

# Martin L Yarmush

## List of Publications by Citations

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561  
papers

26,671  
citations

81  
h-index

136  
g-index

585  
ext. papers

29,481  
ext. citations

5.7  
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6.95  
L-index

| #   | Paper                                                                                                                                                                                                     | IF   | Citations |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 561 | Organ reengineering through development of a transplantable recellularized liver graft using decellularized liver matrix. <i>Nature Medicine</i> , <b>2010</b> , 16, 814-20                               | 50.5 | 1032      |
| 560 | Effect of cell-cell interactions in preservation of cellular phenotype: cocultivation of hepatocytes and nonparenchymal cells. <i>FASEB Journal</i> , <b>1999</b> , 13, 1883-900                          | 0.9  | 754       |
| 559 | Hepatocyte function and extracellular matrix geometry: long-term culture in a sandwich configuration. <i>FASEB Journal</i> , <b>1989</b> , 3, 174-7                                                       | 0.9  | 658       |
| 558 | Long-term in vitro function of adult hepatocytes in a collagen sandwich configuration. <i>Biotechnology Progress</i> , <b>1991</b> , 7, 237-45                                                            | 2.8  | 594       |
| 557 | Mesenchymal stem cells: Mechanisms of immunomodulation and homing. <i>Cell Transplantation</i> , <b>2010</b> , 19, 667-79                                                                                 | 4    | 515       |
| 556 | Electroporation-based technologies for medicine: principles, applications, and challenges. <i>Annual Review of Biomedical Engineering</i> , <b>2014</b> , 16, 295-320                                     | 12   | 466       |
| 555 | Controlling cell interactions by micropatterning in co-cultures: hepatocytes and 3T3 fibroblasts. <i>Journal of Biomedical Materials Research Part B</i> , <b>1997</b> , 34, 189-99                       |      | 436       |
| 554 | Mesenchymal stem cell-derived molecules reverse fulminant hepatic failure. <i>PLoS ONE</i> , <b>2007</b> , 2, e941                                                                                        | 3.7  | 402       |
| 553 | Mesenchymal stem cell-derived molecules directly modulate hepatocellular death and regeneration in vitro and in vivo. <i>Hepatology</i> , <b>2008</b> , 47, 1634-43                                       | 11.2 | 400       |
| 552 | Tissue engineering and regenerative medicine: history, progress, and challenges. <i>Annual Review of Chemical and Biomolecular Engineering</i> , <b>2011</b> , 2, 403-30                                  | 8.9  | 368       |
| 551 | Effect of extracellular matrix topology on cell structure, function, and physiological responsiveness: hepatocytes cultured in a sandwich configuration. <i>FASEB Journal</i> , <b>1996</b> , 10, 1471-84 | 0.9  | 343       |
| 550 | Effects of oxygenation and flow on the viability and function of rat hepatocytes cocultured in a microchannel flat-plate bioreactor. <i>Biotechnology and Bioengineering</i> , <b>2001</b> , 73, 379-89   | 4.9  | 276       |
| 549 | Hepatocytes in collagen sandwich: evidence for transcriptional and translational regulation. <i>Journal of Cell Biology</i> , <b>1992</b> , 116, 1043-53                                                  | 7.3  | 256       |
| 548 | Reprogramming of intestinal glucose metabolism and glycemic control in rats after gastric bypass. <i>Science</i> , <b>2013</b> , 341, 406-10                                                              | 33.3 | 251       |
| 547 | Microfabrication of hepatocyte/fibroblast co-cultures: role of homotypic cell interactions. <i>Biotechnology Progress</i> , <b>1998</b> , 14, 378-87                                                      | 2.8  | 233       |
| 546 | Gut Microbiota-Derived Tryptophan Metabolites Modulate Inflammatory Response in Hepatocytes and Macrophages. <i>Cell Reports</i> , <b>2018</b> , 23, 1099-1111                                            | 10.6 | 222       |
| 545 | Liver-specific functional studies in a microfluidic array of primary mammalian hepatocytes. <i>Analytical Chemistry</i> , <b>2006</b> , 78, 4291-8                                                        | 7.8  | 213       |

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|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|
| 544 | Immunomodulation of activated hepatic stellate cells by mesenchymal stem cells. <i>Biochemical and Biophysical Research Communications</i> , <b>2007</b> , 363, 247-52                                                                          | 3.4  | 198 |
| 543 | Culture matrix configuration and composition in the maintenance of hepatocyte polarity and function. <i>Biomaterials</i> , <b>1996</b> , 17, 373-85                                                                                             | 15.6 | 193 |
| 542 | A high-throughput microfluidic real-time gene expression living cell array. <i>Lab on A Chip</i> , <b>2007</b> , 7, 77-85                                                                                                                       | 7.2  | 186 |
| 541 | Apolipoprotein B-dependent hepatitis C virus secretion is inhibited by the grapefruit flavonoid naringenin. <i>Hepatology</i> , <b>2008</b> , 47, 1437-45                                                                                       | 11.2 | 183 |
| 540 | Kinetics of electrically and chemically induced swelling in polyelectrolyte gels. <i>Journal of Chemical Physics</i> , <b>1990</b> , 93, 4462-4472                                                                                              | 3.9  | 180 |
| 539 | A microfluidic hepatic coculture platform for cell-based drug metabolism studies. <i>Biochemical Pharmacology</i> , <b>2010</b> , 79, 1036-44                                                                                                   | 6    | 174 |
| 538 | Oxygen-mediated enhancement of primary hepatocyte metabolism, functional polarization, gene expression, and drug clearance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 15714-9 | 11.5 | 165 |
| 537 | In vitro models of traumatic brain injury. <i>Annual Review of Biomedical Engineering</i> , <b>2011</b> , 13, 91-126                                                                                                                            | 12   | 159 |
| 536 | Transcriptional regulation of human and rat hepatic lipid metabolism by the grapefruit flavonoid naringenin: role of PPARalpha, PPARgamma and LXRAalpha. <i>PLoS ONE</i> , <b>2010</b> , 5, e12399                                              | 3.7  | 155 |
| 535 | Nucleation and growth of ice crystals inside cultured hepatocytes during freezing in the presence of dimethyl sulfoxide. <i>Biophysical Journal</i> , <b>1993</b> , 65, 2524-36                                                                 | 2.9  | 152 |
| 534 | Subnormothermic machine perfusion for ex vivo preservation and recovery of the human liver for transplantation. <i>American Journal of Transplantation</i> , <b>2014</b> , 14, 1400-9                                                           | 8.7  | 148 |
| 533 | Self-assembling elastin-like peptides growth factor chimeric nanoparticles for the treatment of chronic wounds. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 1034-9              | 11.5 | 148 |
| 532 | Hepatic Injury in Nonalcoholic Steatohepatitis Contributes to Altered Intestinal Permeability. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , <b>2015</b> , 1, 222-232                                                         | 7.9  | 147 |
| 531 | Probing heterotypic cell interactions: hepatocyte function in microfabricated co-cultures. <i>Journal of Biomaterials Science, Polymer Edition</i> , <b>1998</b> , 9, 1137-60                                                                   | 3.5  | 146 |
| 530 | Dynamic gene expression profiling using a microfabricated living cell array. <i>Analytical Chemistry</i> , <b>2004</b> , 76, 4098-103                                                                                                           | 7.8  | 141 |
| 529 | Long-term maintenance of a microfluidic 3D human liver sinusoid. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 241-6                                                                                                             | 4.9  | 135 |
| 528 | Evaluation of a microfluidic based cell culture platform with primary human hepatocytes for the prediction of hepatic clearance in human. <i>Biochemical Pharmacology</i> , <b>2009</b> , 78, 625-32                                            | 6    | 134 |
| 527 | Alginate-PLL microencapsulation: effect on the differentiation of embryonic stem cells into hepatocytes. <i>Biotechnology and Bioengineering</i> , <b>2006</b> , 93, 581-91                                                                     | 4.9  | 134 |

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|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|
| 526 | Nonthermal irreversible electroporation: fundamentals, applications, and challenges. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2013</b> , 60, 707-14                           | 5    | 133 |
| 525 | Microfabrication-based modulation of embryonic stem cell differentiation. <i>Lab on A Chip</i> , <b>2007</b> , 7, 1018-28                                                                    | 7.2  | 132 |
| 524 | Polybrene increases retrovirus gene transfer efficiency by enhancing receptor-independent virus adsorption on target cell membranes. <i>Biophysical Chemistry</i> , <b>2002</b> , 97, 159-72 | 3.5  | 132 |
| 523 | Reactive bone marrow stromal cells attenuate systemic inflammation via sTNFR1. <i>Molecular Therapy</i> , <b>2010</b> , 18, 1857-64                                                          | 11.7 | 130 |
| 522 | Bone marrow-derived mesenchymal stem cells ameliorate autoimmune enteropathy independently of regulatory T cells. <i>Stem Cells</i> , <b>2008</b> , 26, 1913-9                               | 5.8  | 130 |
| 521 | Three-dimensional primary hepatocyte culture in synthetic self-assembling peptide hydrogel. <i>Tissue Engineering - Part A</i> , <b>2008</b> , 14, 227-36                                    | 3.9  | 129 |
| 520 | Oxygen uptake rates in cultured rat hepatocytes. <i>Biotechnology and Bioengineering</i> , <b>1992</b> , 40, 1286-91                                                                         | 4.9  | 123 |
| 519 | Microfabricated grooved substrates as platforms for bioartificial liver reactors. <i>Biotechnology and Bioengineering</i> , <b>2005</b> , 90, 632-44                                         | 4.9  | 122 |
| 518 | In vitro platforms for evaluating liver toxicity. <i>Experimental Biology and Medicine</i> , <b>2014</b> , 239, 1180-1191                                                                    | 3.7  | 118 |
| 517 | Keratinocyte growth factor induces hyperproliferation and delays differentiation in a skin equivalent model system. <i>FASEB Journal</i> , <b>2001</b> , 15, 898-906                         | 0.9  | 118 |
| 516 | Hepatic tissue engineering. Development of critical technologies. <i>Annals of the New York Academy of Sciences</i> , <b>1992</b> , 665, 238-52                                              | 6.5  | 118 |
| 515 | Living-cell microarrays. <i>Annual Review of Biomedical Engineering</i> , <b>2009</b> , 11, 235-57                                                                                           | 12   | 117 |
| 514 | Charged polymers modulate retrovirus transduction via membrane charge neutralization and virus aggregation. <i>Biophysical Journal</i> , <b>2004</b> , 86, 1234-42                           | 2.9  | 117 |
| 513 | Enhancement of naringenin bioavailability by complexation with hydroxypropyl-β-cyclodextrin. [corrected]. <i>PLoS ONE</i> , <b>2011</b> , 6, e18033                                          | 3.7  | 113 |
| 512 | Oxygen consumption characteristics of porcine hepatocytes. <i>Metabolic Engineering</i> , <b>1999</b> , 1, 49-62                                                                             | 9.7  | 113 |
| 511 | Supercooling enables long-term transplantation survival following 4 days of liver preservation. <i>Nature Medicine</i> , <b>2014</b> , 20, 790-3                                             | 50.5 | 109 |
| 510 | Hepatic tissue engineering for adjunct and temporary liver support: critical technologies. <i>Liver Transplantation</i> , <b>2004</b> , 10, 1331-42                                          | 4.5  | 107 |
| 509 | Dynamics of cell membrane permeability changes at supraphysiological temperatures. <i>Biophysical Journal</i> , <b>1995</b> , 68, 2608-14                                                    | 2.9  | 105 |

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|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|
| 508 | Naringenin inhibits the assembly and long-term production of infectious hepatitis C virus particles through a PPAR-mediated mechanism. <i>Journal of Hepatology</i> , <b>2011</b> , 55, 963-71                         | 13.4 | 104 |
| 507 | Metabolic preconditioning of donor organs: defatting fatty livers by normothermic perfusion ex vivo. <i>Metabolic Engineering</i> , <b>2009</b> , 11, 274-83                                                           | 9.7  | 104 |
| 506 | Genetically modified human keratinocytes overexpressing PDGF-A enhance the performance of a composite skin graft. <i>Human Gene Therapy</i> , <b>1998</b> , 9, 529-39                                                  | 4.8  | 104 |
| 505 | The growing role of precision and personalized medicine for cancer treatment. <i>Technology</i> , <b>2018</b> , 6, 79-100                                                                                              | 10   | 103 |
| 504 | Evaluation of human skin reconstituted from composite grafts of cultured keratinocytes and human acellular dermis transplanted to athymic mice. <i>Journal of Investigative Dermatology</i> , <b>1996</b> , 107, 121-7 | 4.3  | 101 |
| 503 | The fabrication of low-impedance nanoporous gold multiple-electrode arrays for neural electrophysiology studies. <i>Nanotechnology</i> , <b>2010</b> , 21, 125504                                                      | 3.4  | 100 |
| 502 | Molecular machines. <i>Annual Review of Biomedical Engineering</i> , <b>2004</b> , 6, 363-95                                                                                                                           | 12   | 98  |
| 501 | Designing a hepatocellular microenvironment with protein microarraying and poly(ethylene glycol) photolithography. <i>Langmuir</i> , <b>2004</b> , 20, 2999-3005                                                       | 4    | 97  |
| 500 | Droplet-based microfluidic platforms for single T cell secretion analysis of IL-10 cytokine. <i>Biosensors and Bioelectronics</i> , <b>2011</b> , 26, 2707-10                                                          | 11.8 | 96  |
| 499 | Assessment of artificial liver support technology. <i>Cell Transplantation</i> , <b>1992</b> , 1, 323-41                                                                                                               | 4    | 95  |
| 498 | Gap junction inhibition prevents drug-induced liver toxicity and fulminant hepatic failure. <i>Nature Biotechnology</i> , <b>2012</b> , 30, 179-83                                                                     | 44.5 | 93  |
| 497 | A device to measure the oxygen uptake rate of attached cells: importance in bioartificial organ design. <i>Cell Transplantation</i> , <b>1994</b> , 3, 515-27                                                          | 4    | 93  |
| 496 | Increased gut permeability early after burns correlates with the extent of burn injury. <i>Critical Care Medicine</i> , <b>1992</b> , 20, 1508-12                                                                      | 1.4  | 93  |
| 495 | Control of hypertrophic scar growth using selective photothermolysis. <i>Lasers in Surgery and Medicine</i> , <b>1997</b> , 21, 7-12                                                                                   | 3.6  | 92  |
| 494 | Vitrification by ultra-fast cooling at a low concentration of cryoprotectants in a quartz micro-capillary: a study using murine embryonic stem cells. <i>Cryobiology</i> , <b>2008</b> , 56, 223-32                    | 2.7  | 91  |
| 493 | Bone marrow mesenchymal stromal cells attenuate organ injury induced by LPS and burn. <i>Cell Transplantation</i> , <b>2010</b> , 19, 823-30                                                                           | 4    | 89  |
| 492 | Subnormothermic machine perfusion at both 20°C and 30°C recovers ischemic rat livers for successful transplantation. <i>Journal of Surgical Research</i> , <b>2012</b> , 175, 149-56                                   | 2.5  | 88  |
| 491 | Advances in proteomic technologies. <i>Annual Review of Biomedical Engineering</i> , <b>2002</b> , 4, 349-73                                                                                                           | 12   | 88  |

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| 490 | Effects of hypothermia on the function, membrane integrity, and cytoskeletal structure of hepatocytes. <i>Cryobiology</i> , <b>1995</b> , 32, 389-403                                                                                                                                                                                             | 2.7  | 87 |
| 489 | Effect of collagen gel configuration on the cytoskeleton in cultured rat hepatocytes. <i>Experimental Cell Research</i> , <b>1993</b> , 208, 442-52                                                                                                                                                                                               | 4.2  | 86 |
| 488 | Proteomic analysis of naturally-sourced biological scaffolds. <i>Biomaterials</i> , <b>2016</b> , 75, 37-46                                                                                                                                                                                                                                       | 15.6 | 85 |
| 487 | Proteoglycans secreted by packaging cell lines inhibit retrovirus infection. <i>Journal of Virology</i> , <b>1996</b> , 70, 6468-73                                                                                                                                                                                                               | 6.6  | 85 |
| 486 | Excorporeal normothermic machine perfusion resuscitates pig DCD livers with extended warm ischemia. <i>Journal of Surgical Research</i> , <b>2012</b> , 173, e83-8                                                                                                                                                                                | 2.5  | 82 |
| 485 | Oxygen uptake rates and liver-specific functions of hepatocyte and 3T3 fibroblast co-cultures. <i>Biotechnology and Bioengineering</i> , <b>2007</b> , 97, 188-99                                                                                                                                                                                 | 4.9  | 82 |
| 484 | Genetically modified human epidermis overexpressing PDGF-A directs the development of a cellular and vascular connective tissue stroma when transplanted to athymic mice--implications for the use of genetically modified keratinocytes to modulate dermal regeneration. <i>Journal of Investigative Dermatology</i> , <b>1995</b> , 105, 756-63 | 4.3  | 82 |
| 483 | Oxygen is a factor determining in vitro tissue assembly: Effects on attachment and spreading of hepatocytes. <i>Biotechnology and Bioengineering</i> , <b>1994</b> , 43, 654-60                                                                                                                                                                   | 4.9  | 82 |
| 482 | Conserving energy during molecular dynamics simulations of water, proteins, and proteins in water. <i>Journal of Computational Chemistry</i> , <b>1990</b> , 11, 1169-1180                                                                                                                                                                        | 3.5  | 82 |
| 481 | Layered patterning of hepatocytes in co-culture systems using microfabricated stencils. <i>BioTechniques</i> , <b>2010</b> , 48, 47-52                                                                                                                                                                                                            | 2.5  | 81 |
| 480 | Large-scale processing of recombinant retroviruses for gene therapy. <i>Biotechnology Progress</i> , <b>1999</b> , 15, 1-11                                                                                                                                                                                                                       | 2.8  | 81 |
| 479 | Resolvin D2 prevents secondary thrombosis and necrosis in a mouse burn wound model. <i>Wound Repair and Regeneration</i> , <b>2013</b> , 21, 35-43                                                                                                                                                                                                | 3.6  | 79 |
| 478 | Implantable microenvironments to attract hematopoietic stem/cancer cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 19638-43                                                                                                                                                    | 11.5 | 79 |
| 477 | Ultrasensitive detection of low-abundance surface-marker protein using isothermal rolling circle amplification in a microfluidic nanoliter platform. <i>Small</i> , <b>2011</b> , 7, 395-400                                                                                                                                                      | 11   | 78 |
| 476 | Polyelectrolyte nano-scaffolds for the design of layered cellular architectures. <i>Tissue Engineering</i> , <b>2006</b> , 12, 1553-63                                                                                                                                                                                                            |      | 78 |
| 475 | Recent advances in nonbiofouling PDMS surface modification strategies applicable to microfluidic technology. <i>Technology</i> , <b>2017</b> , 5, 1-12                                                                                                                                                                                            | 3    | 75 |
| 474 | Effect of oxygen on isolated pancreatic tissue. <i>ASAIO Transactions</i> , <b>1989</b> , 35, 739-41                                                                                                                                                                                                                                              |      | 75 |
| 473 | Kinetics of retrovirus production and decay <b>1999</b> , 63, 654-662                                                                                                                                                                                                                                                                             |      | 74 |

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|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|
| 472 | Microfluidic flow-encoded switching for parallel control of dynamic cellular microenvironments. <i>Lab on A Chip</i> , <b>2008</b> , 8, 107-16                                                                                   | 7.2  | 73 |
| 471 | A stable long-term hepatocyte culture system for studies of physiologic processes: cytokine stimulation of the acute phase response in rat and human hepatocytes. <i>Biotechnology Progress</i> , <b>1992</b> , 8, 219-25        | 2.8  | 73 |
| 470 | Generation and manipulation of hydrogel microcapsules by droplet-based microfluidics for mammalian cell culture. <i>Lab on A Chip</i> , <b>2017</b> , 17, 1913-1932                                                              | 7.2  | 72 |
| 469 | A novel formulation of oxygen-carrying matrix enhances liver-specific function of cultured hepatocytes. <i>FASEB Journal</i> , <b>2006</b> , 20, 2531-3                                                                          | 0.9  | 72 |
| 468 | Metabolic flux analysis of postburn hepatic hypermetabolism. <i>Metabolic Engineering</i> , <b>2000</b> , 2, 312-27                                                                                                              | 9.7  | 71 |
| 467 | Dynamic interplay of flow and collagen stabilizes primary hepatocytes culture in a microfluidic platform. <i>Lab on A Chip</i> , <b>2014</b> , 14, 2033-9                                                                        | 7.2  | 70 |
| 466 | Sleeve gastrectomy and Roux-en-Y gastric bypass exhibit differential effects on food preferences, nutrient absorption and energy expenditure in obese rats. <i>International Journal of Obesity</i> , <b>2012</b> , 36, 1396-402 | 5.5  | 70 |
| 465 | Copolymers of lysine and polyethylene glycol: a new family of functionalized drug carriers. <i>Bioconjugate Chemistry</i> , <b>1993</b> , 4, 54-62                                                                               | 6.3  | 70 |
| 464 | Bioacoustic-enabled patterning of human iPSC-derived cardiomyocytes into 3D cardiac tissue. <i>Biomaterials</i> , <b>2017</b> , 131, 47-57                                                                                       | 15.6 | 69 |
| 463 | Recovery of warm ischemic rat liver grafts by normothermic extracorporeal perfusion. <i>Transplantation</i> , <b>2009</b> , 87, 170-7                                                                                            | 1.8  | 69 |
| 462 | Patterned co-culture of primary hepatocytes and fibroblasts using polyelectrolyte multilayer templates. <i>Macromolecular Bioscience</i> , <b>2007</b> , 7, 344-53                                                               | 5.5  | 69 |
| 461 | Retrovirus infection: effect of time and target cell number. <i>Journal of Virology</i> , <b>1995</b> , 69, 6994-7000                                                                                                            | 6.6  | 69 |
| 460 | Nonequilibrium freezing of one-cell mouse embryos. Membrane integrity and developmental potential. <i>Biophysical Journal</i> , <b>1993</b> , 64, 1908-21                                                                        | 2.9  | 68 |
| 459 | Radial flow hepatocyte bioreactor using stacked microfabricated grooved substrates. <i>Biotechnology and Bioengineering</i> , <b>2008</b> , 99, 455-67                                                                           | 4.9  | 67 |
| 458 | Metabolic flux analysis of cultured hepatocytes exposed to plasma. <i>Biotechnology and Bioengineering</i> , <b>2003</b> , 81, 33-49                                                                                             | 4.9  | 67 |
| 457 | An analysis of transport resistances in the operation of BIAcore; implications for kinetic studies of biospecific interactions. <i>Molecular Immunology</i> , <b>1996</b> , 33, 1203-14                                          | 4.3  | 67 |
| 456 | Simple Surface Modification of Poly(dimethylsiloxane) via Surface Segregating Smart Polymers for Biomicrofluidics. <i>Scientific Reports</i> , <b>2019</b> , 9, 7377                                                             | 4.9  | 66 |
| 455 | Long-term coculture strategies for primary hepatocytes and liver sinusoidal endothelial cells. <i>Tissue Engineering - Part C: Methods</i> , <b>2015</b> , 21, 413-22                                                            | 2.9  | 66 |

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|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|
| 454 | Isolation and co-culture of rat parenchymal and non-parenchymal liver cells to evaluate cellular interactions and response. <i>Scientific Reports</i> , <b>2016</b> , 6, 25329                            | 4.9  | 66 |
| 453 | Building and manipulating neural pathways with microfluidics. <i>Lab on A Chip</i> , <b>2010</b> , 10, 999-1004                                                                                           | 7.2  | 66 |
| 452 | Tissue heterogeneity in structure and conductivity contribute to cell survival during irreversible electroporation ablation by "electric field sinks". <i>Scientific Reports</i> , <b>2015</b> , 5, 8485  | 4.9  | 65 |
| 451 | A simplified subnormothermic machine perfusion system restores ischemically damaged liver grafts in a rat model of orthotopic liver transplantation. <i>Transplantation Research</i> , <b>2012</b> , 1, 6 |      | 65 |
| 450 | Homogeneous differentiation of hepatocyte-like cells from embryonic stem cells: applications for the treatment of liver failure. <i>FASEB Journal</i> , <b>2008</b> , 22, 898-909                         | 0.9  | 65 |
| 449 | A new technique for primary hepatocyte expansion in vitro. <i>Biotechnology and Bioengineering</i> , <b>2008</b> , 101, 345-56                                                                            | 4.9  | 63 |
| 448 | Biotunable acoustic node assembly of organoids. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 1937-43                                                                                           | 10.1 | 62 |
| 447 | Live single cell functional phenotyping in droplet nano-liter reactors. <i>Scientific Reports</i> , <b>2013</b> , 3, 3179                                                                                 | 4.9  | 62 |
| 446 | Xenobiotic metabolism by cultured primary porcine hepatocytes. <i>Tissue Engineering</i> , <b>2000</b> , 6, 467-79                                                                                        |      | 62 |
| 445 | Liver endothelial cells promote LDL-R expression and the uptake of HCV-like particles in primary rat and human hepatocytes. <i>Hepatology</i> , <b>2006</b> , 43, 257-65                                  | 11.2 | 61 |
| 444 | Complexation of retrovirus with cationic and anionic polymers increases the efficiency of gene transfer. <i>Human Gene Therapy</i> , <b>2001</b> , 12, 1611-21                                            | 4.8  | 61 |
| 443 | Effectiveness of poloxamer 188 in arresting calcein leakage from thermally damaged isolated skeletal muscle cells. <i>Annals of the New York Academy of Sciences</i> , <b>1994</b> , 720, 111-23          | 6.5  | 61 |
| 442 | Control of hepatic differentiation via cellular aggregation in an alginate microenvironment. <i>Biotechnology and Bioengineering</i> , <b>2007</b> , 98, 631-44                                           | 4.9  | 60 |
| 441 | The use of elastin-like polypeptide-polyelectrolyte complexes to control hepatocyte morphology and function in vitro. <i>Biomaterials</i> , <b>2008</b> , 29, 625-32                                      | 15.6 | 60 |
| 440 | Integration of technologies for hepatic tissue engineering. <i>Advances in Biochemical Engineering/Biotechnology</i> , <b>2007</b> , 103, 309-29                                                          | 1.7  | 60 |
| 439 | Analysis of oxygen transport to hepatocytes in a flat-plate microchannel bioreactor. <i>Annals of Biomedical Engineering</i> , <b>2001</b> , 29, 947-55                                                   | 4.7  | 60 |
| 438 | A new approach to the cryopreservation of hepatocytes in a sandwich culture configuration. <i>Cryobiology</i> , <b>1990</b> , 27, 576-84                                                                  | 2.7  | 60 |
| 437 | Co-delivery of a growth factor and a tissue-protective molecule using elastin biopolymers accelerates wound healing in diabetic mice. <i>Biomaterials</i> , <b>2017</b> , 141, 149-160                    | 15.6 | 57 |



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| 436 | Proteomic analysis of altered protein expression in skeletal muscle of rats in a hypermetabolic state induced by burn sepsis. <i>Biochemical Journal</i> , <b>2006</b> , 397, 149-58 | 3.8  | 56 |
| 435 | Metabolic engineering: advances in modeling and intervention in health and disease. <i>Annual Review of Biomedical Engineering</i> , <b>2003</b> , 5, 349-81                         | 12   | 56 |
| 434 | Amphipathic peptide-based fusion peptides and immunoconjugates for the targeted ablation of prostate cancer cells. <i>Cancer Research</i> , <b>2007</b> , 67, 6368-75                | 10.1 | 55 |
| 433 | Profiling of dynamic changes in hypermetabolic livers. <i>Biotechnology and Bioengineering</i> , <b>2003</b> , 83, 400-15                                                            | 7.9  | 55 |
| 432 | Metabolic flux analysis of hepatocyte function in hormone- and amino acid-supplemented plasma. <i>Metabolic Engineering</i> , <b>2003</b> , 5, 1-15                                  | 9.7  | 55 |
| 431 | Intrahepatic amino acid and glucose metabolism in a D-galactosamine-induced rat liver failure model. <i>Hepatology</i> , <b>2001</b> , 34, 360-71                                    | 11.2 | 55 |
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