

Project E2 'Design of Nanostructured Surfaces for Manipulating Cells'

E2.2 'Nanostructured Templates with Cadherin Specific Adhesive Properties' (D. Wedlich)

- [E2.2:1] S.M. Pancera, H. Gliemann, Th. Schimmel, D.F.S. Petri, *Effect of pH on the adsorption and activity of creatine phosphokinase*, J. Phys. Chem. B **110**, 2674 (2006)
- [E2.2:2] S.M. Pancera, H. Gliemann, Th. Schimmel, and D.F.S. Petri, *Adsorption behaviour and activity of hexokinase*, J. Coll. Interface Sci. **302**, 417 (2006)
- [E2.2:3] J. López Gejo, N. Manoj, S. Sumalekshmy, H. Gliemann, Th. Schimmel, M. Wörner, and A.M. Braun, *Vacuum-ultraviolet photochemically initiated modification of polystyrene surfaces: morphological changes and mechanistic investigations*, Photochem. Photobiol. Sci. **5**, 948 (2006)
- [E2.2:4] H. Gliemann, A.T. Almeida, D.F.S. Petri, and Th. Schimmel, *Nanostructure formation in polymer thin films influenced by humidity*, Surf. Interface Anal. **39**, 1 (2007)
- [E2.2:5] * S. Kalinina, H. Gliemann, M. López-García, A. Petershans, J. Auernheimer, Th. Schimmel, M. Bruns, A. Schambony, H. Kessler, and D. Wedlich, *Isot/hiocyanate-functionalized RGD-peptides for tailoring cell-adhesive surface patterns*, Biomaterials **29**, 3004 (2008)
- [E2.2:6] * S. Montero-Pancera, V. Trouillet, M. Bruns, Th. Schimmel, P.G. Weidler, A. Petershans, D. Fichtner, A. Lyapin, S. Reichlmaier, D. Wedlich, and H. Gliemann, *Design of Chemically Activated Microwells by One-Step UV- Lithography for Stem Cell Adhesion*, Langmuir **26**, 2050 (2010)
- [E2.2:7] * A. Petershans, A. Lyapin, S. Reichlmaier, S. Kalinina, D. Wedlich, and H. Gliemann, *TOF-SIMS analysis of structured surfaces biofunctionalized by one-step coupling of a spacer-linked GRGDS peptide*, J. Colloid Interface Sci. **341**, 30 (2010)
- [E2.2:8] * S. Engin, V. Trouillet, C.M. Franz, A. Welle, M. Bruns, and D. Wedlich, *Benzylguanine thiol self-assembled monolayers for the immobilization of SNAP-tag proteins on microcontact-printed surface structures*, Langmuir **26**, 6097 (2010)
- [E2.2:9] * A. Petershans, D. Wedlich and L. Fruk, *Bioconjugation of CdSe/ZnS nanoparticles with Snap tagged proteins*, Chem Comm **47**, 10671 (2011)

E2.3 'Adhesion of Cells on Micro- and Nanostructured Surfaces' (M. Bastmeyer)

- [E2.3:1] A.C. von Philipsborn, S. Lang, J. Loeschinger, A. Bernard, C. David, D. Lehnert, F. Bonhoeffer, and M. Bastmeyer, *Growth Cone Navigation in Substrate-Bound Ephrin Gradients*, *Development* **133**, 2487 (2006)
- [E2.3:2] Z. Jiang, F. Klein, M. Bastmeyer and D. Lehnert, *Cell size on micropatterned substrates is controlled by intracellular tension and ECM-induced signaling but not by ECM-geometry*, *Eur. J. Cell Biol.* **85**, 104 (2006)
- [E2.3:3] ‡ A.C. von Philipsborn, S. Lang, A. Bernard, J. Loeschinger, C. David, D. Lehnert, M. Bastmeyer, and F. Bonhoeffer, *Microcontact Printing of Axon Guidance Molecules for Generation of Graded Patterns*, *Nature Protocols* **1**, 1322 (2006)
- [E2.3:4] A.C.von Philipsborn, S. Lang, Z. Jiang, F. Bonhoeffer, and M. Bastmeyer, *Substrate-Bound Protein Gradients for Cell Culture Fabricated by Microfluidic Networks and Microcontact Printing*, *Science STKE* **414**, 16 (2007)
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- [E2.3:6] S. Lang, A.C. von Philipsborn, A. Bernard, F. Bonhoeffer, and M. Bastmeyer, *Axon Guidance in Ephrin Gradients Produced by Microfluidic Networks*, *Anal. Bioanal. Chem.* **390**, 809 (2008)
- [E2.3:7] T. Autenrieth and M. Bastmeyer, *Micropatterned fibronectin-gradients induce polarization and haptotaxis in primary fibroblasts*, *Eur. J. Cell Biol.* **89**, 19 (2010)
- [E2.3:8] * F. Klein, T. Striebel, J. Fischer, Z. Jiang, C.M. Franz, G. von Freymann, M. Wegener, and M. Bastmeyer, *Elastic fully three-dimensional microstructure scaffolds for cell force measurements*, *Adv. Mater.* **22**, 868 (2010)
- [E2.3:9] * F. Klein, B. Richter, T. Striebel, C.M. Franz, G. von Freymann, M. Wegener, and M. Bastmeyer, *Two-component polymer scaffolds for controlled three-dimensional cell culture*, *Adv. Mater.* **23**, 1341 (2011)
- [E2.3:10] * T. Pauloehrl, G. Delaittre, M. Bastmeyer, and C. Barner-Kowollik, *Ambient Temperature Polymer Modification by In-situ Phototriggered Deprotection and Thiol-Ene Chemistry*, *Polym. Chem.*, DOI: 10.1039/c1py00372k (2011)
- [E2.3:11] ‡ A.F. Ross, Z. Jiang, M. Bastmeyer, and J. Lahann, *Physical Aspects of Cell Culture Substrates: Topography, Roughness, and Elasticity*, *Small*, DOI: 10.1002/smll.201100934 (2011)
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E2.4 ,Cell Adhesion and Migration on Micro- and Nanostructured Surfaces' (C. Franz)

- [E2.4:1] C.M. Franz and P.-H. Puech, *Atomic force microscopy – a versatile tool for studying cell morphology, adhesion and mechanics*, Cell. Mol. Bioeng. **1**, 289 (2008)
- [E2.4:2] * F. Klein, T. Striebel, J. Fischer, Z. Jiang, C.M. Franz, G. von Freymann, M. Wegener, and M. Bastmeyer, *Elastic Fully Three-dimensional Microstructure Scaffolds for Cell Force Measurements*, Adv. Mat. **22**, 1868 (2010)
- [E2.4:3] * S. Engin, V. Trouillet, C.M. Franz, A. Welle, M. Bruns, and D. Wedlich, *Benzylguanine Thiol Self-Assembled Monolayers for the Immobilization of SNAP-tag Proteins on Microcontact-Printed Surface Structures*, Langmuir **26**, 6097 (2010)
- [E2.4:4] R. Gruschwitz, J. Friedrichs, M. Valtink, C.M. Franz, D.J. Muller, R. Funk, and K. Engelmann, *Alignment And Cell-Matrix Interactions Of Human Corneal Endothelial Cells On Nanostructured Collagen Type I Matrices*, Invest. Ophthalmol. Vis. Sci. **51**, 6303 (2010)
- [E2.4:5] ‡ C. Zeltz, S. Brezillon, J. Kapyla, J.A. Eble, H. Bobichon, C. Terryn, C. Perreau, C.M. Franz, J. Heino, F.X. Maquart, and Y. Wegrowski, *Lumican inhibits cell migration through alpha2beta1 integrin*, Exp. Cell Res. **316**, 2922 (2010)
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- [E2.4:7] S. Ulbrich, J. Friedrichs, M. Valtink, S. Murovski, C.M. Franz, D.J. Müller, R.H. Funk, and K. Engelmann, *RPE Cell Alignment on Nanostructured Collagen Matrices*, Cells Tissues Organs **194**, 443 (2011)
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