DARRELL L. TANELIAN, M.D., Ph.D.

SUMMARY OF QUALIFICATIONS

30 years of professional experience in clinical and basic scientific research, clinical medicine, biomedical engineering, professional program and financial management, meeting organization, public speaking, faculty and employee recruitment, fund raising, and consulting. Independent design and implementation of successful program development, basic and clinical research studies, publications, and NIH grant fund awards. Personal involvement in IND enabling-activities and writing, Phase I/II clinical trial design, and intellectual property creation and patent document writing. Investment and business development experience in privately owned, middle market companies. Consulting in the areas of health, biomedical, pharmaceutical, and engineering technologies.

2005 – Present **HealthConnexin, Inc.** **Stowe, Vermont**
Founder and President -*Research, Development and Health Affairs*
Chief Science, Nutrition and Medical Molecule

HealthConnexin is a health services, wellness, and fitness company which empowers consumers regarding their healthcare and provides services and products for consumers as well as healthcare providers directed at education, monitoring, restoration of health and prevention of disease.

Primary Responsibilities:
- Establishing the business, health and medical vision for the company.
- Directing, managing, and coordinating the company's medical and scientific efforts.
- Creating proprietary and nonproprietary products and patents.
- Developing budgets and timelines for project and product development.
- Strategic planning

Accomplishments:
- Developed and started the HealthConnexin concept and platform of products and services.
- Wrote *The Connexin Connection* and *Molecular Fitness,* books unifying disease and associating the major diseases of modern man to a single common cellular molecule – the connexin – and developing a unified solution to our Nation's health problems and the healthcare crisis.

1997 – Present **Lynch Investment Company** **Dallas, Texas**
Business Development and Investment

Evaluation of investment opportunities in privately owned, middle market companies. Most recently involved in the evaluation and acquisition of Cerilliant Corporation, a chemical standards, reference materials, and custom chemical synthesis company and serve on its Board of Directors.

1997 – 2005 **Pain Diagnostics and Treatment Center** **Dallas, Texas**
Medical Director and Physician

1999 – 2001 **Stanford University Medical Center** **Stanford, California**
Clinical Assistant Professor, Anesthesia

March -December 1999 **Omeros Medical Systems, Inc.** **Seattle, Washington**
Vice President, Scientific Affairs

Omeros Medical Systems is a start-up biotechnology company focusing on the areas of inflammation, pain, smooth muscle spasm, chondroprotection, and tendon repair.

Primary Responsibilities:
- Setting the research vision for the company.
- Establishing, directing, managing, and coordinating the company's research efforts.
- Setting research policies and procedures for the company.
- Developing budgets, time-lines, and monitoring research activity expenditures.

Additional Responsibilities:
- Assisting in preparation of the pre-clinical and clinical sections of IND submission and Phase I/II clinical study design.

Accomplishments:
- Developed and started the pre-clinical program for the Omeros Urologic Irrigation Solution.
- Created intellectual property and wrote body of the patent: *Methods for Inhibition of Tumor Cell Adhesion Pain and Inflammation; 6,492,332 and 6,413,961.*
- Involved in the creation and successful filing of an IND to evaluate the Omeros-103 arthroscopic irrigation solution.
- Formulated and conducted focus groups for designing the Omeros Urologic Irrigation Solution and a potential gene delivery program.

1992 – 1997 **UT Southwestern Medical Center** **Dallas, Texas**
Jane and Bill Browning, Jr. Chair in Medical Science
Founding Director: The Eugene McDermott Center for Pain Management
Founding Director: Pain Research Program

Co-Founding Director: UTSW Pain Treatment Center at Doctors Hospital
Associate Professor (tenured) Dept. of Anesthesiology and Pain Mgt.
Associate Professor (secondary) Department of Neurology
Faculty of the Biomedical Engineering Graduate Program

Primary Responsibilities:

- Develop, direct, and manage the Eugene McDermott Center for Pain Management
    1. Designed a new 15,000 sq. ft. clinical facility in the Aston Outpatient Clinical Building for the Center in conjunction with architects and designers.
    2. Recruited and trained clinical faculty (4 M.D., 1Ph.D., 2 M.S.), 13 fellows, 4 nurses, and administrative staff for the Center.
    3. Developed Center financial projections, billing guidelines, and managed 1 million dollar annual budget.
    4. Developed of Center policies and procedures, and QA guidelines.
    5. Developed and ran an ACME accredited Pain Fellowship Program.
    6. Clinical teaching of Pain Fellows and Anesthesiology Residents.
    7. Provide clinical patient care.
    8. Designed and conducted clinical research.
    9. Designed and developed marketing materials and programs.
    10. Evaluate faculty, fellow, and staff.

- Develop, direct, and manage the Pain Neuroscience Basic Research Center
    1. Designed laboratory space and offices for a new 10,000 sq. ft. basic science facility.
    2. Recruited 4 Ph.D. faculty (neurophysiology, pharmacology, biophysics, molecular biology) and post-doctoral fellows, technicians, and administrative staff.
    3. Developed and managed 1.2 million dollar annual Center research budget and financial projections.
    4. Organized integrated basic science research program consisting of 5 Ph.D. faculty, 15 post-doctoral fellows, graduate and medical students, visiting faculty and technicians.
    5. Obtained NIH, private foundation, and private donor funding.
    6. Evaluated and promoted faculty and staff.
    7. Developed biomedical engineering laboratory and trained 3 graduate students.

- Develop, direct, and manage the Zale Lipsy University Hospital Inpatient and Post-operative Pain Program
    1. Developed and implemented inpatient post-operative pain guidelines, and policies and procedures for the hospital physicians and nursing.
    2. Patient care for post-surgical pain, cancer pain, and chronic intractable pain conditions.

Accomplishments:

- Created the Eugene McDermott Center for Pain Management and Pain Fellowship Program
- Created the Pain Neuroscience Basic Research Center with 7 NIH-RO1 grants and 7 other reviewed grant funding totaling approximately 4 million dollars and producing an average of 35 peer-reviewed publications per year.

- Created the Zale Lipshy University Hospital Inpatient and Post-operative Pain Program
- Created the Pain Management CME Accredited Lecture Series
- Involved in fund raising 3 million in private foundation and individual funds.
- Trained 13 pain fellows who have gone on to successful careers.

1988 – 1992 **Stanford University School of Medicine** **Stanford, California**
Assistant Professor, Anesthesia
Founding Director of Pain Research Program, Department of Anesthesia
Assistant Professor (secondary), Neurology and Neurological Sciences
Faculty of the Neurosciences Ph.D. Program

Primary Responsibilities:
- Provide clinical anesthesia and pain management care for post-surgical pain, cancer pain, and chronic intractable pain conditions.
- Develop, direct, and manage the Pain Research Program
- Recruit and train visiting faculty, fellow, residents, and medical students.
- Assisted in developing and running an ACME accredited Pain Fellowship Program.
- Designed and conducted clinical research.
- Obtain NIH, private foundation, and private donor funding.
- Evaluate and promote faculty and staff.

Accomplishments:
- Established a basic science research laboratory and created the Pain Research Program
- Awarded NIH Biomedical Research Support Grant - Sensory physiology of nociceptive afferents.
- Awarded Parker B. Francis Investigatorship in Anesthesiology for studying the effects of tissue injury on nociceptor physiology and pharmacology.
- Awarded American Cancer Society grant for Cancer pain: Peripheral sensory mechanisms.
- Developed of a silicon microprobe for controlled sensory nerve stimulation - Stanford OTL Grant.
- Awarded NIH 1RO1 NS28646-01, Sensory transduction in normal and injured nerves. Percentile score 1.7, Annual direct 268,919/730,809.
- Developed a laser microstimulator for controlled sensory nerve stimulation. Beckman Laser Institute and DOD's Medical Free Electron Laser Program.
- Trained 10 pain fellows and post-doctoral who have gone on to successful academic and private careers.

POSTGRADUATE MEDICAL EDUCATION

July, 1987 - December, 1987 **Fellow in Pain Management**
Stanford Pain Management Service
Preceptor: Dr. Michael J. Cousins
Stanford University Medical Center

January, 1986 - June, 1987 **Resident in Anesthesia**
January, 1988 - June, 1988 Department of Anesthesia

	Stanford University Medical Center
July, 1984 - June, 1985	**Intern** (Rotating) Department of Anesthesia Stanford University Medical Center Santa Clara Valley Medical Center
BOARD CERTIFICATION:	National Board of Medical Examiners, 1985 American Board of Anesthesiology, 1990 Pain Management, American Board of Anesthesiology, 1994
MEDICAL LICENSURE:	State of California (G-55648), 1985 State of Texas (J3243), 1992

POST AND UNDERGRADUATE EDUCATION

June, 1975 - September, 1975	**Marquette University**, Chemistry
September, 1975 - June, 1979	**Stanford University**, Neurobiology ***B.S.*** *1979 with Scholastic Distinction and Academic Honors* *Completed requirements for* ***M.S.*** *in Marine Biology*
June, 1978 - September, 1978	**Woods Hole Marine Biological Institute** Neural Systems and Behavior Harvard University
September, 1979 - June, 1983	**Stanford University**, Neuroscience ***Ph.D****., 1983*
September, 1979 - June, 1984	**Stanford University**, School of Medicine ***M.D****., 1984*
July, 1987 - September, 1987	**Hopkins Marine Institute**, Ion Channels in Natural and Model Membranes: Patch Clamp Techniques
August, 1997 – May, 1999	**Southern Methodist University** (SMU) ***M.B.A.,*** *1999*

MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC ASSOCIATIONS

International Association for the Study of Pain (IASP)
Association of University Anesthesiologists (AUA)
American Society of Anesthesiologists (ASA)
Texas Society of Anesthesiologists (TSA)

INVITED LECTURES AND SYMPOSIUM PRESENTATIONS

These lectures were presented by myself and were on both topics related to clinical pain management and research, and basic scientific research conducted in my laboratory.

International: 18
National: 87
Local: 105

Involved in the organization of 15 conference symposia, including national and international symposia at conferences such as the PGA in New York, ASA, IASP, Society for Neuroscience.

EDITORIAL BOARD AND JOURNAL REVIEW

Associate Editor – **ANESTHESIOLOGY** 1995 - 2000
Reviewer for:

- Journal of Neuroscience
- Journal of Neurophysiology
- Anesthesiology
- Anesthesia and Analgesia
- Pain
- Clinical Journal of Pain
- Investigative Ophthalmology
- Cornea

GRANTING AGENCY REVIEW

National Institutes of Health (NIH)
National Eye Institute (NEI)
Medical Research Council - Canada (MRC)
Veterans Administration

COMMITTEE APPOINTMENTS HELD AND EXPERIENCE

1. American Pain Society, Quality of Care Committee, 1994 - 1997
2. American Society of Anesthesiologists, 1995 - 1999

- Chairman: Experimental Neurosciences and Biochemistry Committee 1995
- Committee on Scientific Papers 1995 – currently

3. Texas State Board of Medical Examiners, 1994 -1995
   Committee to Study Pain Management
4. Clinical Research Planning Committee, UT Southwestern Medical Center, 1996
   - Committee on Core Facilities to Support Clinical Research
5. Clinical Council - UT Southwestern Medical Center, 1993 - 1997
6. Aston Faculty Advisory Committee - UT Southwestern Medical Center, 1992 - 1997
7. Continuing Education Advisory Committee - UT Southwestern Medical Center, 1994
8. Executive Committee - Department of Anesthesiology and Pain Management, 1992 - 1997
9. Governance and Administration Committee, UT Southwestern Medical Center, 1995
10. Research Committee, Department of Anesthesiology and Pain Management, 1992-1994
11. Finance Committee, Department of Anesthesiology and Pain Management, 1992-1994
12. Advisory Committee, Department of Anesthesiology and Pain Management, 1992-1994
13. American Society of Anesthesiologists, Experimental Neurosciences and Biochemistry Committee, 1990-1991, 1992-1993
14. American Society of Anesthesiologists, Clinical Neurosciences Committee, 1990-1991
15. Stanford Medical School Admissions Panel, 1990-1992
16. Stanford Hospital Operating Room Equipment Committee, 1989-1992
17. Stanford Department of Anesthesia Research Committee, 1989-1992
18. Stanford Clinical Neurosciences Steering Committee, Pain Working Group, 1989-1991

RESEARCH BACKGROUND

CLINICAL RESEARCH BACKGROUND

1. Neuropathic pain research looking at the efficacy of intravenous lidocaine infusion via a computer controlled pharmokinetic infusion pump and subsequent oral sodium channel blocker therapy (mexiletine and carbamazepine) for nerve injury and cancer pain.

2. CSF and blood pharmokinetics of hydromorphone compared to morphine following lumbar epidural administration.

3. Evaluation of dynorphin for intractable terminal cancer pain.

4. Investigation of different epidural opiate administration techniques for providing post-operative analgesia. Comparison of continuous epidural infusion, epidural PCA, and combined epidural PCA-infusion to determine the optimal technique, which produces maximal analgesia with minimal side-effects and maximal post-operative function and recovery.

5. Investigation of the ability of percutaneous electrical stimulation (PENS) to produce analgesia in chronic pain conditions such as arthritis, neck and back pain, post-herpetic neuralgia, and diabetic neuropathy. Collaboration with the Ft. Worth Center for Pain Management.

6. Research into the spinal synaptic mechanisms underlying high frequency transcutaneous nerve stimulation (TENS) and vibration induced analgesia. The proposed mechanism includes inhibition of nociception neurotransmission by cellular hyperpolarization due to adenosine and ATP. This hypothesis will be tested by the intravenous infusion of the adenosine blocker, caffeine, and oral administration of the adenosine reuptake inhibitor, dipyramidole.

BASIC SCIENCE

1. Semaphorin as a treatment of neuropathic pain and autonomic dysreflexia. Adenoviral expression of neurotrophins (NGF and Semaphorin III) in corneal epithelial cells and their effects on peripheral sensory afferent innervation pre- and post-injury. Spinal cord expression of NGF and Semaphorin in rat. I am also interested in other neurotrophic and cellular and molecular growth factors that affect the rate of epithelial wound healing and neurite regeneration.

2. Electrophysiology and pharmacology of A-delta and C fiber nociceptors.

   a. Effects of algesic, analgesic and anesthetic agents on normal, acutely injured and regenerating nerve fibers.

   b. Sensory-sympathetic interactions and modulation of peripheral nociceptive activity.

   c. Sensory transduction mechanisms in nociceptive afferents (ion channel, 2nd messenger, and G-protein).

   d. Epifluorescent visualization and correlation of nerve terminal morphology with physiology.

   e. Neurotrophic factor modulation of regenerating sensory nerve terminals (NGF, BDNF, NT3, Semaphorin III).

3. Development of an epithelial-neuronal organ culture preparation to study neuronal development and differentiation at both the cellular and molecular level. We have successfully co-cultured rat DRG neurons and a clonal corneal epithelial cell line to produce differentiated sensory receptors. For the first time this has allowed individual intra-epithelial sensory nerve terminals to be whole-cell patch clamped and dye labeled, allowing electrophysiological characterization of sensory transduction processes. In addition, effects of neuronal growth factors will be studied on neurite outgrowth, functional and anatomic neuronal differentiation, and neuro-neuronal interaction.

4. Adenovirus beta-endorphin gene transfection of the rat CNS to upregulate this endogenous opiate and produce analgesia. Collaboration with George M. Smith, Ph.D. at UT Southwestern. The clinical potential of this project is that it could lead to improved long-term analgesia for chronic and cancer pain patients.

5. Development and utilization of thermodynamic modeling to predict the effects of laser produced radiant energy on thermal nociceptors. These results along with the development of a “fuzzy logic” thermal controller will be used to develop a thermal stimulus for sensory transduction studies and also for development of nociceptive evoked potentials in humans.

6. Design and development of a silicon microprobe for sensory nerve stimulation using integrated circuit technology. This work was done in collaboration with Gregory Kovacs of the Electrical Engineering Department at Stanford University.

7. Biophysical modeling of the mechanisms and functional consequences of nerve fiber transformation as they relate to action potential filtering and pain. Investigation of bioelectromagnetic fields induced by spinal cord stimulation and their interaction with spinal cord neurons. These studies will elucidate the mechanisms underlying electrical analgesia.

BIBLIOGRAPHY: REFEREED JOURNAL ARTICLES

Basic Scientific Research Articles:

1. Beuerman RW and **Tanelian DL** (1979) Corneal pain evoked by thermal stimulation. Pain 7:1-14.

2. **Tanelian DL** and Beuerman RW (1980) Recovery of corneal sensation following contact lens wear and the implication for adaptation. Invest Ophthal Vis Sci 19:1391-1394.

3. **Tanelian DL** and Beuerman RW (1984) Responses of rabbit corneal nociceptors to mechanical and thermal stimulation. Exp Neurol 84:165-178.

4. **Tanelian DL** and MacIver MB (1990) Simultaneous visualization and electrophysiologic recording of corneal A-delta and C fiber afferents. J Neurosci Meth 32:213-222.

5. MacIver MB and **Tanelian DL** (1990) Volatile anesthetics excite mammalian nociceptor afferents recorded in vitro. Anesthesiology 72:1022-1030.

6. Jarvis D, MacIver MB, and **Tanelian DL** (1990) Electrophysiologic recording and thermodynamic modeling demonstrate that helium-neon laser irradiation does not affect peripheral A-delta and C fiber nociceptors. Pain 34:235-242.

7. Mody I, **Tanelian DL**, and MacIver MB (1991) Halothane enhances tonic neuronal inhibition by elevating intracellular calcium. Brain Res 538:319-323.

8. **Tanelian DL** and MacIver MB (1991) Analgesic concentrations of lidocaine suppress tonic A-delta and C fiber discharges produced by acute injury. Anesthesiology 74:934-936.

9. **Tanelian DL** (1991) Cholinergic activation of a population of corneal afferent nerves. Exp Brain Res 86:414-420.

10. **Tanelian DL** and MacIver MB (1991) Differential excitatory and depressant anesthetic effects on mammalian A-delta and C fiber sensory afferents. Ann NY Acad Sci 625: 273-276.

11. MacIver MB, **Tanelian DL** and Mody I (1991) Two mechanisms for anesthetic-induced enhancement of $GABA_A$-mediated neuronal inhibition. Ann NY Acad Sci 625: 91-96.

12. MacIver MB and **Tanelian DL** (1992) Activation of C fibers by metabolic perturbations associated with ischemia. Anesthesiology 76:617-623.

13. Bisla KK and **Tanelian DL** (1992) Concentration dependent effects of lidocaine on corneal epithelial wound healing. Invest Ophth Vis Sci 33:3029-3028.

14. MacIver MB and **Tanelian DL** (1993) Free nerve ending terminal morphology is fiber type specific for A-delta and C fibers innervating rabbit corneal epithelium. J Neurophysiol 69:1779-1783.

15. MacIver MB and **Tanelian DL** (1993) Structural and functional specialization of A-delta and C fiber free endings innervating rabbit corneal epithelium. J Neuroscience 13:4511-4524.

16. **Tanelian DL**, Kosek, P, MacIver MB and Mody I (1993) The role of the $GABA_A$ receptor/chloride complex in anesthesia. Anesthesiology 78:757-776.

17. **Tanelian DL** and Monroe S (1995) Altered thermal responsiveness during regeneration in corneal cold fibers. J Neurophysiol 73:1568-1573.

18. Mikulec A and **Tanelian DL** (1996) CGRP increases the rate of corneal re-epithelialization in an in vitro whole mount preparation. J Ocular Pharm and Therapeutics 12(4):417.

19. Volkov AG, Deamer DW, **Tanelian DL** and Markin VS (1996) Electrical double layers at the oil/water interface. Prog in Surface Science 53:1-134.

20. **Tanelian DL** and Markin VS (1997) Biophysical and functional consequences of receptor mediated nerve fiber transformation. Biophysical Journal 72:1092-1108.

21. Smith G, Berry RL, Yang J and **Tanelian DL** (1997) Electrophysiological analysis of dorsal root ganglion neurons pre and post co-expression of green fluorescent protein and functional $5\text{-}HT_3$ receptor. J Neurophysiol 77:3115-3121.

22. **Tanelian DL**, Barry, MA, Johnston SA, Le T, and Smith G (1997) Controlled gene gun delivery and expression of DNA within the cornea. Biotechniques 23:485-488.

23. **Tanelian DL**, Barry MA, Johnston SA, Le T, and Smith G (1997) In vivo repulsion and inhibition of A-delta and C fiber sensory afferents after expression of semaphorin III. Nature Medicine 3: 1398 - 1401.

24. Markin VS, **Tanelian DL**, Jersild, RA, and Och, S (1999) Biomechanics of stretch-induced beading. Biophysical Journal 76: 2852-2860.

25. Garry M, Walton L and **Tanelian DL** (2000) Capsaicin-evoked release of immunoreactive CGRP from the spinal cord is mediated by the generation of nitric oxide but not by cyclic GMP. Brain Research: 861: 208-219.

26. Garry M, Souter, A and **Tanelian DL** (2000) Spinal interleukin-1beta reduces inflammatory pain. Pain: 86:63-68.

27. Tang X, **Tanelian DL** and Smith GM (2004) Semaphorin3A inhibits nerve growth factor-induced sprouting of nociceptive afferents in adult rat spinal cord. J Neuroscience: 24:819-827.

28. **Tanelian DL** and Monroe S Thermal transduction is corneal cold receptors: involvement of a non-specific cation channel. In preparation.

29. **Tanelian** DL, Kovacs, TA, Monroe S, and Markin VS Thermal transduction in C-fiber cold receptors. In preparation.

30. **Tanelian DL**, Monroe S and Markin VS Quantitative characterization of corneal mechanoreceptors using a silicon microprobe. In preparation.

Engineering Articles:

31. Beuerman RW, Maurice DM and **Tanelian DL** (1977) Thermal stimulation of the cornea. In: Pain in the Trigeminal Region, Eds. Matthews CB and Anderson D, Elsevier-North Holland, 413-422.

32. **Tanelian, DL** and Bisla KK (1992) A new in vitro whole mount corneal preparation to study epithelial wound healing. Invest Ophth Vis Sci 33:3026-3028.

33. Maluf N, McNutt E, **Tanelian DL** and Kovacs, TA (1994) A thermal generator probe for the study of neural thermal transduction. IEEE Trans Bio Med Eng 41:649-656.

34. Jackson D, Kane BJ, Monroe S, Li J, Storment C, Kovacs G and **Tanelian DL** (1995) A feedback controlled silicon microprobe for quantitative mechanical stimulation of nerve and tissue. J Neuroscience Meth 60:157-163.

35. Kane B, Storment C, Crowder SW, **Tanelian DL** and Kovacs G (1995) Force-sensing microprobe for precise stimulation of mechanosensitive tissues. IEEE Trans Bio Med Eng 42:745-750.

36. Balachandran N, Jackson D and **Tanelian DL** (2000) A “fuzzy logic” thermal stimulation device for the study of cold sensory transduction. In preparation.

Clinical Articles:

37. **Tanelian DL** and Cousins MJ (1989) Celiac plexus block following high dose opiates for chronic non-cancer pain in a four year old child. J Pain and Symptom Management 2:82-86.

38. **Tanelian DL** and Cousins MJ (1989) Combined neurogenic and nociceptive pain in a patient with pancoast tumor managed by epidural hydromorphone and oral carbamazepine. Pain 36:85-88.

39. **Tanelian DL** and Cousins MJ (1989) Failure of epidural opioid to control cancer pain in a patient previously treated with massive doses of intravenous opioid. Pain 36:359-362.

40. Brose WG, **Tanelian DL**, Brodsky JB, Cousins MJ and Mark JB (1991) CSF and blood pharmacokinetics of hydromorphone compared to morphine following lumbar epidural administration. Pain 45:11-15.

41. **Tanelian DL** and Brose WG (1991) Neuropathic pain can be relieved by drugs that are use-dependent sodium channel blockers: lidocaine, carbamazepine and mexiletine. Anesthesiology 74:949-951.

42. **Tanelian DL** and Brunson DB (1993) Anatomy and physiology of pain with special reference to ophthalmology. Invest Opthal Vis Sci 35:759-763.

43. **Tanelian DL** and Victory R (1993) Multidisciplinary approach to the management of pain. Dallas Medical Journal 79:269-273.

44. Clifford PA and **Tanelian DL** (1993) Psychological treatments for refractory pain using the mind to maximize quality of life and enhance recovery from pain and disability. Dallas Medical Journal 79:274-276.

45. Bamberger A, Klein K and **Tanelian DL** (1994) Postoperative pain management. Texas Medicine 90:54-57.

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47. **Tanelian DL** (1996) Reflex sympathetic dystrophy: A re-evaluation of the literature. Pain Forum 5(4) 1-10.

48. Kowalski K and **Tanelian DL** (1997) Acute management of burn pain. Anesthesiology Clinics of North America. Eds. Wallace M, Dunn J and Yaksh T., Vol 15:2

49. Victory R and **Tanelian DL** (1999) Intravenous lidocaine infusion can be used to predict the clinical usefulness of sodium channel blockers for chronic pain. In preparation: Anesthesiology.

50. **Tanelian DL** and Meyer M (1999) A critical review of electrical stimulation techniques for the relief of pain. In preparation.

Letters:

51. **Tanelian DL**, Jarvis D and MacIver MB (1991) Reply to "Ignorance of photobiology: a major pitfall in using lasers in medicine" by KC Smith, Pain 47:244-245.

52. Zimmern PE and **Tanelian DL** (1996) Letter on "Urological symptomatology in patients with reflex sympathetic dystrophy" by MR Chancellor et al., J Urol 155:634-637.

53. **Tanelian DL** (1996) Further comments regarding RSD studies. Pain Forum 5(4).

Book Chapters:

54. **Tanelian DL** (1983) Neurobiology of the rabbit cornea: an inquiry into the anatomy, electrophysiology, pharmacology and neurochemistry of a pain model. Ph.D. Thesis, University Microfilms, Ann Arbor, MI.

55. Beuerman RW, Rozsa, AJ and **Tanelian DL** (1985) Neurophysiological correlates of post-traumatic acute pain. In: Proceedings of the Fourth World Congress on Pain: Advances in Pain Research and Therapy, Raven Press, 8:73-81.

56. Beuerman, RW, **Tanelian DL** and Schimmelpfennig B (1988) Nerve-tissue interactions in the cornea. In: The Cornea: Transactions of the World Congress on the Cornea III, Eds. HD Cavanaugh, Raven Press, New York, 59-62.

57. Samuels, S and **Tanelian DL** (1989) Regional anesthesia for the emergency department physician. In: Emergency Medicine, Ed. Rosen J, Aspen Publishers, 11:31-45.

58. **Tanelian DL** and Jarem B (1996) Reflex Sympathetic Dystrophy. In: The Low Back Handbook: A Practical Guide for the Primary Care Physician. Eds. Cole A and Herring S, Hanley and Belfus, Inc. Chapter 28.

59. **Tanelian DL** (1996) Lidocaine. In: Essence of Anesthesia Practice. Eds. Roisen M and Fleisher A, W.B. Sanders Company, 507.

60. **Tanelian DL** (1996) The New Local Anesthetics: Benefits, Risks, and Use. In: The 1996 ASA Refresher Course Book of Lecture Summaries.

61. **Tanelian DL** (1997) The New Local Anesthetics: Benefits, Risks, and Use. In: ASA Refresher Courses in Anesthesiology, Vol 25, Eds. Barash P, Deutsch S and Tinker J.

62. **Tanelian DL** and Garry M (1998) Afferent activity in injured afferent nerves. In: ANESTHESIA – Biologic Foundations, Eds. Yaksh T. et.al., Lippincott-Raven, 531-543.

63. Krafft K and **Tanelian DL** (1998) Sensory systems and pain. In: Basic and Applied Science for Anesthesia. Eds. Hemmings HC and Hopkins P. Mosby-Wolfe.

Books:

64. Volkov AG, Deamer DW, **Tanelian DL** and Markin VS (1998) **Liquid Interfaces in Chemistry and Biology**. 551 pages, Wiley & Sons, Inc. .

65. **Tanelian DL** (2005) **The Connexin Connection**. 226 pages, GOM MEDPRESS

66. **Tanelian DL** (2006**) Molecular Fitness**. 233 pages, Brown Books Publishing Group

Abstracts and Other Publications

67. Beuerman RW, Maurice DM and **Tanelian DL** (1977) Thermal stimulation of the cornea in humans. Society for Neuroscience Abs. Vol 3, 476.

68. Beuerman RW, Maurice DM and **Tanelian DL** (1977) Thermal stimulation in the human cornea. Invest Ophthal Vis Sci Suppl 16:3.

69. **Tanelian DL** and Beuerman RW (1977) Corneal sensation in contact lens wearers and non-wearers. Abs Western Section ARVO and Second Study Group for Human Vision.

70. Beuerman RW and **Tanelian DL** (1978) Unit responses from the isolated rat cornea. Society for Neuroscience Abs. Vol 4:1752.

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72. **Tanelian DL** and Beuerman RW (1981) Sensory specialization of free nerve endings in the rabbit cornea. Society for Neuroscience Abs, Vol 7: 272.

73. **Tanelian DL**, Beuerman RW and Young M (1982) Cholinergic pharmacology of rabbit corneal nerve. Invest Ophthal Vis Sci Suppl, 181.

74. **Tanelian DL**, Beuerman RW and Young M (1982) Stimulation of rabbit corneal nerves by acetylcholine and nicotine. Society for Neuroscience Abs, Vol 8: 858.

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76. **Tanelian DL**, Wallace B and Beuerman RW (1983) The effect of corneal denervation on the synthesis of acetylcholine could be due to decreased choline uptake. Invest Ophthal Vis Sci Suppl, Vol 24:198.

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82. MacIver MB and **Tanelian DL** (1989) Characterization of nociceptors in a new in vitro cornea preparation. Anesthesiology 71:3A, 771.

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85. **Tanelian DL** and MacIver MB (1989) Activation of peripheral nociceptors by glutamate. Society for Neuroscience Abs, Vol 15: 533.

86. Brose W, Cousins M and **Tanelian DL** (1989) Cephalad migration of hydromorphone compared to morphine following lumbar epidural administration. Proceedings of the Royal Australian College of Surgeons and Faculty of Anaesthetists, 45.

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