



ROBERT WOOD JOHNSON
MEDICAL SCHOOL

University of Medicine & Dentistry of New Jersey

03.3022.SCR.E.O

Department of Pharmacology

Leroy F. Liu, Ph.D., Professor and Chairman

Dr. Sally Meiners has been funded by The New Jersey Commission on Spinal Cord Research since 2003. During this time Dr. Meiners has made many professional accomplishments. The New Jersey Commission on Spinal Cord Research has strengthened her position in the department, which will lead to future promotion.

The following publications were supported by Commission-funded research:

1. **Meiners, S.** An "attractive" approach for repairing CNS injury. Amer. Soc. Cell Biol. Press Book 2004, 16 (2004). *This abstract was chosen as one of 16 out of 1,200 with the strongest news value for the general public by the American Society for Cell Biology.*
2. Schindler, M., Ahmed, I., Kamal, J., Nur-e-Kamal, A., Grafe, T.H., Chung, H.Y., and **Meiners, S.** Three dimensional nanofibrillar surfaces promote *in vivo*-like organization and morphogenesis for cells in culture. Biomaterials 26, 5624-5631 (2005).
3. Nur-e-Kamal, A., Ahmed, I., Kamal, J., Schindler, M., and **Meiners, S.** Three dimensional nanofibrillar surfaces induce activation of Rac. Biochem. Biophys. Res. Commun. 331, 428-434 (2005).
4. Liu, H.-Y., Nur-e-Kamal, A., Schachner, M., and **Meiners, S.** Neurite guidance by the fnC repeat of human tenascin-C: Neurite attraction vs. neurite retention. Eur. J. Neurosci. 22, 1863-1872 (2005). *Selected for the cover picture.*
5. Ahmed, I.*, Liu, H.-Y*., Mamiya, P.C., Ponery, A.S., Babu, A.N., Weik, T., Schindler, M., and **Meiners, S.** Three-dimensional nanofibrillar surfaces covalently modified with tenascin-C-derived peptides enhance neuronal growth *in vitro*. J. Biomed. Mater. Res. A. 76: 851-860 (2006).
* Equal contributors.
6. Nur-e-Kamal, A., Ahmed, I., Kamal, J., Schindler, M., and **Meiners, S.** Nanofibrillar surfaces promote self-renewal in mouse embryonic stem (mEs) cells. Stem Cells 24: 426-433 (2006).
7. Schindler, M., Nur-E-Kamal, A., Ahmed, I., Kamal, J., Liu, H.-Y., Amor, N., Ponery, A.S., Crockett, D.P., Grafe, T.H., Chung, H.Y., Weik, T., Jones, E., and **Meiners, S.** Living in three dimensions: 3D nanostructured environments for cell culture and

- regenerative medicine. *Cell Biochemistry and Biophysics* 45: 215-228 (2006) .
(Invited, peer-reviewed, review.)
8. Ahmed, I., Ponery, A.S., Nur-E-Kamal, A., Kamal, J., Meshel, A., Sheetz, M., Schindler, M., and **Meiners, S.** Mouse embryonic fibroblasts cultured on synthetic three dimensional nanofibrillar surfaces demonstrate altered morphology, cytoskeleton organization, and myosin dynamics. Submitted.
 9. Nur-E-Kamal, A., Ahmed, I., Babu, A.N., Kamal, J., Schindler, M., and **Meiners, S.** FGF-2 tethered to polyamide nanofibrillar surfaces has enhanced structural stability and biological activity. In preparation.
 10. **Meiners, S.**, Ahmed, I., Ponery, A.S., Amor, N., and Babu, A.N. Engineering electrospun nanofibrillar surfaces for spinal cord repair. In preparation.

The 2003 Commission-funded research lead directly to the 2004 and 2006 Commission funded research. The P.I. is planning to submit additional grants to the CRPF Foundation, the NIH, the NSF, and other appropriate agencies based on the current research in 2007-2008. The Commission-funded research has been invaluable in precipitating other research.

The Commission grants have lead to collaborations with other departments within the medical school and at Rutgers University with individuals who are dedicated to finding a cure for spinal cord injury and other neurological disorders. The Commission grant has also evoked the enthusiasm of another Departmental faculty member, Dr. Alam Nur-E-Kamal, to study signal transduction and cytokine expression following spinal cord injury.

Sincerely yours,



Leroy F. Liu, Ph.D.
Professor and Chairman