



2014 High impact publications utilizing PerkinElmer imaging technology




Biomaterials

-  **FRET-enabled biological characterization of polymeric micelles**
Stephen W. Mortona, Xiaoyong Zhaoa, Mohiuddin A. Quadira, Paula T. Hammond
Biomaterials, Volume 35, Issue 11, April 2014, Pages 3489–3496




Biomarker Research


-  **Point-of-care diagnostics for noncommunicable diseases using synthetic urinary biomarkers and paper microfluidics**
Andrew D. Warren, Gabriel A. Kwong, David K. Wood, Kevin Y. Lin, and Sangeeta N. Bhatia
PNAS. published 24 February 2014, 10.1073/pnas.1314651111

Cardiovascular Disease

-  **Imaging and Nanomedicine in Inflammatory Atherosclerosis**
Willem J. M. Mulder, Farouc A. Jaffer, Zahi A. Fayad, and Matthias Nahrendorf
Science Translational Medicine. 2014; 6:239sr1
-  **Ischemic neurons recruit natural killer cells that accelerate brain infarction**
Yan Gan, Qiang Liu, Wei Wu, Jun-Xiang Yin, Xue-Feng Bai, Rulong Shen, Yongjun Wang, Jieli Chen, Antonio La Cava, Jennifer Poursine-Laurent, Wayne Yokoyama, and Fu-Dong Shi
PNAS, 2014; 111: 2704-2709
-  **HIF-Prolyl Hydroxylase 2 Inhibition Enhances the Efficiency of Mesenchymal Stem Cell-Based Therapies for the Treatment of Critical Limb Ischemia**
Howangyin KY, Loinard C, Bakker W, Guérin CL, Vilar J, D'Audigier C, Mauge L, Bruneval P, Emmerich J, Lévy BI, Pouysségur J, Smadja DM, Silvestre JS
Stem Cells. 2014 Jan; 32(1):231-43.
doi: 10.1002/stem.1540


Infectious Disease

-  **In vivo imaging of disseminated murine *Candida albicans* infection reveals unexpected host sites of fungal persistence during antifungal therapy**
Ilse D. Jacobsen, Anja Lüttich, Oliver Kurzai, Bernhard Hube, and Matthias Brock
J. Antimicrob. Chemother., published 20 June 2014, 10.1093/jac/dku198
-  **Transfusion of stored blood impairs host defenses against Gram-negative pathogens in mice**
Prestia K1, Bandyopadhyay S, Slate A, Francis RO, Francis KP, Spitalnik SL, Fidock DA, Brittenham GM, Hod EA
Transfusion, 2014 May 19. DOI: 10.1111/trf.12712
-  **MyD88 signalling in myeloid cells is sufficient to prevent chronic mycobacterial infection**
Luciana Berod, Philipp Stüve, Maxine Swallow, Catharina Arnold-Schrauf, Friederike Kruse, Maria V. Gentilini, Jenny Freitag, Bernhard Holzmann and Tim Sparwasser
Eur. J. Immunol. doi: 10.1002/eji.201344039

 **Live Attenuated Influenza Vaccine Enhances Colonization of Streptococcus pneumoniae and Staphylococcus aureus in Mice**

Michael J. Mina, Jonathan A. McCullers, and Keith P. Klugman
mBio., 2014; 5:e01040-13

Inflammation

 **Trifluoromethyl Fluorocoxib A Detects Cyclooxygenase-2 Expression in Inflammatory Tissues and Human Tumor Xenografts**

Md. Jashim Uddin,* Brenda C. Crews, Imran Huda, Kebreab Ghebreselasie, Cristina K. Daniel, and Lawrence J. Marnett
ACS Med. Chem. Lett. 2014, 5, 446–450; DOI: dx.doi.org/10.1021/ml400485g

 **A macrophage uptaking near-infrared chemical probe CDnir7 for in vivo imaging of inflammation**

Nam-Young Kang, Sung-Jin Park, Xiao Wei Emmiline Ang, Animesh Samanta, Wouter H. P. Driessen, Vasilis Ntziachristos, Kristine O. Vasquez, Jeffrey D. Peterson, Seong-Wook Yu* and Young-Tae Chang
Pharm Res, DOI 10.1007/s11095-014-1364-9

Multimodal Imaging

 **Validation of Fluorescence Molecular Tomography/Micro-CT Multimodal Imaging In Vivo in Rats**

Vonwil D, Christensen J, Fischer S, Ronneberger O, Shastri VP
Mol Imaging Biol., 2014 Jun;16(3):350-61. Doi: 10.1007/s11307-013-0698-8

Nanotechnology

 **Opening Up the Optical Imaging Window Using Nano-Luciferin**


Apurva R. Patel & Ed Lim & Kevin P. Francis & Mandip Singh
Pharm Res., Published Online 5/16/2014; DOI 10.1007/s11095-014-1400-9

 **Assessing the in vivo efficacy of Doxorubicin loaded hyaluronan nanoparticles**

Ei-Dakdouki MH, Xia J, Zhu DC, Kavunja H, Grieshaber J, O'Reilly S, McCormick JJ, Huang X
ACS Applied Material Interfaces., 2014 Jan 8;6(1):697-705
doi: 10.1021/am404946v

 **Treatment of cancer micrometastasis using a multicomponent chain-like nanoparticle**

Peiris PM, Toy R, Abramowski A, Vicente P, Tucci S, Bauer L, Mayer A, Tam M, Doolittle E, Pansky J, Tran E, Lin D, Schiemann WP, Ghaghada KB, Griswold MA, Karathanasis E
J Control Release, 2014;173: 51-8
doi: 10.1016/j.jconrel.2013.10.031

 **Imaging and Nanomedicine in Inflammatory Atherosclerosis**

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Science Translational Medicine, 2014; 6:239sr1

NeuroScience




 **Bioluminescence imaging of stroke-induced endogenous neural stem cell response**

Vandeputte C, Reumers V, Aelvoet SA, Thiry I, De Swaef S, Van den Haute C, Pascual-Brazo J, Farr TD, Vande Velde G, Hoehn M, Himmelreich U, Van Laere K, Debyser Z, Gijsbers R, Baekelandt V
Neurobiol Dis., 2014 May 27;69C:144-155. doi: 10.1016/j.nbd.2014.05.014

Oncology

-  **Downregulation of SUN2, a novel tumor suppressor, mediates miR-221/222-induced malignancy in central nervous system embryonal tumors**
Tsung-Han Hsieh, Chen-Li Chien, Yu-Hsiu Lee, Chen-I Lin, Jui-Yu Hsieh, Meng-En Chao, Da-Jung Liu, Shing-Shiung Chu, Wan Chen, Shih-Chieh Lin, Donald Ming-Tak Ho, Ren-Shyan Liu, Chi-Hung Lin, Tai-Tong Wong, and Hsei-Wei Wang
Carcinogenesis, published 12 June 2014, DOI: 10.1093/carcin/bgu105
-  **Biodistribution, Tumor Uptake and Efficacy of 5-FU-Loaded Liposomes: Why Size Matters**
Raphaelle Fanciullino & Severine Mollard & Florian Correard & Sarah Giacometti & Cindy Serdjebi & Athanassios Iliadis & Joseph Ciccolini
Pharmaceutical Research, April 22nd 2014; DOI 10.1007/s11095-014-1364-9
-  **Bone resorption facilitates osteoblastic bone metastatic colonization by cooperation of insulin-like growth factor and hypoxia**
Kuchimaru T, Hoshino T, Aikawa T, Yasuda H, Kobayashi T, Kadonosono T, Kizaka-Kondoh S.
Cancer Sci., 2014 Mar 5. doi: 10.1111/cas.12391
-  **beta-Catenin Inhibitor ICAT Modulates the Invasive Motility of Melanoma Cells**
Melanie J. Domingues, Florian Rambow, Bastien Job, Laura Papon, Wanguo Liu, Lionel Larue and Jacky Bonaventure
Cancer Res., 74(7); 113 DOI: 10.1158/0008-5472.CAN-13-0920
-  **Fragmented Sleep Accelerates Tumor Growth and Progression through Recruitment of Tumor-Associated Macrophages and TLR4 Signaling**
Fahed Hakim, Yang Wang, Shelley X.L. Zhang, Jiamao Zheng, Esma S. Yolcu, Alba Carreras, Abdelnaby Khalyfa, Haval Shirwan, Isaac Almendros, and David Gozal
Cancer Res., 2014; 74:1329-1337
-  **Estradiol and mTORC2 cooperate to enhance prostaglandin biosynthesis and tumorigenesis in TSC2-deficient LAM cells**
Li C, Lee PS, Sun Y, Gu X, Zhang E, Guo Y, Wu CL, Auricchio N, Priolo C, Li J, Csibi A, Parkhitko A, Morrison T, Planaguma A, Kazani S, Israel E, Xu KF, Henske EP, Blenis J, Levy BD, Kwiatkowski D, Yu JJ
J Exp Med., 2014 Jan 13;211(1):15-28
doi: 10.1084/jem.20131080

Probe development

-  **Discovery of Bioluminogenic Probes for Aminopeptidase N Imaging**
Jing Li, Laizhong Chen, Wenxiao Wu, Wei Zhang, Zhao Ma, Yanna Cheng, Lupei Du, Minyong Li
Anal Chem., 2014 Mar 12;86(5):2747-51. Epub 2014 Feb 12. DOI: dx.doi.org/10.1021/ac404176x
-  **A synthetic luciferin improves bioluminescence imaging in live mice**
Evans MS, Charette JP, Adams ST Jr, Reddy GR, Paley MA, Aronin N, Prescher JA, Miller SC
Nat. Methods, 2014 Feb 9. doi: 10.1038/nmeth.2839
-  **A macrophage uptaking near-infrared chemical probe CDnir7 for in vivo imaging of inflammation**
Nam-Young Kang, Sung-Jin Park, Xiao Wei Emmiline Ang, Animesh Samanta, Wouter H. P. Driessen, Vasilis Ntziachristos, Kristine O Vasquez, Jeffrey D. Peterson, Seong-Wook Yu* and Young-Tae Chang
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Stem Cells

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