

## Publications aligned with the SysCODE goals

October, 2007 – March, 2008

### *Project 2. Tooth Germ Design and Engineering*

1. Han J, Ishii M, Bringas P Jr, **Maas RL**, Maxson RE Jr, Chai Y. Concerted action of Msx1 and Msx2 in regulating cranial neural crest cell differentiation during frontal bone development. 2007. Mech Dev. 124(9-10): 729-45. PMID: [17693062](#).
2. Nishimura W, Rowan S, Salameh T, **Maas RL**, Bonner-Weir S, Sell SM, Sharma A. Preferential reduction of beta cells derived from Pax6-MafB pathway in MafB deficient mice. Dev Biol. 2008 Feb 15; 314(2):443-56. PMID: [18199433](#).
3. Tun HW, Personett D, Baskerville KA, Menke DM, Jaeckle KA, Kreinest P, Edenfield B, Zubair AC, O'Neill BP, Lai WR, **Park PJ**, McKinney M. Pathway analysis of primary central nervous system lymphoma. Blood. 2008 Mar 15; 111(6):3200-10. PMID: [18184868](#).
4. Peng S, Alekseyenko AA, Larschan E, Kuroda MI, **Park PJ**. 2007. Normalization and experimental design for ChIP-chip data. BMC Bioinformatics 8:219. PMID: [17592629](#).
5. McCord RP, Berger MF, Philippakis AA, **Bulyk ML**. 2007. Inferring condition-specific transcription factor function from DNA binding and gene expression data. Mol Syst Biol. 3:100. PMID: [17437025](#).
6. Deans TL, Cantor CR, **Collins JJ**. 2007. A tunable genetic switch based on RNAi and repressor proteins for regulating gene expression in mammalian cells. Cell.130:363-72. PMID: [17662949](#).

### *Project 3. Pancreatic Islet Design and Engineering*

7. Zhou Q, Chipperfield H, **Melton DA**, Wong WH. 2007. A gene regulatory network in mouse embryonic stem cells. Proc Natl Acad Sci U S A. 104:16438-16443. PMID: [17940043](#).
8. Gerber GK, Dowell RD, Jaakkola TS, **Gifford DK**. 2007. Automated discovery of functional generality of human gene expression programs. PLoS Comput Biol. 3:e148. PMID: [17696603](#).

### *Project 4. Heart Valve Design and Engineering*

9. Boyle S, Misfeldt A, Chandler KJ, Deal KK, Southard-Smith EM, Mortlock DP, **Baldwin HS**, de Caestecker M. Fate mapping using Cited1-CreERT2 mice demonstrates that the cap mesenchyme contains self-renewing progenitor cells and gives rise exclusively to nephronic epithelia. Dev Biol. 2008 Jan 1;313(1):234-45. PMID: [18061157](#).
10. Mendelson K, **Schoen FJ**. 2006. Heart valve tissue engineering: concepts, approaches, progress, and challenges. Ann Biomed Eng. 34:1799-1819. PMID: [1705506](#).

### ***Project 5. Mass Spectrometry of Proteins Involved in Organogenesis***

11. Asthana S, Roytberg M, Stamatoyannopoulos J, **Sunyaev S**. 2007. Analysis of sequence conservation at nucleotide resolution. PLoS Comput Biol. 3:e254. PMID: [18166073](#).
12. Bakalarski CE, Haas W, Dephoure NE, **Gygi SP**. 2007. The effects of mass accuracy, data acquisition speed, and search algorithm choice on peptide identification rates in phosphoproteomics. Anal Bioanal Chem. 389:1409-1419. PMID: [17874083](#).
13. Ballif BA, Carey GR, **Sunyaev SR, Gygi SP**. Large-scale identification and evolution indexing of tyrosine phosphorylation sites from murine brain. J Proteome Res. 2008 Jan;7(1):311-8. PMID: [18034455](#).

### ***Project 6. Micromechanical Determinants of Organ Design and Engineering***

14. Ghosh K, **Ingber DE**. 2007. Micromechanical control of cell and tissue development: implications for tissue engineering. Adv Drug Deliv Rev. 59:1306-1318. PMID: [17920155](#).
15. Parker KK, **Ingber DE**. 2007. Extracellular matrix, mechanotransduction and structural hierarchies in heart tissue engineering. Philos Trans R Soc Lond B Biol Sci. 362:1267-1279. PMID: [17588874](#).
16. Sands RW, **Mooney DJ**. 2007. Polymers to direct cell fate by controlling the microenvironment. Curr Opin Biotechnol. 18:448-53. PMID: [18024105](#).
17. Mammoto A, Sero JE, Mammoto T, **Ingber DE**. Methods for studying mechanical control of angiogenesis by the cytoskeleton and extracellular matrix. Methods Enzymol. 2008; 443:227-59. PMID: [18772019](#).

### ***Project 7. Microengineered Environments for Epi/Mes Interactions***

18. Kang L, Chung BG, Langer R, **Khademhosseini A**. Microfluidics for drug discovery and development: from target selection to product lifecycle management. Drug Discov Today. 2008 Jan;13(1-2):1-13. PMID: [18190858](#).
19. Moeller HC, Mian MK, Shrivastava S, Chung BG, **Khademhosseini A**. A microwell array system for stem cell culture. Biomaterials. 2008 Feb;29(6):752-63 (Funded by SysCODE). PMID: [18001830](#).

### ***Project 10. DSAGE Technology Development***

20. Kim JB, Porreca GJ, Song L, Greenway SC, Gorham JM, Church GM, Seidman CE, **Seidman JG**. 2007. Polony multiplex analysis of gene expression (PMAGE) in mouse hypertrophic cardiomyopathy. Science. 316:1481-1484. PMID: [17556586](#).
21. Underhill GH, **Bhatia SN**. 2007. High-throughput analysis of signals regulating stem cell fate and function. Curr Opin Chem Biol. 11:357-366. PMID: [17656147](#).