Rutledge Ellis-Behnke, PhD

CONTACT INFORMATION

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EDUCATION

1998-2003 Massachusetts Institute of Technology, Dept of Brain & Cognitive Sciences, Doctoral studies in Cellular and Molecular Neuroscience; Thesis: *The Four P's of Central Nervous System Regeneration: a Multi-factor Approach*, Ph.D. 2003

1995 Harvard Business School, AMP 148: Advanced Manager's Program; 3 month in-residence program for corporate executives; Certificate, 1995

1979-1984 Rutgers University (Cook College), Agricultural & Environmental Sciences (minor in Physics) B.Sci 1986

PROFESSIONAL ACADEMIC POSITIONS

Note: Left industry in 1998 to study for Ph.D. at MIT

2010-present *Director*, Nanomedicine Translational Think Tank, Dept of Ophthalmology, Medical Faculty Mannheim of the University of Heidelberg, Germany

2007-2010 *Associate Professor*, Dept of Anatomy, University of Hong Kong Faculty of Medicine

2007-2010 *Associate Director*, Technology Transfer Office, University of Hong Kong

2004-2006 *Research Officer*, Dept of Anatomy, University of Hong Kong Faculty of Medicine

2003-2006 *Research Scientist*, Dept of Brain & Cognitive Sciences, MIT

VISITING, AFFILIATE AND HONORARY FACULTY APPOINTMENTS

2012-present *Affiliate Professor*, Institute for Regenerative Medicine, Wake Forest University School of Medicine

2012-present *Affiliate Professor*, Center of Excellence for Aging & Brain Repair, University of South Florida College of Medicine

2012-present *Affiliate Professor*, School of Systems Biology, George Mason University

2010-2012 *Honorary Associate Professor*, Dept of Anatomy, University of Hong Kong Faculty of Medicine

2009-2010 *Visiting Professor*, Chonbuk National University, Jeonbuk Korea

2007-present *Research Affiliate*, Dept of Brain & Cognitive Sciences, MIT

2006-2007 *Visiting Associate Professor*, Institute for NanoBiomedical Technology and Membrane Biology, West China Hospital, Sichuan University, Chengdu, China

MANAGEMENT POSITIONS

1995-1997 *Co-Founder and CEO*, MemTel Corporation, Rochester NY

- Neural networking, RAM memory, website design, hosting and online merchandise sales (NASA, Buffalo Sabres)
- One of the first companies in the U.S. to do online commerce
- In 1996 I initiated a partnership with Metro Traffic Networks to test the direct response impact of radio sponsorships to the online sales of MemTel's RAM memory. The slogan "Memory Sales Direct. Their name is their address." was advertised in New York, San Francisco, Buffalo and Houston. Web visitors increased from hundreds per week to 450,000+ the first week. RAM memory sales increased exponentially. Metro Networks leveraged this direct response case study to be the first media organization to convince advertisers to use radio to drive consumers to purchase goods from their websites.

1993-1995 *Group VP Sales/Marketing/Strategic Planning*, Huntingdon Corp., Middleport NY (U.S. headquarters of UK company)

- Engineering; environmental consulting; materials testing; and pharmaceutical consulting and testing for FDA and European approval
- Realigned business from 18 companies in 72 offices to 4 business units.
- Re-engineered operations, sales, business development, marketing and strategic planning.

1990-1993 American NuKEM, Houston TX (U.S. subsidiary of German RWE NuKEM GmbH)

ENSR Remediation and Construction division (1991-1993)

Manager of Business Development, New York / New England territory

- Developed and wrote strategic marketing plan for the division and achieved the following goals:
  - maintained an aggressive 25% growth rate
  - created programs to keep company ahead of the market curve
  - pushed the company outside of its "comfort zone" every six months in order to enter new markets
  - developed a proactive plan for company infrastructure development
- Created a synergistic corporate network to leverage the strengths of each NuKem division in order to gain market share.

AnalytiKem Environmental Testing Labs division, Cherry Hill NJ (1990-1991)

National Accounts Manager, Environmental Testing Labs

- Built and implemented a strategy for capturing more petrochemical dollars which created an entry point for all NuKem divisions.

1986-1989 *Co-Founder and President*, R & R Inc., Princeton NJ

- Designed and built research facilities and genetic engineering labs

- Founded company based on the unmet needs of an Italian chemical company, Enochem, to design and build a genetic engineering facility for modifying the corn genome. Located in Monmouth Junction, NJ.
- Specialized in the conceptual design and construction of genetic engineering research facilities. The function of the facilities ranged from genetic engineering of agricultural crops to make them chemical-resistant, to a genetic engineering and production facility for bio-remediation organisms for waste clean-up.

1979-1986 *General Manager*, Garrison, Inc., Centerton NJ

- Managed 3500 acre farm plus fertilizer and seed distributorships
- Grew business to be the largest handler of US Steel fertilizers east of the Mississippi.
- Set up system for transportation, distribution and handling for 32,000 tons of fertilizers annually.
- Largest dealer east of the Mississippi for Pioneer and Asgrow seeds.

1982 *U.S. Representative*, International Agricultural Exchange Association, Aarhus Denmark

- Nine month technological exchange to evaluate four agricultural chemicals for their use, effects, regulation, and tolerances prior to their introduction into the U.S.

AWARDS AND HONORS

2011 Awarded European Union permanent residence visa for highly qualified scientists
2007 Nominated for the International Glaucoma Review Prize
2007 Top 10 Emerging Technology, "Nanohealing" in *Technology Review*
2007 Guangdong - Hong Kong Technology Cooperation award
2006 Nominated for the Lewis Rudin Glaucoma Prize
2006 Best poster presentation, "Nano neuro technology to repair the brain," at the 2nd Meeting of the American Academy of Nanomedicine, Washington DC
2006 2 Hong Kong Innovation Technology Commission awards
2006 Top 25 most innovative product, "Nano Neuro Knitting," *MICRO/NANO Newsletter*
2005 Deshpande Award for Technological Innovation, MIT
2005 Top 10 Nanotech Innovation, "Immediate Hemostasis," *Nanotechnology Law & Business*
2004 Deshpande Award for Technological Innovation, MIT
2003 Elected Sigma Xi
2003 D'Arbeloff Award for Computing in Teaching and Education, MIT
2003 Brain & Cognitive Sciences Departmental Service Award, MIT
2002 Walle Nauta Award for Continuing Dedication in Teaching, MIT
2001 Brain and Cognitive Sciences Award for Continuing Excellence in Teaching, MIT
2000 Best oral/poster presentation, "Four P's of CNS Regeneration," 2nd Asia Pacific Symposium on Neural Regeneration, Xi'an China
2000 Angus MacDonald Award for Excellence in Undergraduate Teaching, MIT

MEMBERSHIPS IN ACADEMIC AND SCHOLARLY SOCIETIES

2009-present International Brain Mapping & Intraoperative Surgical Planning Society
2008-present International Society for Nanomedicine (Founding Executive Board member)

2008-present	American Society for Nanomedicine
2006-present	American Chemical Society
2005-present	Association for Research in Vision and Ophthalmology
2005-2010	China Spinal Cord Injury Clinical Trial Network
2005-2008	American Academy of Nanomedicine (Founding Executive Board Member)
2004-2009	Asia-Pacific Society for Neural Repair
2003-present	Sigma Xi
1998-present	Society for Neuroscience

LEADERSHIP AND SERVICE

UNIVERSITY SERVICE

University of Hong Kong:

2008-2010	Key member of the University of Hong Kong Strategic Research Area *Frontier Technologies: Nano-Biotechnology for collaborative, interdisciplinary research*
2008-2009	Initiator and developer of the infrastructure for an Industrial Liaison Programme for the University of Hong Kong Technology Transfer Office
2007-2009	Curriculum consultant to newly-created Medical Ethics class for University of Hong Kong Faculty of Medicine
2007-2009	Curriculum consultant and professor teaching Responsible Conduct in Research class at University of Hong Kong Faculty of Medicine

Massachusetts Institute of Technology:

2001-2004	MIT Library committee for copyrighted and digital materials
2001-2004	DSpace design and implementation team member (central digital repository for research, data sets, images and theses at MIT)
2000-2002	Graduate Alumni Board
1999-2002	STELLAR design and organization committee (MIT online course delivery system)

DEPARTMENTAL SERVICE

University of Heidelberg

2010-present	Seminars in Nanomedicine

University of Hong Kong:

2009	Raised $16 million HKD ($2 million US) from government and private foundations

Massachusetts Institute of Technology:

2002	Open Course Ware committee representing Brain & Cognitive Sciences department-personally responsible for delivering 60 of the first 500 courses
2001-2008	Designed and implemented the Paperless Classroom program to reduce the use of paper by introducing TabletPCs and digital media at MIT
2001-2004	STELLAR implementation committee for conversion of all course materials for MIT. Department of Brain & Cognitive Sciences

ORGANIZED SYMPOSIA AND CHAIRED SESSIONS

2013 Session Chair - *Nanomedical Application for Diagnostic and Therapeutic Settings*, 6th European Conference for Clinical Nanomedicine (CLINAM), Basel Switzerland

2013 Session Chair - *Nanotechnology,* 4th Pan Pacific Symposium on Stem Cell Research (PPSCR), Taichung Taiwan

2012 Nanomedicine symposium co-organizer and session chair - 11th International Conference on Nanostructured Materials, Rhodes Greece

2012 Session Chair - 27th Asia Pacific Academy of Ophthalmology (APAO) Congress, Busan Korea

2011 Session Chair - 10th International Neurotrauma Symposium, Shanghai China

2011 Session Chair - *Nanotechnology,* 3rd Pan Pacific Symposium on Stem Cell Research (PPSCR), Taichung Taiwan

2011 Session Chair – *Glia in CNS Injury*, 21st ISOPE Nanomaterials for Structural Applications Symposium*,* Maui HI

2011 Session Co-chair - 26th Asia-Pacific Academy of Ophthalmology (APAO-AAO): *Neuroprotection and Regenerative Medicine*, Sydney Australia

2010 Session Co-chair - *Degenerative Diseases*, Fifth International Symposium on Healthy Aging: "Is Aging a Disease?" Hong Kong

2010 Session Chair – *Nanomedicine*, Hong Kong-Denmark Joint Seminar on Synthetic Biology and Nanomedicine, Hong Kong

2010 Session Chair – *Nanomedicine*, 7th Annual World Congress for Brain Mapping and Image Guided Therapy, University of Uniformed Armed Services, Bethesda MD

2010 Session Chair – *Nanomaterials*, 20th ISOPE Nanomaterials for Structural Applications Symposium, Beijing China

2009 Moderator – *Nanotechnology,* 2nd Pan Pacific Symposium on Stem Cell Research (PPSCR), Taichung Taiwan

2009 Symposium Organizer and Chair –*Nanomedicine*, Annual Meeting of the American Association of Anatomists, New Orleans LA

2009 Symposium Co-Chair – *Tissue Bioengineering*, 24th Congress of Asia Pacific Association for Ophthalmology, Bali Indonesia

2009 Symposium Co-Organizer – *Nanotechnology*, Chinese University of Hong Kong/ University of Hong Kong Joint Symposium at the Hong Kong Eye Hospital, Kowloon, Hong Kong

2009 Session Co-Chair – *Nanomedicine*, 6th Annual World Congress for Brain Mapping and Image Guided Therapy, Harvard Medical School, Boston MA

2009 Symposium Co-Organizer and Co-Chair - *Translational Nanomedicine in Neurological Disorders*, 1st Annual Conference of the American Society for Nanomedicine, Potomac MD

2008 Symposium Co-organizer and Co-chair – *Neurology Nanomedicine*, 4th Meeting of the American Academy of Nanomedicine, Potomac MD

2008 Developed, organized and funded Nanomedicine Half-day Workshop*: Intersection of Nanotechnology in Medicine,* held at the University of Hong Kong Faculty of Medicine

2007 Session Co-chair, 17th ISOPE Nanomaterials for Structural Applications Symposium*,* Lisbon Portugal

2007 Roundtable Organizer and Leader, Harvard Business School Alumni Health Conference: *Nanomedicine and the transfer and commercialization of intellectual property: from academia to business*, Boston MA

2006 Symposium Organizer and Chair – *Neurology Nanomedicine*, 2nd Meeting of the American Academy of Nanomedicine, Washington DC

EXTERNAL REVIEWING

Journals:

2009-present Wiley's International Review: Nanomedicine-regular reviewer
2009-present International Journal of Nanomedicine-regular reviewer
2008-present Experimental Neurology-regular reviewer
2007-present Journal of Brain Research-regular reviewer

Conference abstracts:

2008-present Nano Science and Technology Institute (NSTI) Nanotech and BioNano conferences-review abstracts
2010-2012 International Brain Mapping & Intraoperative Surgical Planning Society (IBMISPS) conference-review abstracts and conference papers
2010-present International Conference on Neuroprotective Agents (ICNA)-review abstracts and conference papers

Grants and reports:

2012 Reviewer for the Swiss National Science Foundation, National Centers of Competence in Research NCCR 2011 Program Call
2012 Reviewer for the Catalan Broadcasting Company (Spain) Marathon Foundation for Biomedical Research Program for Organ Regeneration and Stem Cells
2010 Expert reviewer/validator on the 2010 report "*Nanotechnology and Drug Delivery*" for the European Union ObservatoryNANO Project's publication on Scientific and Technological Trends in Health, Medicine and Nanobio.
2010 Expert reviewer/validator on the 2010 report "*Nanotechnology in Regenerative Medicine*" for the European Union ObservatoryNANO Project's publication on Scientific and Technological Trends in Health, Medicine and Nanobio.
2009 Expert reviewer/validator on the "*Neutralising Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Effects*" report for the European Union ObservatoryNANO Project's publication on Scientific and Technological Trends in Health, Medicine and Nanobio.
2009 Expert reviewer/validator on the "*Implants, Surgery and Coatings*" report for the European Union ObservatoryNANO Project's 2009 publication on Scientific and Technological Trends in Health, Medicine and Nanobio.
2009 Trauma peer review panel for the Defense Medical Research and Development Program (DMRDP) Intramural Applied Research and Advanced Technology Development Awards
2008 Review panel – United States Department of Defense Research Program for Traumatic Brain Injury – Clinical Treatment and Rehabilitation Panel for the Peer Review of the 2007 Extramural TBI Research Program: Multidisciplinary Research Consortium Proposals

2008	Study section – U.S. National Academies Board on Life Sciences/National Research Council for the Third Frontier Project (Ohio) Biosciences Research and Commercialization Program
2008	Finalist interviews – U.S. National Academies Board on Life Sciences/National Research Council for the Third Frontier Project (Ohio) Biosciences Research and Commercialization Program
2006-2010	International Program Committee, Asia-Pacific Society for Neural Regeneration

COMMITTEE ASSIGNMENTS

2010-present	International Program Committee member, International Conference on Neuroprotective Agents
2009-2011	International Program Committee member, European Foundation for Clinical Nanomedicine
2009-present	External examiner for medical ethics exam given to new clinical research associates of confidential clinical research organization (CRO)
2007-present	Consultant, "*Patenting challenges in nanomedicine"* for the Association of International Patent Law Attorneys (AIPLA) executive committee meeting, Washington, DC
2007-2009	Consultant for Ventac Partners' Life Science Follow-up Project for the Hong Kong Science and Technology Park "*Capturing the Delta Opportunity*," published April 2009
2004-2009	International Program Committee member, Asia-Pacific Society for Neural Repair

EDITORIAL DUTIES

2010-present	Editorial Board Member, *Nanomedicine & Biotherapeutic Discovery*
2010-2011	Assoc Editor, *IBMISPS-Neuroimage Special Issue* 2011
2006-present	Assoc Editor/Neurology, *Nanomedicine: Nanotechnology, Biology and Medicine*

NON-PROFIT BOARD INVOLVEMENT

2009-present	International Conference on Neuroprotective Agents, Scientific Advisory Board
2009-present	Asia Foundation for Cancer Research, Executive Board of Directors
2008-present	International Society for Nanomedicine, Executive Board of Directors
2008-2012	The Glaucoma Foundation, Executive Board of Directors
2006-2008	American Academy of Nanomedicine, Founding Board of Directors
2006-present	The Glaucoma Foundation, Scientific Advisory Board

RESEARCH AND DISCOVERY

BOOKS

1. **Ellis-Behnke RG.** *The Intersection of Nanomedicine and Healthcare*. Under contract with Pan Stanford Publishing (div. of World Scientific).

BOOK CHAPTERS

1. **Ellis-Behnke RG**. Introduction to the Nanomedicine section. In: *The Biomedical Engineering Handbook, 4th ed.*, Joseph D. Bronzino and Donald R. Peterson (eds.), vol. 4, Boca Raton, CRC Press (In press).

2. **Ellis-Behnke RG**. "Molecular Medical Devices for Nanoneurosurgery." In: *Textbook of Nanoneurosurgery,* Babak Kateb and John Heiss (eds.), New York, Taylor & Francis (In press).
3. **Ellis-Behnke RG** and Schneider GE. "Peptide Amphiphiles and Porous Biodegradable Scaffolds for Tissue Regeneration in the Brain and Spinal Cord." In: *Biomedical Nanotechnology, Methods in Molecular Biology* series, Sarah Hurst (vol. ed.), vol. 726, pp 259-281. New York, Springer, 2011.
4. **Ellis-Behnke RG.** "Nano Neurology and the 4 Ps of CNS Regeneration: Preserve, Permit, Promote and Plasticity." In: *The Medical Clinics of North America,* Chiming Wei (ed.), vol. 91, pp 937-62. Philadelphia, Elsevier, 2007.
5. Schneider GE and **Ellis-Behnke RG.** "CNS Regeneration." In: *Encyclopedia of Neuroscience*, George Adelman and Barry H. Smith (eds.), 3rd ed., revised and enlarged, CD-ROM format, Amsterdam, Elsevier, 2004.

SPECIAL EDITIONS

Selection of the best and most relevant Neurology papers published to date in the journal *Nanomedicine: Nanotechnology, Biology and Medicine*. Edited by **Rutledge Ellis-Behnke** (Virtual edition published September 2013).

PEER-REVIEWED JOURNAL ARTICLES

1. **Ellis-Behnke RG**, Jonas RA and Jonas JB. (2013) The microglial system in the eye and brain in response to stimuli in vivo. *J Glaucoma* 22 Suppl 5:S32-5.
2. Newman P, Minett A, **Ellis-Behnke R** and Zreiqat H. (2013) Carbon Nanotubes their Potential and Pitfalls for Bone Tissue Regeneration and Engineering. *Nanomedicine* Jun 12. [Epub ahead of print].
3. Sang YH, Liang YX, Liu LG, **Ellis-Behnke RG**, Wu WT, So KF and Cheung RTF. (2013) A Rat Model of Intracerebral Hemorrhage Permitting Hematoma Aspiration plus Intralesional Injection. *Experimental Animals* 62: 63-69.
4. Jonas RA, Yuan TF, Cheung SWH, Liang YX, Jonas JB, Tay DKC and **Ellis-Behnke RG.** (2012) The spider effect: Morphological and orienting classification of microglia in response to stimuli *in vivo. PLoS One* 7: e30763.
5. Roohani-Esfahani SI, Lu ZF, Li JJ, **Ellis-Behnke RG**, Kaplan DL, Appleyard RC and Zreiqat H. (2012) Effect of self-assembled nanofibrous silk/polycaprolactone layer on the osteoconductivity and mechanical properties of biphasic calcium phosphate scaffolds. *Acta Biomaterialia* 8: 302-312.
6. Krol S, **Ellis-Behnke RG** and Marchetti P. (2012) Nanomedicine for treatment of diabetes in an aging population: State-of-the-art and future developments. *Nanomedicine* 8: S69-S76.
7. Lia Q, Hung W, Chow KL, **Ellis-Behnke RG** and Chau Y. (2012) Factorial analysis of adaptable properties of self-assembling peptide matrix on cellular viability and neuronal differentiation of pluripotent embryonic carcinoma. *Nanomedicine* 8:748-56.
8. Wu KS, Tang B, Li SY, Lo ACY, Ngan AHW, Wong DSH, So KF and **Ellis-Behnke RG**. (2011) Micro-scale stiffness change of cornea tissues suffered from elevated intraocular pressure investigated by nanoindentation. *Soft Materials* DOI:10.1080/1539445X.2011.622030.

9. Ling MT, Tay DKC, Cheung WH and **Ellis-Behnke RG.** (2011) Using self-assembled nanomaterials to delay the formation of metastatic cancer stem cell colonies while artificially mimicking a stem cell niche *in vitro. Cell Transplantation* 20: 127-131.
10. **Ellis-Behnke RG** and Jonas JB. (2011) Redefining tissue engineering for nanomedicine in ophthalmology. *Acta Ophthalmologia.* 89: e108-14.
11. **Ellis-Behnke RG**. (2011) At the nanoscale: nanohemostat, a new class of hemostatic agent. *Wiley Interdiscip Rev Nanomed Nanobiotechnol.* 3: 70-8.
12. Liang YX, Chan KCW, Cheung SWH, Tay DKC, Wu EX and **Ellis-Behnke RG**. (2011) CNS regeneration after chronic injury using a self-assembled nano material and MEMRI for real-time *in vivo* monitoring. *Nanomedicine* 7: 351-359.
13. Nan Y, Xiao CX, Chen BY, **Ellis-Behnke RG**, So KF and Pu M. (2010) Visual response properties of Y-cells in the detached feline retina. *Invest Ophthalmol Vis Sci.* 51: 1208-15.
14. Woo PCY, Lau SKP, Choi GKY, Fung HT, Shek KC, Miao J, Chan BYL, Ng KHL, Ngan AHY, **Ellis-Behnke RG**, Que TL, Kam CW and Yuen KY. (2010) Resequencing microarray for detection of human adenoviruses in patients with conjunctivitis. *J Clin Virol*. 47: 282-5.
15. Woo PCY, Lau SKP, Choi GKY, Fung HT, Shek KC, Miao J, Chan BYL, Ng KHL, Ngan AHY, **Ellis-Behnke RG**, Que TL, Kam CW and Yuen KY. (2010) Resequencing microarray for detection of human adenoviruses in patients with community-acquired gastroenteritis: a proof-of-concept study. *J Med Microbiol*. 59:1387-1390.
16. Cheung ACY, Yu Y, Tay DKC, **Ellis-Behnke RG** and Chau Y. (2010) Ultrasound-enhanced intrascleral delivery of protein. *Int J Pharm*. 401: 16-24.
17. **Ellis-Behnke RG,** Liang YX, Guo J, Tay DKC, Schneider GE, Teather LA, Wu W and So KF. (2009) Forever young: how to control the elongation, differentiation and proliferation of cells using nanotechnology. *Cell Transplantation* 18: 1047-1058.
18. Ellenberg D, Shi J, Jain S, Chang JH, Brady S, Melhem E, Lakkis F, Adamis A, Chen DF, **Ellis-Behnke RG**, Langer RS, Strittmatter S and Azar DT. (2009) Impediments to eye transplantation: ocular viability following optic nerve transection or enucleation. *Br J Ophthalmol.* 93: 1134-1140.
19. Ye Z, Zhang H, Luo H, Wang S, Zhou Q, Du X, Tang C, Chen L, Liu J, Shi YK, Zhang EY, **Ellis-Behnke RG** and Zhao X. (2008) Temperature and pH effects on biophysical and morphological properties of self-assembling peptide RADA16-I. *J Peptide Science* 14: 152-162.
20. **Ellis-Behnke RG**, Teather LA, Schneider GE and So KF. (2007) Using nanotechnology to design potential therapies for CNS regeneration. *Current Pharmaceutical Design* 13: 2519-2528.
21. Guo J, Su H, Zeng Y, Liang YX, **Ellis-Behnke RG,** So KF and Wu W. (2007) Reknitting the injured spinal cord using self-assembling peptide nanofiber scaffold. *Nanomedicine* 3: 311-21.
22. **Ellis-Behnke RG**, Liang YX, You SW, Tay DKC, Zhang S, So KF and Schneider GE. (2006) Nano neuro knitting: peptide nanofiber scaffold for brain repair and axon regeneration with functional return of vision*, Proc Nat Acad Sci USA* 103: 5054-5059.
23. **Ellis-Behnke RG**, Liang YX, Tay DKC, Kau PWF, Schneider GE, Zhang S, Wu W and So KF. (2006) Nano hemostat solution: immediate hemostasis at the nanoscale. *Nanomedicine* 2: 207-15.
24. Schneider GE, **Ellis-Behnke RG,** Liang YX, Kau PWF, Tay DKC and So KF. (2006) Behavioral testing and preliminary analysis of the hamster visual system. *Nat Protoc.*1: 1898-1905.

25. **Ellis-Behnke RG,** Teather LA and So KF. (2006) Molecular restoration of the body: nano neuro knitting for brain repair. *J European Anti-Ageing Medicine & British Anti-Ageing Medical Journal* 4: 34-35.
26. **Ellis-Behnke RG**, So KF and Zhang S. (2006) Molecular repair of the brain using self-assembling peptides. *Chimica Oggi* 24: 41-43.
27. Teather LA, Packard MG, Smith DE, **Ellis-Behnke RG** and Bazan NG. (2005) Differential induction of c-JUN and Fos-like proteins in rat hippocampus and dorsal striatum after training in two water maze tasks. *Neurobiology of Learning and Memory* 84: 75-84.

PEER-REVIEWED CONFERENCE PAPERS

1. Sang YH, Liang YX, **Ellis-Behnke RG**, So KF and Cheung RTF. (2009) Clot Aspiration Plus Intrastriatal Administration of a Self-Assembling Peptide in a Rat Model of Intracerebral Hemorrhage, *Proceedings of the 61st American Academy of Neurology*, Neurology 72 (suppl 3): A398
2. Sang YH, Liang YX, **Ellis-Behnke RG**, So KF and Cheung RTF. (2009) Neuroprotective effects of self-assembling peptide nanofiber scaffold in a hypertension rat model of intracerebral haemorrhage, *Hong Kong Medical Journal*, 32
3. Chan KC, Liang YX, **Ellis-Behnke RG,** So KF and Wu EX. (2009) Longitudinal 1H MRS of hamster superior colliculus following retinotectal deafferentation, *Proc. Intl. Soc. Mag. Reson. Med.* 17, 1027.
4. **Ellis-Behnke RG**, Schneider GE, Zhang S and So KF. (2007) Nano neuro knitting for brain repair. *National Science and Technology Institute Nanotech/BioNano,* San Jose CA
5. **Ellis-Behnke RG,** Schneider GE, Zhang S. and So K.F. (2005) Crystal clear surgery with self-assembling molecules that act as a bio barrier in the brain and intestine. *Proceedings of the 1st Conference Amer Acad Nanomedicine.* Nanomedicine 1(3): 269-270.

PEER-REVIEWED ABSTRACTS

1. **R.G. Ellis-Behnke,** Cheung, SWH, Tay, DKC. (2011) CNS regeneration after chronic injury using a self-assembled nano material and MEMRI for real-time in vivo monitoring, *Abstracts, NSTI Nanotech conf.*
2. **R.G. Ellis-Behnke,** Cheung, SWH, Tay, DKC. (2011) Using fMRI to find the window of opportunity for optimal treatment of TBI, *Abstracts, 10th International Neurotrauma Symposium.*
3. **R.G. Ellis-Behnke,** Ling, PMT, Cheung, SWH, Tay, DKC. (2011) How can smart environments outwit cancer cells? *Abstracts, 1st ISOPE Nanomaterials for Structural Applications Symposium.*
4. **R.G. Ellis-Behnke,** Cheung, SWH, Tay, DKC. (2011) Breaking Boundaries: Age is no longer a barrier. *Abstracts, 4th Pan Pacific Symposium on Stem Cell Research (PPSSCR).*
5. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) The Control of Growth and Differentiation of Cells with Physical Interaction. *Abstracts, International Conference for Neuroprotective Agents.*
6. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) Nano Contrast enhancement agents used in the eye for tracing axons: trauma or illumination? *Abstracts, Society for Neurosci.*

7. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) Using a self-assembling nanopeptide to achieve ocular hemostasis without causing clotting or secondary inflammation. *Abstracts, Association for Vision and Research in Ophthalmology*
8. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) Neuroprotective Agents, *Abstracts, 9th International Symposium on Ocular Pharmacology and Therapeutics (ISOPT).*
9. **R.G. Ellis-Behnke.** (2010) Innovations in Nanomedicine, *Abstracts, National Nanotechnology Initiative at Ten: Nanotechnology Innovation Summit*
10. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) Controlling the Growth and Differentiation of Cells, *Abstracts, 3rd Sydney University Tissue Engineering Network (SuTEN) symposium*
11. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) Nanomedicine in Brain and Organ Repair, *Abstracts, 1st Else Kröner-Fresenius-Symposium on Nanomedicine-Basic and Clinical Application in Diagnostic and Therapy*
12. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) The Control of Growth and Differentiation of Cells with Physical Interaction, *Abstracts, 20th ISOPE Nanomaterials for Structural Applications Symposium*
13. **R.G. Ellis-Behnke**, S.W.H. Cheung, D.K.C. Tay, J.B. Jonas. (2010) Lecture 1: Nano strategies to protect neurons in glaucoma; Lecture 2: in Nanotechnology Symposium - Using nanotechnology to control ocular inflammation, *Abstracts, 32nd World Ophthalmology Congress.*
14. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) CNS regeneration after chronic injury using a self-assembled nano material and MEMRI for real-time in vivo monitoring, *Abstracts, 3rd Pan Pacific Symposium on Stem Cell Research (PPSSCR)*
15. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) The First Self-assembled Molecular Medical Device (MMD) for CNS Regeneration and Beyond: from Treatment to ADME, *Abstracts, 7th Annual World Congress for Brain Mapping and Image Guided Therapy*
16. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) The Control of Growth and Differentiation of Cells with Physical Interaction, *Abstracts, 3rd European Conference for Clinical Nanomedicine*
17. **R.G. Ellis-Behnke**, Y. Liang, S.W.H. Cheung, D.K.C. Tay. (2010) Neural Knitting in the Optic Nerve and Optic Pathway, *Abstracts, 13th Annual Vision Research Conference*
18. **R.G. Ellis-Behnke.** (2010) Intersection of Nanotechnology and Healthcare, *Abstracts, 1st Conference of the Institute of Nanotechnology - Nanomedicine Visions for the Future*
19. **R. G. Ellis-Behnke**, S. W. H. Cheung, D. K. C. Tay, Y.X. Liang, P. W. F.Kau, G. E. Schneider, K.F. So. (2009) The control of stem cells in the brain and spinal cord by extracellular nanomatrix system. *Abstracts, Society for Neurosci.* Chicago IL
20. **R. G. Ellis-Behnke**, Y. X. Liang, So, K. F. Cheung, S. W. H., So, E. X. Wu, D. K. C. Tay. (2009) Redefining tissue engineering for nanomedicine: Visualizing the progress of regenerating axons in the mammalian visual system after complete transection and treatment with self-assembling nanomaterial. *Abstracts, 6th Annual World Congress for Brain Mapping and Image Guided Therapy*, Harvard Medical School, Boston MA
21. Sang Y., Liang Y., **Ellis-Behnke R.G**., So K.F. and Cheung R.T.F. (2009) Evaluation of a self-assembling peptide nanofiber scaffold (SAPNS) in normotensive and hypertensive models of

intracerebral hemorrhage (ICH) in the rat, *Abstracts, Fourth International Symposium on Healthy Aging: Emerging Therapies for an Aging Population*, Research Centre of Heart, Brain, Hormone & Healthy Aging, Hong Kong

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46. **Ellis-Behnke, R.G.,** Liang, Y.X., Chan, K.C.W., Tay, D.K.C., So, K.F., Wu E.X. (2007) Assessing the progression of functional regeneration of the visual system**.** *Abstracts, 6th Picower-RIKEN Symposium,* Cambridge USA
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48. Guo, J., Liang, Y.-X., Zeng, Y., **Ellis-Behnke, R. G.,** So, K.-F., Wu, W. (2007) Reknitting the spinal cord using a self-assembling peptide nanofiber scaffold to promote functional recovery. *Abstracts, Society for Neurosci.*

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54. **R.G. Ellis-Behnke,** Y.X. Liang, D.K.C. Tay, G. E. Schneider (2007) Using nanotechnology to repair the CNS: from the 4 Ps of regeneration to crystal clear surgery to *in vivo* non-invasive imaging of regenerating axons, *Abstracts, Dept of Brain & Cognitive Sciences Fall Colloquium lecture, Massachusetts Institute of Technology*
55. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay (2007) Nano neuro knitting for brain repair, *Abstracts, NSTI Nanotech/BioNano*
56. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay (2007) Using nanotechnology as a part of a therapy to repair the brain, *Abstracts, 27th Blankenese Conference on Routes to Therapy - From Stem Cell Tailoring to Nano Knitting*
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58. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay (2007) Assessing functional regeneration of the visual system, *Abstracts, 14th Annual Optic Nerve Rescue and Restoration Think Tank*
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63. **R.G. Ellis-Behnke,** Y.X. Liang, S.W.H. Cheung, D.K.C. Tay (2007) Intersection of nanotechnology and medicine, *Abstracts, World Future Society*

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68. **Ellis-Behnke, R.G**. and Schneider, G.E. (2006) Hemostasis at the nanoscale. *Abstracts and presentation, M.I.T. Entrepreneurship Center Idea Stream*
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80. **R.G. Ellis-Behnke,** Y.X. Liang, D.K.C. Tay, G. E. Schneider (2006) *Abstracts,* 5th Asia Pacific Symposium on Neural Regeneration: *Nanotechnology and CNS repair,* Shanghai China
81. **R.G. Ellis-Behnke,** Y.X. Liang, D.K.C. Tay, G. E. Schneider (2006) *Abstracts,* 1st Workshop on Regeneration/Repair in Nervous System, Juvenile Diabetes Research Foundation (JDRF) and European Association for the Study of Diabetes (EASD): *The 4Ps of CNS regeneration*, Oxford UK
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84. **R.G. Ellis-Behnke,** Y.X. Liang, D.K.C. Tay, G. E. Schneider (2006) *Abstracts,* 2nd Meeting of the American Academy of Nanomedicine: *Nano neuro technology to repair the brain,* Washington DC
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94. Tipoe, G.L., So, K.-F. and **Ellis-Behnke, R**. (2005) Paperless classroom: A preliminary study on the uses of Tablet-PC in teaching human topographic anatomy among medical students at the University of Hong Kong. *Abstracts, 3rd Congress of Asian Medical Education Association*
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ACQUIRED FUNDING (USD 2.4 million since 2003)

2010-2012 Co-Investigator (40% to Ellis-Behnke). Hong Kong General Research Fund, "*Evaluation of key mechanisms of brain injury and of a novel hemostatic treatment in a rat model of hypertensive intracerebral hemorrhage.*"

2009-2010 Principal Investigator, University of Hong Kong Technology Transfer Seed Fund, "*Preservation of biologics: breaking the cold chain*."

2009-2010 Principal Investigator, University of Hong Kong Seed Funding Programme for Applied Research, "*Self-assembling peptides at the nanoscale for blood preservation.*"

2009-2010 Principal Investigator, University of Hong Kong Seed Funding Programme for Basic Research, "*Incorporation dynamics of additives and self-assembling peptides at the nanoscale for central nervous system (CNS) regeneration.*"

2008-2010 Principal Investigator, Guangdong-Hong Kong Technology Cooperation Funding Scheme GHP/048/06, "*Development of a new frontier in nanomedicine.*"

2008-2010 Principal Investigator, University of Hong Kong Seed Funding Programme for Basic Research, "*The ADME of self-assembling nanomaterials.*"

2007-2009 Co-Investigator (40% to Ellis-Behnke). University of Hong Kong Seed Funding Programme for Basic Research "*Nanomechanical characterization of tissues in eye.*"

2007-2008 Principal Investigator, Hong Kong Innovation and Technology Support Programme ITS/101/06, "*Hemostasis and Hong Kong.*"

2006-2007 Principal Investigator, Hong Kong Innovation and Technology Support Programme ITS/102/06, "*Nanobiomedical manufacturing: the workforce of tomorrow.*"

2006-2007 Principal Investigator, MIT Deshpande Center for Technological Innovation Award, "*Realizing modern medicine's dream of immediate hemostasis II.*"

2005-2006 Principal Investigator, MIT Deshpande Center for Technological Innovation Award, "*Realizing modern medicine's dream of immediate hemostasis I.*"
2005-2007 Principal Investigator, University of Hong Kong Technology Transfer Seed Fund, "*Immediate hemostasis.*"
2003-2004 Principal Investigator, Microsoft/HP, "*Paperless classroom.*"

PATENTS

1. U.S. Patent No. 7,846,891 (issued 7 Dec 2010). **R Ellis-Behnke**, S Zhang and G Schneider, "Self-Assembling Peptides for Regeneration and Repair of Neural Tissue."
2. **R Ellis-Behnke**, KF So, D Tay, YX Liang and G Schneider, "Compositions and Methods for Promoting Hemostasis and other Physiological Activities" PCT/US2006/015850
3. **R Ellis-Behnke**, S Zhang, KF So, D Tay, YX Liang and G Schneider, "Compositions and Methods for Affecting Movement of Contaminants, Bodily Fluids or Other Entities, and/or Affecting Other Physiological Conditions" PCT/US2007/796132
4. **R Ellis-Behnke**, T Norchi and SR Kelly, "Compositions for Prevention of Adhesions and Other Barrier Applications" PCT/US2008/0032934
5. **R Ellis-Behnke**, SR Kelly and T Norchi, "Treatment of Leaky or Damaged Tight Junctions and Enhancing Extracellular Matrix" PCT/US 2008/0274979
6. **R Ellis-Behnke**, P Ling, "Nano Cancer Barrier Device (NCBD) to Immobilize and Inhibit the Division of Metastic Cancer Stem Cells" PCT/ US2011/0144023
7. **R Ellis-Behnke**, D Tay, "Compositions and Methods for Controlling Proliferation and Differentiation of Cells" PCT/US2011/0150844

LICENSED TECHNOLOGY

3 D Matrix (Japan): Central nervous system regeneration
Arch Therapeutics (USA): Hemostasis
NanoMedLabs (USA): Pathogen control; inflammation control

TEACHING

LECTURES AND SEMINARS

Medical Faculty Mannheim

2010-present Introduction to Nanomedicine – interdisciplinary course that begins with the basic concepts and explores practical translation of nanotechnology in medicine
2012-present Ophthalmic surgical techniques in small animals

Massachusetts Institute of Technology

2007-present *NeuroTechnology Ventures* – Co-creator, -developer and –instructor across 5 departments (Science, Engineering, Business, Health Sciences & Technology and Media Lab)
- In 2008 and 2009 I taught it via live link with University of Hong Kong and China Medical University Hospital in Taiwan

2004-present *Introduction to Neuroanatomy* - Independent Activities Period (IAP)
2001-2002 Head Teaching Assistant for *Introduction to Psychology*
1999-2002 Teaching Assistant for *Comparative Neuroanatomy and Development*

1999-2002 Teaching Assistant for *Introduction to Neuroscience*

University of Hong Kong Faculty of Medicine

2008-2009 Central Nervous System Review (Lectures) - University of Hong Kong 4th year medical students

2007-2010 Ethics in Medical research (Lectures and case studies), University of Hong Kong medical students

2007-2010 Responsible Conduct in Research (Lectures and case studies), University of Hong Kong medical students

2007-2010 Problem-Based Learning (PBL) in Central Nervous System Diseases - University of Hong Kong 2nd year medical students

2007-2010 Problem-Based Learning (PBL) in Hematology - University of Hong Kong 2nd year medical students

2007-2010 Problem-Based Learning (PBL) in Neurology - University of Hong Kong 2nd year medical students

2007-2010 Cranial Nerves (Lectures) - University of Hong Kong 2nd year medical students

2007-2010 Sensory Systems (Lectures) - University of Hong Kong 2nd year medical students

2007-2010 Central Nervous System Anatomy (Lectures) - University of Hong Kong 2nd year medical students

2004-2010 Head and Neck Anatomy, University of Hong Kong 2nd year medical students

PRESENTATIONS AND MEDIA COVERAGE

KEYNOTE AND PLENARY ADDRESSES

2014:

Keynote speaker, 7th Pan Pacific Symposium on Stem Cell Research (PPSSCR): *Title TBD,* Taipei Taiwan

Plenary speaker, BioNanoMed 2014: 5th International Congress: *Title TBD* Krems Austria

2013:

Keynote speaker, Nanomanufacturing Summit 2013: *Nanomedicine: discovering, manufacturing and using new molecular medical devices for immediate hemostasis, tissue restoration and functional return of vision after trauma,* Philadelphia

Keynote speaker, 4th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (IC4N): *Nanotechnology Ventures Based on Research*, Corfu Greece

Keynote speaker, 6th Pan Pacific Symposium on Stem Cell Research (PPSSCR): *The Spider Effect: a Novel Framework to Categorize Microglial Activation Status and Modulation,* Hsinchu Taiwan

Plenary speaker, BioNanoMed 2013: 4th International Congress: *The use of nanomedical devices from treatment to ADME: How we can reassemble the disconnected parts of the body and CNS while measuring the progress of repair noninvasively*? Krems Austria

2012:

Keynote speaker, 5th Pan Pacific Symposium on Stem Cell Research (PPSSCR): *Using self-assembled nanomaterials to delay the formation of metastatic cancer stem cell colonies,* Taichung Taiwan

2011:

Keynote speaker, Nano 2011: 8th Conference on Medicine, Science and Engineering: *New Scientific Approaches to Treating Diseases of the Elderly*, Rensselaer Polytechnic Institute, Troy NY

Keynote speaker, 2nd Conference of the Institute of Nanotechnology - Nano- and other enabling technologies for an ageing population: *New Scientific Approaches to Treating Diseases of the Elderly,* Glasgow Scotland

2010:

Keynote Speaker, 1st European Medicines Agency International Workshop on Nanomedicines: *Way to the Future: Key Ongoing Applications in Nanosciences and How they Apply to Pharmaceuticals*, London UK

Plenary speaker, 2nd Lätemar International Winter School on Nano and Biotechnology: *Intersection of Nanotechnology and Healthcare*, Sterzing/Vitipeno Italy

2009:

Keynote speaker, Presidential Symposium on Nanotechnology at the 51st Meeting of the American Society for Therapeutic Radiology and Oncology (ASTRO): *Nanoscale image contrast agents to enhance the visualization of regenerating CNS axons,* Chicago IL

Keynote speaker, Nanobiotech 2009: *Controlling the growth and differentiation of cells with physical interaction,* Rensselaer Polytechnic Institute, Troy NY

Plenary speaker, 5th World Congress of the International Society of Physical and Rehabilitation Medicine (ISPRM): *Nanobiotechnology for the functional recovery of the nervous system*, Istanbul Turkey

2007:

Keynote speaker, Asia-Oceanic Society for Glaucoma/Pfizer Japan Symposium: *Nano hemostat solution*, Bangkok, Thailand

Keynote speaker, M.I.T. Sloan conference: *Serendipity in product development,* Cambridge MA

Keynote speaker, 1st IEEE International Conference on Nano/Molecular Medicine and Engineering: *Nanomachines that help repair the brain,* Macau

Keynote speaker, 2nd SRI Nanomedicine - Commercializing Drug Discovery, Drug Delivery and Diagnostics: *Repairing the brain using nanotechnology*, Washington DC

2006:

Plenary speaker, Inaugural Sydney University Tissue Engineering Network (SuTEN) symposium: *Nano neuro knitting*, Sydney Australia

Keynote speaker, Accelrys Seminar Series on Nanodesign - Revolutionizing Healthcare and Medicine through Nanotechnology: *Nanotechnology to repair the brain*, Cambridge MA

Keynote speaker, Xiangshan International Nanomedicine Conference: *Using nanotechnology to repair the body,* Beijing China

INVITED LECTURES

2014:

7th European Conference for Clinical Nanomedicine (CLINAM): *Title TBD,* Basel Switzerland

12th International Conference on Neuroprotective Agents (ICNA): *Title TBD*, Charlottesville VA

4th American Society of Nanomedicine Annual Meeting: *Title TBD*, Shady Grove MD

2013:

NanoCAN Seminar Medical Biotechnology Center Institute for Molecular Medicine: *The Intersection of Nanotechnology and Healthcare: From Discovery to Application,* Odense Denmark

University of Texas Arlington Materials and Science Engineering Seminar Series: *Nanomedicine and New Molecular Medical Devices,* Arlington Texas

Nano2013: 10th Conference on Medicine, Science and Engineering: *The use of nanomaterials for the modulation of the CNS immune system*, Rensselaer Polytechnic Institute, Troy NY

NSTI Nanotech/BioNano 2013 *Nanomedicine* Editors' Symposium: *The Spider Effect: a Novel Framework to Categorize Microglial Activation Status and Modulation,* Washington DC

6th European Conference for Clinical Nanomedicine (CLINAM): *The Spider Effect: how the Immune System in the Brain can be Measured and Modulated with Nanotechnology,* Basel Switzerland

2012:

Nano 2012: 11th International Conference on Nanostructured Materials: *Nano-tonometry: a new measure for structural reorganization of the eye caused by glaucoma*, Rhodes Greece

11th International Conference on Neuroprotective Agents (ICNA): *The microglial system in the eye and brain in response to stimuli in vivo*, Quebec City

5th European Conference for Clinical Nanomedicine (CLINAM): *Structural Reorganization of the Eye Caused by Glaucoma,* Basel Switzerland

The Nanoscience and Nanotechnology Forum: *Reassembling the disassembled with the help of nanotechnology: from injured to aged*, University of South Florida, Tampa FL

Biomedical Engineering Seminar Series: *The Intersection of Nanotechnology and Healthcare: From Discovery to Application*, Rutgers University, New Brunswick NJ

2011:

10th International Symposium on Ocular Pharmacology and Therapeutics (ISOPT): *Neuroprotection and neuroregeneration using nanotechnology*, Vienna, Austria

International Symposium on Clusters and Nano-Structures (ISCAN): *How Barrier Formation Enables New Applications of Nanotechnology in Healthcare*, Richmond USA

18th Glaucoma Foundation Optic Nerve Rescue and Restoration Think Tank: *Glia in Ophthalmology*, New York USA

Erasmus Medical Center / Rotterdam Eye Hospital: *Applications for regeneration and restoration of vision*, Rotterdam Netherlands

University Clinic Carl Gustav Carus of the Technical University of Dresden: *Real-time in vivo monitoring of the regeneration of acute or chronic CNS injury in rodents using a self-assembling nanopeptide and MEMRI*, Dresden Germany

2nd German-French Nano Workshop: *New Applications of Nanotechnology in Healthcare*, Landau Germany

8th International Conference on Nanosciences & Nanotechnologies: *CNS regeneration after chronic injury using a self-assembled nano material and manganese-enhanced MRI for real-time in-vivo monitoring*, Thessaloniki Greece

Nanotech 2011 / Neurology Nanotech Symposium: *CNS regeneration after chronic injury using a self-assembled nano material and MEMRI for real-time in vivo monitoring*, Boston USA

2nd Annual Navy Medicine Research Conference-Connecting Wounded Warriors to Advanced Diagnostic and Therapeutic Options: *Nanotechnologies and hemostatic agents*, Washington DC USA

4th European Conference for Clinical Nanomedicine (CLINAM): *Nano tonometry: a new measure for structural reorganization of the eye caused by glaucoma*, Basel Switzerland

10th International Neurotrauma Symposium: *Using fMRI to find the window of opportunity for optimal treatment of TBI*, Shanghai China

21st ISOPE Nanomaterials for Structural Applications Symposium: *How can smart environments outwit cancer cells?* Hawaii USA

4th Pan Pacific Symposium on Stem Cell Research (PPSSCR): *Using self-assembling peptides and regeneration enhancing factors for CNS regeneration,* Taichung Taiwan

4th Annual / 1st International Ophthalmic Scientific Meeting: Lecture 1: *Wound Healing and Nerve Regeneration;* Lecture 2: *Nanotechnology and Nanomedicine-Current and Future Applications;* Lecture 3: *Developing a Nanotechnology Research Program*, Jeddah Saudi Arabia

2010:

9th International Symposium on Ocular Pharmacology and Therapeutics (ISOPT): *Neuroprotective Agents*, Macau, China

National Nanotechnology Initiative at Ten: Nanotechnology Innovation Summit: *Innovations in Translational Nanomedicine*, Washington DC

3rd Sydney University Tissue Engineering Network (SuTEN) symposium: *Controlling the Growth and Differentiation of Cells*, Sydney Australia

2nd Annual Conference of the American Society of Nanomedicine: *Overview: Nanomedicine and Emerging Technologies for HIV*; Potomac MD

10th International Conference on Neuroprotective Agents: *The Control of Growth and Differentiation of Cells with Physical Interaction*; Monterey CA

1st Else Kröner-Fresenius-Symposium on Nanomedicine-Basic and Clinical Application in Diagnostic and Therapy; *Nanomedicine in Brain and Organ Repair*; Erlangen Germany

20th ISOPE Nanomaterials for Structural Applications Symposium: *The Control of Growth and Differentiation of Cells with Physical Interaction*, Beijing China

32nd World Ophthalmology Congress: Lecture 1: *Nano strategies to protect neurons in glaucoma*; Lecture 2: in Nanotechnology Symposium - *Using nanotechnology to control ocular inflammation*, Berlin Germany

7th Annual World Congress for Brain Mapping and Image Guided Therapy: *The First Self-assembled Molecular Medical Device (MMD) for CNS Regeneration and Beyond: from Treatment to ADME;* University of Uniformed and Armed Services, Bethesda MD

3rd European Conference for Clinical Nanomedicine: *The Control of Growth and Differentiation of Cells with Physical Interaction*, Basel Switzerland

13th Association of Vision Research Conference: *Neural Knitting in the Optic Nerve and Optic Pathway;* Ft Lauderdale FL

1st Conference of the Institute of Nanotechnology - Nanomedicine Visions for the Future: *Intersection of Nanotechnology and Healthcare,* Amsterdam Netherlands

2009:

1st Annual Conference of the American Society of Nanomedicine: *Control and preservation of tissue after hemorrhagic stroke using nano materials*, Potomac MD

16th Annual Optic Nerve Rescue and Restoration Think Tank: *Using nanotechnology to control the elongation, differentiation and proliferation of cells*, New York, NY

Tufts Medical School, Dept of Physical Rehabilitation, Residency Program: *Visualizing the progress of regenerating axons in the mammalian visual system after complete transection and treatment with a self-assembling nanomaterial,* Boston MA

6th Annual World Congress for Brain Mapping and Image Guided Therapy (Nanomedicine Session): *Redefining tissue engineering for nanomedicine: Visualizing the progress of regenerating axons in the mammalian visual system after complete transection and treatment with a self-assembling nanomaterial*, Harvard Medical School, Boston MA

4th International Multidisciplinary Congress on Intensive and Critical Care Medicine: *Nanomedicine and nanotechnology applied to neurosciences,* Mexico City, Mexico

The Miami Project Cure for Paralysis, Miller School of Medicine, University of Miami: *From Nano Neuro Knitting to Immediate Hemostasis to Crystal Clear Surgery: The Intersection of Nanotechnology and Healthcare*, Miami FL

Nanotechnology Symposium at the Hong Kong Eye Hospital: *Forever Young: using nanotechnology to control the elongation, differentiation and proliferation of cells*, Hong Kong

24th Asia-Pacific Academy of Ophthalmology (APAO-AAO) Congress: *Breakthroughs in tissue-specific bioengineering*, Bali Indonesia

2nd European Conference for Clinical Nanomedicine: *Nanohealing*, Basel Switzerland

2nd Pan Pacific Symposium on Stem Cell Research (PPSSCR): *The control of growth and differentiation of cells with physical interaction,* Taichung Taiwan

Meisler Middle School, *Nanomedicine: the new frontier of medicine,* New Orleans LA

Annual Meeting of the American Association of Anatomists, *Nanomedicine: the new frontier of medicine*, New Orleans LA

North American Neuro-Ophthalmic Society (NANOS) meeting: *(1) Nanoparticles in Optic Nerve Trauma; Nano-Scaffolding and Regeneration* and *(2) Nanoscale Technologies, Nano-Knitting and Healing Powers,* Lake Tahoe NV

Asia-Assoc for Research in Vision and Ophthalmology (Asia-ARVO) 2009: *Using nanotechnology for tissue bioengineering in ophthalmology*, Hyderabad India

2008:

4th Meeting of the American Academy of Nanomedicine: *Nanohealing in hamster vision: Nanomedicine for functional recovery of central nervous system*, Washington DC

18th International Congress of Eye Research (ICER): *Using a 7 Tesla fMRI and a nano contrast agent to visualize regenerating axons in vivo in hamster optic tract transection*, Beijing, China

9th International Conference on Neuroprotective Agents: *Talk 1: Using nanotechnology to repair the body; Talk 2: In vitro and in vivo cell preservation for spinal cord repair*, Woods Hole MA

15th Annual Optic Nerve Rescue and Restoration Think Tank: *Recent breakthroughs in tissue bioengineering*, New York NY

Assoc for Research in Vision and Ophthalmology (ARVO): *Nano Contrast Enhancement Agents used in the Eye for Tracing Axons: Trauma or Illumination?* Ft. Lauderdale FL

1st Unither Nanomedical and Telemedical Technology conference: *Using nanotechnology and the framework of the 4 Ps of regeneration to repair the CNS*, Magog, ON Canada

7th International Symposium on Ocular Pharmacology and Therapeutics (ISOPT): *The impact of nanotechnology on eye treatments*, Budapest, Hungary

31st World Ophthalmology Congress, Symposium on Nanotechnology: *Using nanotechnology for tissue bioengineering in ophthalmology*, Hong Kong

2007:

Dept of Brain & Cognitive Sciences Fall Colloquium lecture, M.I.T.: *Using nanotechnology to repair the CNS: from the 4 Ps of regeneration to crystal clear surgery to in vivo non-invasive imaging of regenerating axons,* Cambridge MA

NSTI Nanotech/BioNano 2007: *Nano neuro knitting for brain repair,* Santa Clara CA

ARVO Nanotechnology Symposium: *Nanotechnology and tissue bioengineering*, Ft. Lauderdale

27th Blankenese Conference on Routes to Therapy - From Stem Cell Tailoring to Nano Knitting: *Using nanotechnology as a part of a therapy to repair the brain*, Hamburg, Germany

25th National Neurotrauma Symposium: *Nano neuro knitting*, Kansas City MO

14th Annual Optic Nerve Rescue and Restoration Think Tank: *Assessing functional regeneration of the visual system*, New York NY

American Academy Ophthalmology (AAO) Symposium on Regenerative Ophthalmology: *Recent successes of tissue bioengineering in ophthalmology*, New Orleans LA

Visiting Programme on Biomedical Engineering: *Neural Tissue Regeneration*, Hong Kong

Dept of Anatomy & Cell Biology Research Seminar Series, Wayne State University School of Medicine: *The 4 Ps of CNS regeneration*, Detroit MI

Office of Naval Research: *Using nanotechnology to repair the body*, Arlington VA

Dept of Radiology, Memorial Sloan-Kettering Cancer Center: *Using a 7 Tesla fMRI and nano contrast agent to visualize regeneration of axons in vivo after chronic injury*, New York NY

Dept of Materials Science and Metallurgy, Trinity College, University of Cambridge: *Using self-assembling nanofiber peptides to repair the body*, Cambridge UK

3rd Strategies for Engineered Negligible Senescence (SENS): *The use of nanotechnology to repair the body,* Cambridge UK

National Institutes of Health (NIH) - Nanomedicine/Nanotechnology Special Interest Group: *Nanotechnology: From CNS Regeneration to Crystal Clear Surgery,* Bethesda MD

1st IEEE International Conference on Nano/Molecular Medicine and Engineering - Cardiovascular Symposium: *Using nanotechnology for surgical interventions*, Macau

Annual meeting of Assoc Intl Patent Law Attorneys (AIPLA): *The intersection of nanotechnology and healthcare*, Boston MA

World Future Society: *Intersection of nanotechnology and medicine,* Minneapolis MN

Session Co-chair and Speaker, 17th ISOPE Nanomaterials for Structural Applications Symposium: *Using nanotechnology to repair the body,* Lisbon, Portugal

Frontiers of Education in Medicine: *Progress towards the paperless classroom,* Hong Kong

Dept of Anatomy & Cell Biology, Wayne State University School of Medicine: *Innovative Medical Teaching Methods*, Detroit MI

2006:

Chengdu University of Traditional Chinese Medicine: *The use of nanotechnology in neuroscience and Chinese medicine,* Chengdu China

13th Annual Optic Nerve Rescue and Restoration Think Tank: *Nano neuro knitting*, New York

5th Asia Pacific Symposium on Neural Regeneration: *Nanotechnology and CNS repair,* Shanghai China

1st Workshop on Regeneration/Repair in Nervous System, Juvenile Diabetes Research Foundation (JDRF) and European Association for the Study of Diabetes (EASD): *The 4Ps of CNS regeneration*, Oxford UK

2nd International SBE Conference on Bioengineering and Nanotechnology: *Nano neuro knitting*, Santa Barbara CA

1st International Conference of Nanobiomedical Technology & Structural Biology: *Nanotechnology and CNS regeneration*, Chengdu China
Chemical Heritage Foundation: *Hemostasis and nanomedicine*, Philadelphia PA
2nd Meeting of the American Academy of Nanomedicine: *Nano neuro technology to repair the brain,* Washington DC
National Nanotechnology Initiative (NNI) of the National Science Foundation (NSF): *Nano neuro knitting and hemostasis,* Fairfax VA
Nanobiotechnology 2006: *Using nanotechnology to repair the body,* Rennselaer Polytechnic Institute, Troy NY
MIT Enterprise Forum: "What's Hot at MIT?" *The intersection of nanotechnology and medicine: from Nano Neuro Knitting to Crystal Clear Surgery*, Cambridge MA
2005:
1st International Spinal Cord Injury Treatments and Trials Symposium: *Self-assembling nano material for CNS lesion repair,* Hong Kong
1st Lux Executive Summit on Nanotechnology: Panel member for *Strategies from Asia's Nanotech Innovators*, Cambridge MA
1st SRI Nanomedicine - Commercializing Drug Discovery, Drug Delivery and Diagnostics: *Crystal clear surgery with self-assembling molecules that act as a bio-barrier in the brain and intestine*, Cambridge MA
1st Meeting of the American Association of Nanomedicine: *Nano-enabled crystal clear surgery,* Baltimore MD
4th Multidisciplinary Workshop for Self-assembling Peptide and Protein Systems in Biology, Medicine, Materials, and Engineering: *Nano self-assembly and neural repair,* Crete Greece
International Library Association conference**:** *Paperless Classroom*, Hong Kong
2004:
1st International SBE Conference on Bioengineering and Nanotechnology: *Self-assembling peptides in neural repair*, Singapore
3rd Symposium on Neuroscience of Young Scholars Worldwide: *CNS regeneration*, Guangzhou China
Committee on International Teaching and Education: *Paperless Classroom,* University of Hong Kong

MEDIA COVERAGE
Selected from 1,000+ TV, radio, newspaper, magazine and internet articles

Podcasts
National Academy of Sciences, PNAS Science Session with Rutledge Ellis-Behnke
http://www.pnas.org/site/misc/ellis-behnkePodcast.mp3
ScienceCentral, Stopping Bleeding
www.sciencentral.com/articles/view.php3?type=article&article_id=218392862
ScienceCentral, Brain-healing Bridges
www.sciencentral.com/articles/view.php3?language=english&type=&article_id=218392776%20
Boston Globe, "Innovation Economy: New ally on the operating table?"
http://www.boston.com/business/articles/2008/06/29/new_ally_on_the_operating_table/

TV

Fox Business News, in "New Technology Could Stop Bleeding in Seconds"
ABC News, "Healing Brains and Bones"
Discovery Channel, "Nano hemostat solution"
ABC News, "Stopping Bleeding"
Fox News Channel, "New Peptide Salve Could Replace Adhesive Bandages"
National Geographic Channel, "Nano Neuro Knitting"
CBS News, "Nanotechnology May Repair Damaged Brains"
NBC News, "Restoring vision in blinded hamsters by plugging gaps in injured brains"

Journal
Mass. High Tech, "Arch wins anti-bleeding tech global rights"
http://www.bizjournals.com/boston/blog/mass-high-tech/2008/04/arch-wins-anti-bleeding-tech-global-rights.html
Technology Review, "Nanohealing Material Heads to Market"
http://www.technologyreview.com/news/410112/nanohealing-material-heads-to-market/
Technology Review, "Top 10 Emerging Technologies: Nanohealing"
http://www2.technologyreview.com/article/407472/tr10-nanohealing/
Technology Review, "The Surprise Peptide"
http://www.technologyreview.com/article/407124/the-surprise-peptide/
Journal of the American Medical Association (JAMA), "Healing power found in 'Nano Knitting' "
http://jama.jamanetwork.com/article.aspx?articleid=204841
Nature Nanotechnology, "New material stops bleeding in a hurry"
http://dx.doi.org/10.1038/nnano.2006.148
Science, "Peptide 'Soup' Halts Blood Loss" http://news.sciencemag.org/sciencenow/2006/10/10-03.html
The Lancet Neurology, "Nano neuro knitting repairs injured brain"
http://www.thelancet.com/journals/laneur/article/PIIS1474-4422(06)70430-6/fulltext

Radio
BBC Newshour (UK), "Liquid to seal open wounds fast"
Quirks and Quarks, CBC Radio (Canada) "Brain Band-Aid"
BBC World News (UK), "Nanotech helps blind hamsters see"

Newspaper
New York Sunday Times, "Week in review: Bloodless"
Washington Post, "High beam research: High-Tech Liquid May Cut Operating Time"
Le Monde (France), "Un liquide nano qui stoppe les hémorragies en quelques seconds"
Der Spiegel (Germany), "Flüssiges pflaster: Blutung binnen 15 Sekunden gestoppt"
Toronto Star (Canada), "Bleeding? Here's a simple solution"
Xinhua News (China), "Scientists develop liquid bandage"
Mumbai Mirror (India), "New solution to stop bleeding"
USA Today, "Making blind hamsters see with nanotech"
San Francisco Chronicle, "Nanotechnology could fix nerve, brain damage"
Boston Globe, "Ultra-tiny knitting thread helps restore brain function"
The Guardian (UK), "Nanotechnology restores hamsters' sight"

Die Presse (Germany), “Machen, dass die Blinden sehen!”
La Nueva España (Spain), “Hámsteres ciegos recuperan la vista gracias a implantes de nanotecnología”
El Informador, (Mexico) “Nano Neuro Knitting”