CURRICULUM VITAE

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Autobiography

Professor Rutledge Ellis-Behnke is the Director of the Nanomedicine Translational Think Tank at the Medical Faculty Mannheim of the University of Heidelberg in Germany. In addition, he is Affiliate Professor in the Department of Neurosurgery & Brain Repair at the University of Florida Morsani School of Medicine, and Research Affiliate in the Brain and Cognitive Sciences department at the Massachusetts Institute of Technology. His primary research interest is using nanotechnology to reconnect the disconnected parts of the brain in order to restore function. Through additional discoveries, his work in Nanomedicine has broadened to include hemostasis without clotting; preserving stem cells; preservation and restoration of vision; and immobilizing cancer stem cells.

Ellis-Behnke received his PhD from MIT in Neuroscience, BSci from Rutgers University and graduated from Harvard Business School's International Senior Manager's Program (AMP/ISMP). He is Associate Editor for the journal *Nanomedicine: Nanotechnology, Biology and Medicine*; an Editorial Board member for *Nanomedicine & Biotherapeutic Discovery*; and a member of Scientific Advisory Boards for the Glaucoma Foundation.

He has more than 100 patent applications and his "Nano Neuro Knitting" and "Immediate Hemostasis" technologies have each been licensed for translation to humans.

Selected Papers

1. **Ellis-Behnke RG**. "Molecular Medical Devices for Nanoneurosurgery." In: *Textbook of Nanoneurosurgery,* Babak Kateb and John Heiss (eds.), New York, Taylor & Francis (In press).
2. Newman P, Minett A, **Ellis-Behnke R**, Zreiqat H. Carbon Nanotubes their Potential and Pitfalls for Bone Tissue Regeneration and Engineering. *Nanomedicine*
3. 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.
4. 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.
5. **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.

6. **Ellis-Behnke RG** and Jonas JB. (2011) Redefining tissue engineering for nanomedicine in ophthalmology. *Acta Ophthalmol.* 89: e108-14.
7. Liang YX, Chan KCW, Cheung SWH, Tay DKC, Wu EX and **Ellis-Behnke RG**. (2010) CNS regeneration after chronic injury using a self-assembled nano material and MEMRI for real-time *in vivo* monitoring. *Nanomedicine* 7: 351-359.
8. **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.
9. **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.
10. **Ellis-Behnke RG.** (2007**)** Nano Neurology and the 4 Ps of CNS Regeneration: Preserve, Permit, Promote and Plasticity. *Med Clin North Am.* 91: 937-62.
11. 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.
12. **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.
13. **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.
14. 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.