
52. 2A. Lauto*, L.J.R. Foster, L. Ferris, A. Avolio, N. Zwaneveld, L.A. Poole-Warren. Albumin-genipin solder for laser tissue repair. Lasers in Surgery and Medicine. 2004, 35 (2), 40-145. (IF= 4.025)
53. 2S.D. Jackson, A . Lauto*. Diode-pumped fiber lasers: A new clinical tool? Lasers in Surgery and Medicine. 2002, 30 (3), 184-190. (IF= 4.025)
54. A. Lauto*, M. Ohebshalom, M. Esposito, J. Mingin, P.S. Li, D. Felsen, M. Goldstein, D. P. Poppas. Self-expandable chitosan stent: design and preparation. Biomaterials. 2001, 22(13), 1869-1874. (IF= 12.479)
55. A. Lauto*, R. Stewart, M. Ohebshalom, N.D. Nikkoi, D. Felsen, D.P. Poppas. Impact of solubility on laser tissue-welding with albumin solid solders. (2001) Lasers in Surgery and Medicine. 2001, 28(1), 44-49. (IF= 4.025)
56. A. Lauto*, A.H. Hamawy, A.B.M. Phillips, P.B. Petratos, J. Raman, D. Felsen, W. Ko, D.P. Poppas. Carotid artery anastomosis with albumin solder and near infrared lasers: A comparative study. Lasers in Surgery and Medicine. 2001, 28(1), 50-55. (IF= 4.025)
57. D. Ballon, J. Dyke, L.H. Schwartz, E. Lis, E. Schneider, A. Lauto, A. A. Jakubowski. Bone marrow segmentation in leukemia using diffusion and T2 weighted echo planar magnetic resonance imaging. NMR in Biomedicine. 2000, 13(6), 321-328. (IF= 4.044)
58. C.B. Bleustein, B. Cuomo, G.C. Mingin, M. Ohebshalom, A. Lauto, S.J. Shin, R.B. Stewart, D. Felsen, R.A. Soslow, M. Sennett, D.P. Poppas. Laser-assisted demucosalized gastrocystoplasty with autoaugmentation in a canine model. Urology. 2000, 55(3), 437-442. (IF= 2.649)
59. B.E. Cuomo, A. Lauto, I. Kirman, D. Felsen, D.P. Poppas. Assessment of the degradation of denatured albumin solder by human urine. Journal of Urology. 2000, 163(2), 634-637. (IF= 7.45)
60. I. Kirman, A. Lauto, A. Phillips, A. Hamawy, E. Heldman, B. Cuomo, S.J. Shin, R. Soslow, D. Felsen, D.P. Poppas. Effect of laser welding with human serum albumin on the expression of p-selectin on platelets. Lasers in Surgery and Medicine. 1999, 25(5), 438-444. (IF= 4.025)
61. K.M. McNally, J.M. Dawes, A.E. Parker, A. Lauto, J.A. Piper, E.R. Owen. Laser- activated

solid protein solder for nerve repair: In vitro studies of tensile strength and solder/tissue temperature. Lasers in Medical Science. 1999, 14(3), 228-237. (IF= 3.161)

62. A. Lauto*, I. Kerman, M. Ohebshalon, D. Felsen, D.P. Poppas. Two-layer film as a laser soldering biomaterial. Lasers in Surgery and Medicine. 1999, 25(3), 250-256. (IF= 4.025)
63. N.J. Curtis, A. Lauto, R. Trickett, E. Owen, D.M. Walker. Preliminary study of microsurgical repairs of the inferior alveolar nerve in rats using primary suturing and laser weld techniques. International Journal of Oral and Maxillofacial Surgery. 1998, 27(6), 476-481. (IF= 2.789)
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