Stanford



Christopher H. Contag

Professor of Pediatrics (Neonatology), Emeritus

Pediatrics - Neonatology

NIH Biosketch available Online Curriculum Vitae available Online

Bio

BIO

Dr. Contag, is Professor emeritus in the Departments of Pediatrics, Radiology and Microbiology & Immunology at Stanford University, and a member of BioX Faculty for interdisciplinary sciences, and Immunology Faculty. Dr. Contag received his B.S. in Biology from the University of Minnesota, St. Paul in 1982. He received his Ph.D. in Microbiology from the University of Minnesota, Minneapolis in 1988 where he did his dissertation research under the direction of Professors Ashley Haase and Peter Plagemann on the topic of viral infections of the central nervous system. He was a postdoctoral fellow at Stanford University from 1990-1994 in the Department of Microbiology where he studied mother-to-infant transmission of HIV, and then joined the faculty in Pediatrics at Stanford in 1995 with a joint appointment in Microbiology and Immunology and a courtesy appointment in Radiology. Dr. Contag was the Associate Chief of Neonatal and Developmental Medicine, director of Stanford's Center for Innovation in In Vivo Imaging (SCI3) and co-director of the Molecular Imaging Program at Stanford (MIPS) util 2017. Dr. Contag is a pioneer in the field of molecular imaging and is developing imaging approaches aimed at revealing molecular processes in living subjects, including humans, and advancing therapeutic strategies through imaging. His laboratory develops macroscopic and microscopic optical imaging tools and uses imaging to assess tissue responses to stress, reveal immune cell migration patterns, understand stem cell biology and advance biological therapies. He is a founding member, and a past president of the Society for Molecular Imaging, and for his fundamental contributions in imaging, is a recipient of the Achievement Award from the Society for the Molecular Imaging. Dr. Contag is a Fellow of the World Molecular Imaging Society (WMIS) and past President of WMIS. He is also a member of the College of Fellows, American Institute for Medical and Biological Engineering, and received the Britton Chance Award from the International Society of Optics and Photonics (SPIE) for outstanding lifetime contributions to the field of biomedical optics through the development of innovative, high impact technologies.
The research mission of the Contag laboratory is to develop and use noninvasive imaging tools that can simultaneously reveal the nuances of biological processes and provide an overall picture of disease states for the purpose of developing and refining novel interventions. These imaging tools are sensitive and image over a range of scales from micro- to macroscopic, and are well-suited for the in vivo study of cellular and molecular biology.
For the purpose of studying tumor biology in vivo, the Contag group developed advanced microscopic tools with the aims of detecting and studying cancer at high resolution in vivo. These approaches use micro-optics to develop miniaturized cofocal microscopes and Raman endoscopes that can reach inside the body to interrogate disease states. This is enabling point-of-care microscopy that is changing the diagnostic paradigm from biopsy and histopathology to in vivo pathology. The opportunity to study tumor margins with arrays of microscopes will enable improved tumor detection and guided resections.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Pediatrics - Neonatology
- Member, Bio-X
- Member, Cardiovascular Institute

- Member, Maternal & Child Health Research Institute (MCHRI)

ADMINISTRATIVE APPOINTMENTS

- Chair, Scientific Advisory Board--Xenogen Corp., (1997-2005)
- Director, Stanford Center for Photomedicine, (2008-2012)
- Co-director, Molecular Imaging Program at Stanford (MIPS), (2003-2016)
- Director, Stanford Center for Innovation in In Vivo Imaging (SCI^3), (2000-2016)
- Associate Chief, Division of Neonatal and Developmental Medicine, (2010-2016)

HONORS AND AWARDS

- College of Fellows, American Institute for Medical and Biological Engineering (2025)
- Gold Award, World Molecular Imaging Society (2025)
- Alumni Achievement Award, College of Biological Sciences, University of Minnesota (2024)
- Distinguished Investigator, Academy for Radiology and Biomedical Imaging (2022)
- John and Bette Klacsmann Visiting Professor, Mayo Clinc (2019)
- Britton Chance Award for Outstanding Lifetime Contributions to Optics, SPIE (2016)
- Helen C. Levitt Visiting Professorship, Mayo Clinic (2016)
- John A. Hannah Distinguished Professor of Biomedical Engineering, Michigan State University (2016)
- President, World Molecular Imaging Society (2015-2016)
- President Elect, World Molecular Imaging Society (2014-2015)
- Stanford Inventors' Hall of Fame, Stanford University Technology and Licensing Office (2013)
- Fellow, World Molecular Imaging Society (2012)
- Achievement Award, Society for Molecular Imaging (2006)
- President, Society for Molecular Imaging (2002-2003)
- President elect, Society for Molecular Imaging (2001-2002)
- Upjohn Infectious Disease Prize, American Federation for Clinical Research (AFCR) (1995)
- Scholar, American Foundation for AIDS Research (AmFAR) (1991 -1994)
- Bacaner Research Award, Minnesota Medical Foundation (1988)

PROFESSIONAL EDUCATION

- Ph.D., University of Minnesota , Microbiology (1988)
- BS, University of Minnesota , Biology (1982)

PATENTS

- Christopher Contag, Steve H Thorne. "United States Patent 9101658 Immune effector cells pre-infected with oncolytic viruses", Leland Stanford Junior University, Aug 11, 2015
- Christopher Contag, Rajesh Shinde. "United States Patent 12469578 Encapsulated nanoparticles for drug delivery", Leland Stanford Junior University, Dec 15, 2009
- Christopher Contag, Tom J Wandless, Laura A Banaszynski, Mark A Sellmyer, Steve H Thorne.. "United States Patent 8530636 Methods of regulating protein function in cells in vivo using synthetic small molecules.", Leland Stanford Junior University, May 7, 2009
- Christopher Contag, Pamela Contag, David Benaron. "United States Patent 6939533 Non-invasive localization of a light-emitting conjugate in a mammal. Detecting and tracking pathogens in a mammal", Leland Stanford Junior University, Aug 14, 2007
- Christopher Contag, AC Matin, Yorum Borak, Steve H Thorne, Jianghong Rao.. "United States Patent 7687474 Nitroreductase enzymes", Leland Stanford Junior University, Dec 20, 2006

- Christopher Contag, Pamela Contag, David Benaron. "United States Patent 6638752 Biodetectors targeted to specific ligands", Leland Stanford Junior University, Oct 28, 2003

LINKS

- Molecular Imaging Program: http://med.stanford.edu/profiles/mips/researcher/Christopher_Contag/
- MIPS: http://mips.stanford.edu/faculty_staff/
- Molecular Biophotonics and Imaging Lab: http://mips.stanford.edu/research/mbil.html
- Neonatology: http://neonatology.stanford.edu/
- Cancer Institute--Cancer Imaging: http://ancer.stanford.edu/research/imaging/
- Microbiology and Immunology: http://med.stanford.edu/profiles/microimmuno/frdActionServlet?choiceId=facProfile&fid=4036
- Immunology: http://med.stanford.edu/profiles/immunol/faculty/Christopher_Contag/
- BioX--Clark Center: http://biox.stanford.edu/clark/contag.html
- CCBT: http://neurosurgery.stanford.edu/pediatric/ccbt.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Mammalian biology occurs in complex environments of living tissues and complex organ structures where there is potential for rapid change, and therefore we use multimodality imaging approaches to study the dynamics of biological processes. These strategies have cellular resolution and molecular specificity, and can reveal dynamic changes as they occur in the living body. We have developed imaging approaches based on optical reporter genes and have used them to reveal immune cell trafficking patterns, regulation of gene expression, extent of tumor growth, stem cell biology, and nature of host responses to infection. Our initial experimental approach was based on the observation that light can pass through mammalian tissues, much the same as when light from a flashlight is shined through one's hand in a dark room. The source of light in our approach is internal; that is, we use genes originating from fireflies and other "glow-in-the-dark" (bioluminescent) organisms to mark mammalian cells and pathogens. These labeled entities are then used in animal models of human biology and disease, and the light that they produce is externally monitored to reveal levels of expression, growth rate, or movement within tissue and organs. The strength of this method is that it can be used to simultaneously reveal the nuances of biological processes, and the overall biological response in living animals. Recently, we have revealed the kinetics of stem cell engraftment and hematopoietic reconstitution, elucidated the nature of minimal residual disease states following cancer therapy and identified tissue sites that pathogens use to evade the host immune response. Optical methods of molecular imaging are extremely powerful in preclinical models and have tremendous potential, but a wide range of tools is becoming available for studying biology in vivo. We therefore use many of these tools and approach biological questions with multimodality strategies. The focus of our efforts is the cells and molecules that control the body’s response to insult and enable regeneration of damaged tissues and organs.

CLINICAL TRIALS

- SPY Intra-Operative Angiography & Skin Perfusion in Immediate Breast Reconstruction w/ Implants, Not Recruiting

Publications

PUBLICATIONS

- **Engineered Endosymbionts that Modulate Primary Macrophage Function and Attenuate Tumor Growth by Shifting the Tumor Microenvironment** *ACS APPLIED BIO MATERIALS*
  Madsen, C. S., Makela, A. V., Maduka, C. V., Greeson, E. M., Tundo, A., Ural, E., Kulkarni, S., Zarea, A. A., Kiupel, M., Sayadi, M., Contag, C. H.
  2025

- **Immunometabolic cues recompose and reprogram the microenvironment around implanted biomaterials.** *Nature biomedical engineering*

Maduka, C. V., Schmitter-Sánchez, A. D., Makela, A. V., Ural, E., Stivers, K. B., Pope, H., Kuhnert, M. M., Habeeb, O. M., Tundo, A., Alhaj, M., Kiselev, A., Chen, S., Donneys, et al
2024; 8 (10): 1308-1321

- **Polylactide Degradation Activates Immune Cells by Metabolic Reprogramming.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
  Maduka, C. V., Alhaj, M., Ural, E., Habeeb, O. M., Kuhnert, M. M., Smith, K., Makela, A. V., Pope, H., Chen, S., Hix, J. M., Mallett, C. L., Chung, S., Hakun, et al
  2023: e2304632

- **Glycolytic reprogramming in macrophages and MSCs during inflammation.** *Frontiers in immunology*
  Li, X., Shen, H., Zhang, M., Teissier, V., Huang, E. E., Gao, Q., Tsubosaka, M., Toya, M., Kushioka, J., Maduka, C. V., Contag, C. H., Chow, S. K., Zhang, et al
  2023; 14: 1199751

- **Glycolytic reprogramming underlies immune cell activation by polyethylene wear particles.** *Biomaterials advances*
  Maduka, C. V., Habeeb, O. M., Kuhnert, M. M., Hakun, M., Goodman, S. B., Contag, C. H.
  2023; 152: 213495

- **Stereochemistry Determines Immune Cellular Responses to Polylactide Implants.** *ACS biomaterials science & engineering*
  Maduka, C. V., Alhaj, M., Ural, E., Kuhnert, M. M., Habeeb, O. M., Schilmiller, A. L., Hankenson, K. D., Goodman, S. B., Narayan, R., Contag, C. H.
  2023

- **Role of Mitochondrial Complex I in the Proinflammatory Response to Polylactide Implants** *ACS APPLIED ENGINEERING MATERIALS*
  Maduka, C. V., Makela, A. V., Tundo, A., Ural, E., Stivers, K. B., Alhaj, M., Narayan, R., Goodman, S. B., Ashammakhi, N., Elisseeff, J. H., Hankenson, K. D., Contag, C. H.
  2024

- **Regulating the proinflammatory response to composite biomaterials by targeting immunometabolism** *BIOACTIVE MATERIALS*
  Maduka, C., Makela, A., Tundo, A., Ural, E., Stivers, K. B., Kuhnert, M. M., Alhaj, M., Apu, E., Ashammakhi, N., Hankenson, K. D., Narayan, R., Elisseeff, J. H., Contag, et al
  2024; 40: 64-73

- **Targeted Biodegradable Near-Infrared Fluorescent Nanoparticles for Colorectal Cancer Imaging** *ACS APPLIED BIO MATERIALS*
  Chung, S., Hadrick, K., Nafiujjaman, M., Apu, E., Hill, M. L., Nurunnabi, M., Contag, C. H., Kim, T.
  2024; 7 (12): 7861-7870

- **Flavinated SDHA underlies the change in intrinsic optical properties of oral cancers.** *Communications biology*
  Marumo, T., Maduka, C. V., Ural, E., Apu, E. H., Chung, S., Tanabe, K., van den Berg, N. S., Zhou, Q., Martin, B. A., Miura, T., Rosenthal, E. L., Shibahara, T., Contag, et al
  2023; 6 (1): 1134

- **Gla-domain mediated targeting of externalized phosphatidylserine for intracellular delivery.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*
  Hardy, J., Bauzon, M., Chan, C. K., Makela, A. V., Kanada, M., Schneider, D., Blankenberg, F., Contag, C. H., Hermiston, T.
  2023; 37 (8): e23113

- **Flavinated SDHA Underlies the Change in Intrinsic Optical Properties of Oral Cancers.** *bioRxiv : the preprint server for biology*
  Marumo, T., Maduka, C. V., Ural, E., Apu, E. H., Chung, S., van den Berg, N. S., Zhou, Q., Martin, B. A., Rosenthal, E. L., Shibahara, T., Contag, C. H.
  2023

- **Bioenergetic Profile Of Mesenchymal Stromal Cells And Macrophages In The Presence Of An Inflammatory Stimulus In A 3D Model**
  Teissier, V., Gao, Q., Shen, H., Li, J., Li, X., Huang, E., Kushioka, J., Toya, M., Tsubosaka, M., Hirata, H., Alizadeh, H., Maduka, C., Zhang, et al
  MARY ANN LIEBERT, INC.2023

- **Metabolic profile of mesenchymal stromal cells and macrophages in the presence of polyethylene particles in a 3D model.** *Stem cell research & therapy*
  Teissier, V., Gao, Q., Shen, H., Li, J., Li, X., Huang, E. E., Kushioka, J., Toya, M., Tsubosaka, M., Hirata, H., Alizadeh, H. V., Maduka, C. V., Contag, et al
  2023; 14 (1): 99

- **Efficacy of Cathelicidin-Mimetic Antimicrobial Peptoids against Staphylococcus aureus.** *Microbiology spectrum*
  Benjamin, A. B., Moule, M. G., Didwania, M. K., Hardy, J., Saenkham-Huntsinger, P., Sule, P., Nielsen, J. E., Lin, J. S., Contag, C. H., Barron, A. E., Cirillo, J. D.
  2022: e0053422

- **A protease-activated, near-infrared fluorescent probe for early endoscopic detection of premalignant gastrointestinal lesions.** *Proceedings of the National Academy of Sciences of the United States of America*
  Yim, J. J., Harmsen, S., Flisikowski, K., Flisikowska, T., Namkoong, H., Garland, M., van den Berg, N. S., Vilches-Moure, J. G., Schnieke, A., Saur, D., Glasl, S., Gorpas, D., Habtezion, et al
  2021; 118 (1)

- **Mind Over Magnets - How Magnetic Particle Imaging is Changing the Way We Think About the Future of Neuroscience.** *Neuroscience*
  V Makela, A., Gaudet, J. M., Murrell, D. H., Mansfield, J. R., Wintermark, M., Contag, C. H.
  2020

- **Molecular Imaging of Infective Endocarditis With 6''-[18F]Fluoromaltotriose Positron Emission Tomography-Computed Tomography.** *Circulation*
  Wardak, M., Gowrishankar, G., Zhao, X., Liu, Y., Chang, E., Namavari, M., Haywood, T., Gabr, M. T., Neofytou, E., Chour, T., Qin, X., Vilches-Moure, J. G., Hardy, et al
  2020; 141 (21): 1729–31

- **Software-Based Phase Control, Video-Rate Imaging, and Real-Time Mosaicing With a Lissajous-Scanned Confocal Microscope** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Loewke, N. O., Qiu, Z., Mandella, M. J., Ertsey, R., Loewke, A., Gunaydin, L. A., Rosenthal, E. L., Contag, C. H., Solgaard, O.
  2020; 39 (4): 1127–37

- **Nano-immunoimaging.** *Nanoscale horizons*
  Wang, P. n., Kim, T. n., Harada, M. n., Contag, C. n., Huang, X. n., Smith, B. R.
  2020; 5 (4): 628–53

- **Biodegradable fluorescent nanoparticles for endoscopic detection of colorectal carcinogenesis.** *Advanced functional materials*
  Rogalla, S., Flisikowski, K., Gorpas, D., Mayer, A. T., Flisikowska, T., Mandella, M. J., Ma, X., Casey, K. M., Felt, S. A., Saur, D., Ntziachristos, V., Schnieke, A., Contag, et al
  2019; 29 (51)

- **Biodegradable Fluorescent Nanoparticles for Endoscopic Detection of Colorectal Carcinogenesis** *ADVANCED FUNCTIONAL MATERIALS*
  Rogalla, S., Flisikowski, K., Gorpas, D., Mayer, A. T., Flisikowska, T., Mandella, M. J., Ma, X., Casey, K. M., Felt, S. A., Saur, D., Ntziachristos, V., Schnieke, A., Contag, et al
  2019; 29 (51)

- **Microvesicle-mediated delivery of minicircle DNA results in effective gene-directed enzyme prodrug cancer therapy.** *Molecular cancer therapeutics*
  Kanada, M., Kim, B. D., Hardy, J. W., Bachmann, M. H., Bernard, M. P., Perez, G. I., Zarea, A. A., Ge, T. J., Withrow, A., Ibrahim, S. A., Toomajian, V., Gambhir, S. S., Paulmurugan, et al
  2019

- **Tunable structured illumination light sheet microscopy for background rejection and imaging depth in minimally processed tissues** *JOURNAL OF BIOMEDICAL OPTICS*
  Landry, J. R., Itoh, R., Li, J. M., Hamann, S. S., Mandella, M., Contag, C. H., Solgaard, O.
  2019; 24 (4)

- **Tunable structured illumination light sheet microscopy for background rejection and imaging depth in minimally processed tissues.** *Journal of biomedical optics*
  Landry, J. R., Itoh, R., Li, J. M., Hamann, S. S., Mandella, M., Contag, C. H., Solgaard, O.
  2019; 24 (4): 1–6

- **Detection of Premalignant Gastrointestinal Lesions Using Surface-Enhanced Resonance Raman Scattering-Nanoparticle Endoscopy.** *ACS nano*
  Harmsen, S., Rogalla, S., Huang, R., Spaliviero, M., Neuschmelting, V., Hayakawa, Y., Lee, Y., Tailor, Y., Toledo-Crow, R., Kang, J. W., Samii, J. M., Karabeber, H., Davis, et al
  2019; 13 (2): 1354–64

- **Detection of Premalignant Gastrointestinal Lesions Using Surface-Enhanced Resonance Raman Scattering-Nanoparticle Endoscopy** *ACS NANO*
  Harmsen, S., Rogalla, S., Huang, R., Spaliviero, M., Neuschmelting, V., Hayakawa, Y., Lee, Y., Tailor, Y., Toledo-Crow, R., Kang, J., Samii, J. M., Karabeber, H., Davis, et al
  2019; 13 (2): 1354–64

- **Functional DNA Delivery Enabled by Lipid-Modified Charge-Altering Releasable Transporters (CARTs)** *BIOMACROMOLECULES*
  Benner, N. L., Near, K. E., Bachmann, M. H., Contag, C. H., Waymouth, R. M., Wender, P. A.
  2018; 19 (7): 2812–24

- **A Dual-Modality Hybrid Imaging System Harnesses Radioluminescence and Sound to Reveal Molecular Pathology of Atherosclerotic Plaques** *SCIENTIFIC REPORTS*
  Zaman, R. T., Yousefi, S., Long, S. R., Saito, T., Mandella, M., Qiu, Z., Chen, R., Contag, C. H., Gambhir, S. S., Chin, F. T., Khuri-Yakub, B. T., McConnell, M. V., Shung, et al
  2018; 8: 8992

- **Automated Cell Segmentation for Quantitative Phase Microscopy** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Loewke, N. O., Pai, S., Cordeiro, C., Black, D., King, B. L., Contag, C. H., Chen, B., Baer, T. M., Solgaard, O.
  2018; 37 (4): 929–40

- **Regulatory Aspects of Optical Methods and Exogenous Targets for Cancer Detection (vol 77, pg 2197, 2017)** *CANCER RESEARCH*
  Tummers, W. S., Warram, J. M., Tipirneni, K. E., Fengler, J., Jacobs, P., Shankar, L., Henderson, L., Ballard, B., Pfefer, T., Pogue, B. W., Weichert, J. P., Bouvet, M., Sorger, et al
  2018; 78 (4): 1123

- **Characterization of Magneto-Endosymbionts as MRI Cell Labeling and Tracking Agents** *MOLECULAR IMAGING AND BIOLOGY*
  Brewer, K. D., Spitler, R., Lee, K. R., Chan, A. C., Barrozo, J. C., Wakeel, A., Foote, C. S., Machtaler, S., Rioux, J., Willmann, J. K., Chakraborty, P., Rice, B. W., Contag, et al
  2018; 20 (1): 65–73

- **Cell Labeling with Magneto-Endosymbionts and the Dissection of the Subcellular Location, Fate, and Host Cell Interactions** *MOLECULAR IMAGING AND BIOLOGY*
  Lee, K. R., Wakeel, A., Chakraborty, P., Foote, C. S., Kajiura, L., Barrozo, J. C., Chan, A. C., Bazarov, A. V., Spitler, R., Kutny, P. M., Denegre, J. M., Taft, R. A., Seemann, et al
  2018; 20 (1): 55–64

- **Magnetic particle imaging of islet transplantation in the liver and under the kidney capsule in mouse models.** *Quantitative imaging in medicine and surgery*
  Wang, P. n., Goodwill, P. W., Pandit, P. n., Gaudet, J. n., Ross, A. n., Wang, J. n., Yu, E. n., Hensley, D. W., Doyle, T. C., Contag, C. H., Conolly, S. n., Moore, A. n.
  2018; 8 (2): 114–22

- **Implantable, insertable and wearable micro-optical devices for early detection of cancer**
  Contag, C. H.
  edited by Winzer, P., Tsang, H. K., Capmany, J., Yao, J., Fontaine, N., Dutta, N.
  IEEE.2018

- **Preparation of Tc99m-Labeled Pseudomonas Bacteriophage without Adversely Impacting Infectivity or Biodistribution** *BIOCONJUGATE CHEMISTRY*
  Holman, D., Lungren, M. P., Hardy, J., Contag, C., Blankenberg, F.
  2017; 28 (11): 2698–2706

- **The tyrosine kinase inhibitor imatinib mesylate suppresses uric acid crystal-induced acute gouty arthritis in mice** *PLOS ONE*
  Reber, L. L., Starkl, P., Balbino, B., Sibilano, R., Gaudenzio, N., Rogalla, S., Sensarn, S., Kang, D., Raghu, H., Sokolove, J., Robinson, W. H., Contag, C. H., Tsai, et al
  2017; 12 (10): e0185704

- **F-Fluoromaltotriose: A Second Generation PET Tracer Targeting the Maltodextrin Transporter in Bacteria.** *Journal of nuclear medicine*
  Gowrishankar, G., Hardy, J., Wardak, M., Namavari, M., Reeves, R., Neofytou, E., Srinivasan, A., Wu, J., Contag, C., Gambhir, S.
  2017

- **Neutrophil myeloperoxidase diminishes the toxic effects and mortality induced by lipopolysaccharide** *JOURNAL OF EXPERIMENTAL MEDICINE*
  Reber, L. L., Gillis, C. M., Starkl, P., Joensson, F., Sibilano, R., Marichal, T., Gaudenzio, N., Berard, M., Rogalla, S., Contag, C. H., Bruhns, P., Galli, S. J.
  2017; 214 (5): 1249-1258
- **Harnessing Radioluminescence and Sound to Reveal Molecular Pathology of Atherosclerotic Plaques**
  Zaman, R., Yousefi, S., Long, S., Contag, C., Gambhir, S., Khuri-Yakub, B., Xing, L.
  SOC NUCLEAR MEDICINE INC.2017
- **Regulatory Aspects of Optical Methods and Exogenous Targets for Cancer Detection** *CANCER RESEARCH*
  Tummers, W. S., Warram, J. M., Tipirneni, K. E., Fengler, J., Jacobs, P., Shankar, L., Henderson, L., Ballard, B., Pogue, B. W., Weichert, J. P., Bouvet, M., Sorger, J., Contag, et al
  2017; 77 (9): 2197-2206
- **Charge-Altering Releasable Transporters (CARTs) for the delivery and release of messenger RNA in living animals**
  McKinlay, C., Vargas, J., Blake, T., Hardy, J., Masamitsu, K., Contag, C., Wender, P., Waymouth, R.
  AMER CHEMICAL SOC.2017
- **Imaging of Tumor-Associated Macrophages in a Transgenic Mouse Model of Orthotopic Ovarian Cancer.** *Molecular imaging and biology*
  He, H., Chiu, A. C., Kanada, M., Schaar, B. T., Krishnan, V., Contag, C. H., Dorigo, O.
  2017
- **Local estrogen axis in the human bone microenvironment regulates estrogen receptor-positive breast cancer cells.** *Breast cancer research : BCR*
  Amanatullah, D. F., Tamaresis, J. S., Chu, P. n., Bachmann, M. H., Hoang, N. M., Collyar, D. n., Mayer, A. T., West, R. B., Maloney, W. J., Contag, C. H., King, B. L.
  2017; 19 (1): 121
- **Intracellular biomass flocculation as a key mechanism of rapid bacterial killing by cationic, amphipathic antimicrobial peptides and peptoids.** *Scientific reports*
  Chongsiriwatana, N. P., Lin, J. S., Kapoor, R. n., Wetzler, M. n., Rea, J. A., Didwania, M. K., Contag, C. H., Barron, A. E.
  2017; 7 (1): 16718
- **A Clinical Wide-Field Fluorescence Endoscopic Device for Molecular Imaging Demonstrating Cathepsin Protease Activity in Colon Cancer.** *Molecular imaging and biology*
  Sensarn, S., Zavaleta, C. L., Segal, E., Rogalla, S., Lee, W., Gambhir, S. S., Bogyo, M., Contag, C. H.
  2016; 18 (6): 820-829
- **A Clinical Wide-Field Fluorescence Endoscopic Device for Molecular Imaging Demonstrating Cathepsin Protease Activity in Colon Cancer** *MOLECULAR IMAGING AND BIOLOGY*
  Sensarn, S., Zavaleta, C. L., Segal, E., Rogalla, S., Lee, W., Gambhir, S. S., Bogyo, M., Contag, C. H.
  2016; 18 (6): 820–29
- **Reactive Oxygen Species Imaging in a Mouse Model of Inflammatory Bowel Disease** *MOLECULAR IMAGING AND BIOLOGY*
  Bronsart, L., Linh Nguyen, L., Habtezion, A., Contag, C.
  2016; 18 (4): 473-478
- **World Molecular Imaging Congress 2016: Imaging Biology-Improving Therapy.** *Molecular imaging and biology : MIB : the official publication of the Academy of Molecular Imaging*
  Kiessling, F., Contag, C. H.
  2016; 18 (3): 313-4
- **Multimodality Imaging of Cancer Superoxide Anion Using the Small Molecule Coelenterazine.** *Molecular imaging and biology*
  Bronsart, L. L., Stokes, C., Contag, C. H.
  2016; 18 (2): 166-171
- **Non-Invasive Intravital Imaging of siRNA-Mediated Mutant Keratin Gene Repression in Skin.** *Molecular imaging and biology*
  Hickerson, R. P., Speaker, T. J., Lara, M. F., González-González, E., Flores, M. A., Contag, C. H., Kaspar, R. L.
  2016; 18 (1): 34-42

- **Signaling by Extracellular Vesicles Advances Cancer Hallmarks.** *Trends in cancer*
  Kanada, M., Bachmann, M. H., Contag, C. H.
  2016; 2 (2): 84-94
- **Chemiluminescence Imaging of Superoxide Anion Detects Beta-Cell Function and Mass** *PLOS ONE*
  Bronsart, L. L., Stokes, C., Contag, C. H.
  2016; 11 (1)
- **Chemiluminescence Imaging of Superoxide Anion Detects Beta-Cell Function and Mass.** *PloS one*
  Bronsart, L. L., Stokes, C., Contag, C. H.
  2016; 11 (1): e0146601
- **Imaging Functional Nucleic Acid Delivery to Skin.** *Methods in molecular biology (Clifton, N.J.)*
  Kaspar, R. L., Hickerson, R. P., González-González, E., Flores, M. A., Speaker, T. P., Rogers, F. A., Milstone, L. M., Contag, C. H.
  2016; 1372: 1-24
- **A role of the adaptive immune system in glucose homeostasis.** *BMJ open diabetes research & care*
  Bronsart, L. L., Contag, C. H.
  2016; 4 (1)
- **Breast Cancer Cell Colonization of the Human Bone Marrow Adipose Tissue Niche** *NEOPLASIA*
  Templeton, Z. S., Lie, W., Wang, W., Rosenberg-Hasson, Y., Alluri, R. V., Tamaresis, J. S., Bachmann, M. H., Lee, K., Maloney, W. J., Contag, C. H., King, B. L.
  2015; 17 (12): 849-861
- **[Tc-99m]Annexin V-128 SPECT Monitoring of Splenic and Disseminated Listeriosis in Mice: a Model of Imaging Sepsis** *MOLECULAR IMAGING AND BIOLOGY*
  Hardy, J. W., Levashova, Z., Schmidt, T. L., Contag, C. H., Blankenberg, F. G.
  2015; 17 (3): 345-354
- **Early Cancer Detection at the Epithelial Surface** *CANCER JOURNAL*
  Rogalla, S., Contag, C. H.
  2015; 21 (3): 179-187
- **Annexin V blockade of the immunosuppressive effects of phosphatidylserine in 4T1 murine mammary tumors**
  Blankenberg, F., Contag, C., Hardy, J.
  SOC NUCLEAR MEDICINE INC.2015
- **A Real-Time Clinical Endoscopic System for Intraluminal, Multiplexed Imaging of Surface-Enhanced Raman Scattering Nanoparticles** *PLOS ONE*
  Garai, E., Sensarn, S., Zavaleta, C. L., Loewke, N. O., Rogalla, S., Mandella, M. J., Felt, S. A., Friedland, S., Liu, J. T., Gambhir, S. S., Contag, C. H.
  2015; 10 (4)
- **Differential fates of biomolecules delivered to target cells via extracellular vesicles.** *Proceedings of the National Academy of Sciences of the United States of America*
  Kanada, M., Bachmann, M. H., Hardy, J. W., Frimannson, D. O., Bronsart, L., Wang, A., Sylvester, M. D., Schmidt, T. L., Kaspar, R. L., Butte, M. J., Matin, A. C., Contag, C. H.
  2015; 112 (12): E1433-42
- **Atherosclerotic Plaque Targeting Mechanism of Long-Circulating Nanoparticles Established by Multimodal Imaging** *ACS NANO*
  Lobatto, M. E., Calcagno, C., Millon, A., Senders, M. L., Fay, F., Robson, P. M., Ramachandran, S., Binderup, T., Paridaans, M. P., Sensarn, S., Rogalla, S., Gordon, R. E., Cardoso, et al
  2015; 9 (2): 1837-1847
- **Detection of Non-Melanoma Skin Cancer by in vivo Fluorescence Imaging with Fluorocoxib A** *NEOPLASIA*
  Ra, H., Gonzaez-Gonzaez, E., Uddin, M. J., King, B. L., Lee, A., Ali-Khan, I., Marnett, L. J., Tang, J. Y., Contag, C. H.
  2015; 17 (2): 201-207
- **Methods for culturing human femur tissue explants to study breast cancer cell colonization of the metastatic niche.** *Journal of visualized experiments : JoVE*
  Templeton, Z. S., Bachmann, M. H., Alluri, R. V., Maloney, W. J., Contag, C. H., King, B. L.

2015

- **Non-invasive intravital imaging of cellular differentiation with a bright red-excitable fluorescent protein** *NATURE METHODS*
  Chu, J., Haynes, R. D., Corbel, S. Y., Li, P., Gonzalez-Gonzalez, E., Burg, J. S., Ataie, N. J., Lam, A. J., Cranfill, P. J., Baird, M. A., Davidson, M. W., Ng, H., Garcia, et al
  2014; 11 (5): 572-578

- **Tc99m-annexin V-128 SPECT imaging of listeriosis in mice**
  Hardy, J., Levashova, Z., Schmidt, T., Contag, C., Blankenberg, F.
  SOC NUCLEAR MEDICINE INC.2014

- **A killer choice for cancer immunotherapy.** *Immunologic research*
  Schmidt, T. L., Negrin, R. S., Contag, C. H.
  2014; 58 (2-3): 300-306

- **Monitoring Dynamic Interactions Between Breast Cancer Cells and Human Bone Tissue in a Co-culture Model.** *Molecular imaging and biology*
  Contag, C. H., Lie, W., Bammer, M. C., Hardy, J. W., Schmidt, T. L., Maloney, W. J., King, B. L.
  2014; 16 (2): 158-166

- **Severe Impairment of Axonal Transport in Acute Experimental Anterior Ischemic Optic Neuropathy**
  Ma, J., Shariati, M., Pisani, L., Pestilli, F., Dougherty, B., Perry, L., Lee, G., Contag, C., Wandell, B. A., Liao, Y.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2014

- **Reporter gene technologies for imaging cell fates in hematopoiesis.** *Methods in molecular biology (Clifton, N.J.)*
  Kusy, S., Contag, C. H.
  2014; 1109: 1-22

- **Monitoring Dynamic Interactions Between Breast Cancer Cells and Human Bone Tissue in a Co-culture Model** *Molecular Imaging and Biology*
  Contag, C. H., Lie, W., Bammer, M. C., Hardy, J. W., Schmidt, T. L., Maloney, W. J., King, B. L.
  2014; 16 (2): 158-166

- **Noninvasive imaging of hypoxia-inducible factor-1a gene therapy for myocardial ischemia.** *Human gene therapy methods*
  Chen, I. Y., Gheysens, O., Li, Z., Rasooly, J. A., Wang, Q., Paulmurugan, R., Rosenberg, J., Rodriguez-Porcel, M., Willmann, J. K., Wang, D. S., Contag, C. H., Robbins, R. C., Wu, et al
  2013; 24 (5): 279-288

- **Noninvasive imaging of hypoxia-inducible factor-1a gene therapy for myocardial ischemia.** *Human gene therapy methods*
  Chen, I. Y., Gheysens, O., Li, Z., Rasooly, J. A., Wang, Q., Paulmurugan, R., Rosenberg, J., Rodriguez-Porcel, M., Willmann, J. K., Wang, D. S., Contag, C. H., Robbins, R. C., Wu, et al
  2013; 24 (5): 279-288

- **High-sensitivity, real-time, ratiometric imaging of surface-enhanced Raman scattering nanoparticles with a clinically translatable Raman endoscope device.** *Journal of biomedical optics*
  Garai, E., Sensarn, S., Zavaleta, C. L., Van de Sompel, D., Loewke, N. O., Mandella, M. J., Gambhir, S. S., Contag, C. H.
  2013; 18 (9): 96008-?

- **Minimal-length Synthetic shRNAs Formulated with Lipid Nanoparticles are Potent Inhibitors of Hepatitis C Virus IRES-linked Gene Expression in Mice** *MOLECULAR THERAPY-NUCLEIC ACIDS*
  Dallas, A., Ilves, H., Shorenstein, J., Judge, A., Spitler, R., Contag, C., Wong, S. P., Harbottle, R. P., MacLachlan, I., Johnston, B. H.
  2013; 2

- **A Raman-based endoscopic strategy for multiplexed molecular imaging.** *Proceedings of the National Academy of Sciences of the United States of America*
  Zavaleta, C. L., Garai, E., Liu, J. T., Sensarn, S., Mandella, M. J., Van de Sompel, D., Friedland, S., Van Dam, J., Contag, C. H., Gambhir, S. S.
  2013; 110 (25): E2288-97

- **A Raman-based endoscopic strategy for multiplexed molecular imaging** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Zavaleta, C. L., Garai, E., Liu, J. T. C., Sensarn, S., Mandella, M. J., Van de Sompel, D., Friedland, S., Van Dam, J., Contag, C. H., Gambhir, S. S.

2013; 110 (25): 10062–63

- **Non-Invasive High-Resolution Imaging of Muscle Regeneration with a New Red-Absorbing Fluorescent Protein** *16th Annual Meeting of the American-Society-of-Gene-and-Cell-Therapy (ASGCT)*
  Chu, J., Haynes, R. D., Corbel, S. Y., Li, P., Gonzalez-Gonzalez, E., Cranfill, P. J., Baird, M., Davidson, M. W., Contag, C. H., Shen, K., Blau, H. M., Lin, M. Z.
  NATURE PUBLISHING GROUP.2013: S97–S97

- **Gene silencing following siRNA delivery to skin via coated steel microneedles: In vitro and in vivo proof-of-concept** *JOURNAL OF CONTROLLED RELEASE*
  Chong, R. H., Gonzalez-Gonzalez, E., Lara, M. F., Speaker, T. J., Contag, C. H., Kaspar, R. L., Coulman, S. A., Hargest, R., Birchall, J. C.
  2013; 166 (3): 211-219

- **Advancing the translation of optical imaging agents for clinical imaging** *BIOMEDICAL OPTICS EXPRESS*
  Sevick-Muraca, E. M., Akers, W. J., Joshi, B. P., Luker, G. D., Cutler, C. S., Marnett, L. J., Contag, C. H., Wang, T. D., Azhdarinia, A.
  2013; 4 (1): 160-170

- **Gene Silencing in Skin After Deposition of Self-Delivery siRNA With a Motorized Microneedle Array Device.** *Molecular therapy. Nucleic acids*
  Hickerson, R. P., Wey, W. C., Rimm, D. L., Speaker, T., Suh, S., Flores, M. A., Gonzalez-Gonzalez, E., Leake, D., Contag, C. H., Kaspar, R. L.
  2013; 2

- **Real-time pathology through in vivo microscopy.** *Studies in health technology and informatics*
  Liu, J. T., Loewke, N. O., Mandella, M. J., Leigh, S. Y., Levenson, R. M., Crawford, J. M., Contag, C. H.
  2013; 185: 235-264

- **Microscopic Delineation of Medulloblastoma Margins in a Transgenic Mouse Model Using a Topically Applied VEGFR-1 Probe** *TRANSLATIONAL ONCOLOGY*
  Wang, D., Chen, Y., Leigh, S. Y., Haeberle, H., Contag, C. H., Liu, J. T.
  2012; 5 (6): 408-414

- **Intravital Fluorescence Imaging of Small Interfering RNA-Mediated Gene Repression in a Dual Reporter Melanoma Xenograft Model** *NUCLEIC ACID THERAPEUTICS*
  Hickerson, R. P., Gonzalez-Gonzalez, E., Vlassov, A. V., Li, M., Lara, M. F., Contag, C. H., Kaspar, R. L.
  2012; 22 (6): 438-443

- **Femtosecond plasma mediated laser ablation has advantages over mechanical osteotomy of cranial bone** *LASERS IN SURGERY AND MEDICINE*
  Lo, D. D., Mackanos, M. A., Chung, M. T., Hyun, J. S., Montoro, D. T., Grova, M., Liu, C., Wang, J., Palanker, D., Connolly, A. J., Longaker, M. T., Contag, C. H., Wan, et al
  2012; 44 (10): 805-814

- **Comparing an optical parametric oscillator (OPO) as a viable alternative for mid-infrared tissue ablation with a free electron laser (FEL)** *LASERS IN MEDICAL SCIENCE*
  Mackanos, M. A., Simanovskii, D. M., Contag, C. H., Kozub, J. A., Jansen, E. D.
  2012; 27 (6): 1213-1223

- **Interrogation of Inhibitor of Nuclear Factor kappa B alpha/Nuclear Factor kappa B (I kappa B alpha/NF-kappa B) Negative Feedback Loop Dynamics FROM SINGLE CELLS TO LIVE ANIMALS IN VIVO** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Moss, B. L., Elhammali, A., Fowlkes, T., Gross, S., Vinjamoori, A., Contag, C. H., Piwnica-Worms, D.
  2012; 287 (37): 31359-31370

- **Interrogation of inhibitor of nuclear factor ?B a/nuclear factor ?B (I?Ba/NF-?B) negative feedback loop dynamics: from single cells to live animals in vivo.** *journal of biological chemistry*
  Moss, B. L., Elhammali, A., Fowlkes, T., Gross, S., Vinjamoori, A., Contag, C. H., Piwnica-Worms, D.
  2012; 287 (37): 31359-31370

- **Inhibition of CD44 Gene Expression in Human Skin Models, Using Self-Delivery Short Interfering RNA Administered by Dissolvable Microneedle Arrays** *HUMAN GENE THERAPY*
  Lara, M. F., Gonzalez-Gonzalez, E., Speaker, T. J., Nickerson, R. P., Leake, D., Milstone, L. M., Contag, C. H., Kaspar, R. L.
  2012; 23 (8): 816-823

- **Inhibition of CD44 gene expression in human skin models, using self-delivery short interfering RNA administered by dissolvable microneedle arrays.** *Human gene therapy*
  Lara, M. F., González-González, E., Speaker, T. J., Hickerson, R. P., Leake, D., Milstone, L. M., Contag, C. H., Kaspar, R. L.
  2012; 23 (8): 816-823

- **Identification of Cell Surface Targets through Meta-analysis of Microarray Data** *NEOPLASIA*
  Haeberle, H., Dudley, J. T., Liu, J. T., Butte, A. J., Contag, C. H.
  2012; 14 (7): 666-669

- **Pulse-Duration-Dependent Mid-Infrared Laser Ablation for Biological Applications** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Mackanos, M. A., Simanovskii, D. M., Schriver, K. E., Hutson, M. S., Contag, C. H., Kozub, J. A., Jansen, E. D.
  2012; 18 (4): 1514-1522

- **Generic and Personalized RNAi-Based Therapeutics for a Dominant-Negative Epidermal Fragility Disorder** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Pedrioli, D. M., Fu, D. J., Gonzalez-Gonzalez, E., Contag, C. H., Kaspar, R. L., Smith, F. J., McLean, W. H.
  2012; 132 (6): 1627-1635

- **SU-E-J-198: Bioluminescence Monitoring of Metastatic Breast Cancer: Quantitative Assessment of Radiation Treatment Effects and Tracking of Tumor Cells.** *Medical physics*
  Park, J., Schmidt, T., Graves, E., Bazalova, M., Lee, J., Contag, C., Suh, T.
  2012; 39 (6Part9): 3698

- **Infection of pregnant mice with Listeria monocytogenes induces fetal bradycardia** *PEDIATRIC RESEARCH*
  Hardy, J., Kirkendoll, B., Zhao, H., Pisani, L., Luong, R., Switzer, A., McConnell, M. V., Contag, C. H.
  2012; 71 (5): 539-545

- **Development of B Cells and Erythrocytes Is Specifically Impaired by the Drug Celastrol in Mice** *PLOS ONE*
  Kusy, S., Ghosn, E. E., Herzenberg, L. A., Contag, C. H.
  2012; 7 (4)

- **A novel rotational Raman imaging device for early cancer detection**
  Garai, E., Zavaleta, C., Sensarn, S., Mandella, M., Gambhir, S. S., Contag, C. H.
  AMER ASSOC CANCER RESEARCH.2012

- **Seeing it through: translational validation of new medical imaging modalities** *BIOMEDICAL OPTICS EXPRESS*
  Aldrich, M. B., Marshall, M. V., Sevick-Muraca, E. M., Lanza, G., Kotyk, J., Culver, J., Wang, L. V., Uddin, J., Crews, B. C., Marnett, L. J., Liao, J. C., Contag, C., Crawford, et al
  2012; 3 (4): 764-776

- **In vivo near-infrared dual-axis confocal microendoscopy in the human lower gastrointestinal tract** *JOURNAL OF BIOMEDICAL OPTICS*
  Piyawattanametha, W., Ra, H., Qiu, Z., Friedland, S., Liu, J. T., Loewke, K., Kino, G. S., Solgaard, O., Wang, T. D., Mandella, M. J., Contag, C. H.
  2012; 17 (2)

- **Interdigitated Annular CMUT Arrays for Ultrasound Assisted Delivery of Fluorescent Contrast Agents** *IEEE International Ultrasonics Symposium (IUS)*
  Cristman, P., Oralkan, O., Mandella, M., Solgaard, O., Contag, C., Khuri-Yakub, B. T.
  IEEE.2012: 96–99

- **In Vivo Bioluminescence Imaging of Inducible Nitric Oxide Synthase Gene Expression in Vascular Inflammation** *MOLECULAR IMAGING AND BIOLOGY*
  Terashima, M., Ehara, S., Yang, E., Kosuge, H., Tsao, P. S., Quertermous, T., Contag, C. H., McConnell, M. V.
  2011; 13 (6): 1061-1066

- **In Vivo Sustained Release of siRNA from Solid Lipid Nanoparticles** *ACS NANO*
  Lobovkina, T., Jacobson, G. B., Gonzalez-Gonzalez, E., Hickerson, R. P., Leake, D., Kaspar, R. L., Contag, C. H., Zare, R. N.
  2011; 5 (12): 9977-9983

- **Visualization of plasmid delivery to keratinocytes in mouse and human epidermis** *SCIENTIFIC REPORTS*

Gonzalez-Gonzalez, E., Kim, Y., Speaker, T. J., Hickerson, R. P., Spitler, R., Birchall, J. C., Lara, M. F., Hu, R., Liang, Y., Kirkiles-Smith, N., Prausnitz, M. R., Milstone, L. M., Contag, et al
2011; 1

- **Molecular Imaging of Inflammation and Carcinogenesis** *CANCER PREVENTION RESEARCH*
  Ostrov, D. A., Contag, C. H.
  2011; 4 (10): 1523-1526
- **Pulse duration determines levels of Hsp70 induction in tissues following laser irradiation** *JOURNAL OF BIOMEDICAL OPTICS*
  Mackanos, M. A., Contag, C. H.
  2011; 16 (7)
- **Efficacy of Antimicrobial Peptoids against Mycobacterium tuberculosis** *ANTIMICROBIAL AGENTS AND CHEMOTHERAPY*
  Kapoor, R., Eimerman, P. R., Hardy, J. W., Cirillo, J. D., Contag, C. H., Barron, A. E.
  2011; 55 (6): 3058-3062
- **Image-guided genomic analysis of tissue response to laser-induced thermal stress** *JOURNAL OF BIOMEDICAL OPTICS*
  Mackanos, M. A., Helms, M., Kalish, F., Contag, C. H.
  2011; 16 (5)
- **Use of Self-Delivery siRNAs to Inhibit Gene Expression in an Organotypic Pachyonychia Congenita Model** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Hickerson, R. P., Flores, M. A., Leake, D., Lara, M. F., Contag, C. H., Leachman, S. A., Kaspar, R. L.
  2011; 131 (5): 1037-1044
- **Development of Quantitative Molecular Clinical End Points for siRNA Clinical Trials** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Hickerson, R. P., Leachman, S. A., Pho, L. N., Gonzalez-Gonzalez, E., Smith, F. J., McLean, W. H., Contag, C. H., Leake, D., Milstone, L. M., Kaspar, R. L.
  2011; 131 (5): 1029-1036
- **In Vivo Imaging of Human and Mouse Skin with a Handheld Dual-Axis Confocal Fluorescence Microscope** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Ra, H., Piyawattanametha, W., Gonzalez-Gonzalez, E., Mandella, M. J., Kino, G. S., Solgaard, O., Leake, D., Kaspar, R. L., Oro, A., Contag, C. H.
  2011; 131 (5): 1061-1066
- **Visualization of functional nucleic acid delivery to mouse and human epidermis** *71st Annual Meeting of the Society-for-Investigative-Dermatology*
  Gonzalez-Gonzalez, E., Kim, Y., Speacker, T. J., Hickerson, R. P., Spitler, R., Birchall, J., Lara, M., Hu, R., Liang, Y., Kirkiles-Smith, N., Prausnitz, M. R., Milstone, L. M., Contag, et al
  NATURE PUBLISHING GROUP.2011: S69–S69
- **Components of a Curriculum for Molecular Imaging Scientists** *JOURNAL OF NUCLEAR MEDICINE*
  Zinn, K. R., Anderson, C. J., Bradbury, M., Cutler, C. S., Peterson, T. E., Morgan, D. E., Price, J. C., Graham, M. M., Contag, C. H., Wittstrom, K., Norenberg, J. P.
  2011; 52 (4): 650-656
- **Non-damaging Retinal Phototherapy: Dynamic Range of Heat Shock Protein Expression** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*
  Sramek, C., Mackanos, M., Spitler, R., Leung, L., Nomoto, H., Contag, C. H., Palanker, D.
  2011; 52 (3): 1780-1787
- **In Vivo Micro-Image Mosaicing** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
  Loewke, K. E., Camarillo, D. B., Piyawattanametha, W., Mandella, M. J., Contag, C. H., Thrun, S., Salisbury, J. K.
  2011; 58 (1): 159-171
- **3-D MEMS Scanning System For Dual-Axis Confocal Microendoscopy** *16th International Conference on Optical MEMS and Nanophotonics (OMN)*
  Jeong, J., Mandella, M. J., Kino, G. S., Contag, C. H., Solgaard, O.
  IEEE.2011: 71–72
- **Point-of-care pathology with miniature microscopes** *ANALYTICAL CELLULAR PATHOLOGY*

Liu, J. T., Loewke, N. O., Mandella, M. J., Levenson, R. M., Crawford, J. M., Contag, C. H.
2011; 34 (3): 81-98

- **Longitudinal, Noninvasive Imaging of T-Cell Effector Function and Proliferation in Living Subjects** *CANCER RESEARCH*
  Patel, M. R., Chang, Y., Chen, I. Y., Bachmann, M. H., Yan, X., Contag, C. H., Gambhir, S. S.
  2010; 70 (24): 10141-10149

- **Definition of an Enhanced Immune Cell Therapy in Mice That Can Target Stem-Like Lymphoma Cells** *CANCER RESEARCH*
  Contag, C. H., Sikorski, R., Negrin, R. S., Schmidt, T., Fan, A. C., Bachireddy, P., Felsher, D. W., Thorne, S. H.
  2010; 70 (23): 9837-9845

- **Microarray Analysis of Cellular Thermotolerance** *LASERS IN SURGERY AND MEDICINE*
  Beckham, J. T., Wilmink, G. J., Opalenik, S. R., Mackanos, M. A., Abraham, A. A., Takahashi, K., Contag, C. H., Takahashi, T., Jansen, E. D.
  2010; 42 (10): 752-765

- **Cancer stem cells from human breast tumors are involved in spontaneous metastases in orthotopic mouse models** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Liu, H., Patel, M. R., Prescher, J. A., Patsialou, A., Qian, D., Lin, J., Wen, S., Chang, Y., Bachmann, M. H., Shimono, Y., Dalerba, P., Adorno, M., Lobo, et al
  2010; 107 (42): 18115-18120

- **Increased interstitial pressure improves nucleic acid delivery to skin enabling a comparative analysis of constitutive promoters** *GENE THERAPY*
  Gonzalez-Gonzalez, E., Ra, H., Spitler, R., Hickerson, R. P., Contag, C. H., Kaspar, R. L.
  2010; 17 (10): 1270-1278

- **Biodegradable Nanoparticles With Sustained Release of Functional siRNA in Skin** *JOURNAL OF PHARMACEUTICAL SCIENCES*
  Jacobson, G. B., Gonzalez-Gonzalez, E., Spitler, R., Shinde, R., Leake, D., Kaspar, R. L., Contag, C. H., Zare, R. N.
  2010; 99 (10): 4261-4266

- **Silencing of Reporter Gene Expression in Skin Using siRNAs and Expression of Plasmid DNA Delivered by a Soluble Protrusion Array Device (PAD)** *MOLECULAR THERAPY*
  Gonzalez-Gonzalez, E., Speaker, T. J., Hickerson, R. P., Spitler, R., Flores, M. A., Leake, D., Contag, C. H., Kaspar, R. L.
  2010; 18 (9): 1667-1674

- **Targeting Localized Immune Suppression Within the Tumor Through Repeat Cycles of Immune Cell-oncolytic Virus Combination Therapy** *MOLECULAR THERAPY*
  Thorne, S. H., Liang, W., Sampath, P., Schmidt, T., Sikorski, R., Beilhack, A., Contag, C. H.
  2010; 18 (9): 1698-1705

- **IL-12 enhances efficacy and shortens enrichment time in cytokine-induced killer cell immunotherapy** *CANCER IMMUNOLOGY IMMUNOTHERAPY*
  Helms, M. W., Prescher, J. A., Cao, Y., Schaffert, S., Contag, C. H.
  2010; 59 (9): 1325-1334

- **Indirect imaging of cardiac-specific transgene expression using a bidirectional two-step transcriptional amplification strategy** *GENE THERAPY*
  Chen, I. Y., Gheysens, O., Ray, S., Wang, Q., Padmanabhan, P., Paulmurugan, R., Loening, A. M., Rodriguez-Porcel, M., Willmann, J. K., Sheikh, A. Y., Nielsen, C. H., Hoyt, G., Contag, et al
  2010; 17 (7): 827-838

- **Nanoparticle Formation of Organic Compounds With Retained Biological Activity** *JOURNAL OF PHARMACEUTICAL SCIENCES*
  Jacobson, G. B., Shinde, R., McCullough, R. L., Cheng, N. J., Creasman, A., Beyene, A., Hickerson, R. P., Quan, C., Turner, C., Kaspar, R. L., Contag, C. H., Zare, R. N.
  2010; 99 (6): 2750-2755

- **Fiber-optic probes enable cancer detection with FTIR spectroscopy** *TRENDS IN BIOTECHNOLOGY*
  Mackanos, M. A., Contag, C. H.
  2010; 28 (6): 317-323

- **Assessing delivery and quantifying efficacy of small interfering ribonucleic acid therapeutics in the skin using a dual-axis confocal microscope** *JOURNAL OF BIOMEDICAL OPTICS*

Ra, H., Gonzalez-Gonzalez, E., Smith, B. R., Gambhir, S. S., Kino, G. S., Solgaard, O., Kaspar, R. L., Contag, C. H.
2010; 15 (3)

- **Role of nitric oxide in Salmonella typhimurium-mediated cancer cell killing** *BMC CANCER*
  Barak, Y., Schreiber, F., Thorne, S. H., Contag, C. H., deBeer, D., Matin, A.
  2010; 10
- **Micromirror-scanned dual-axis confocal microscope utilizing a gradient-index relay lens for image guidance during brain surgery** *JOURNAL OF BIOMEDICAL OPTICS*
  Liu, J. T., Mandella, M. J., Loewke, N. O., Haeberle, H., Ra, H., Piyawattanametha, W., Solgaard, O., Kino, G. S., Contag, C. H.
  2010; 15 (2)
- **Guided by the light: visualizing biomolecular processes in living animals with bioluminescence** *CURRENT OPINION IN CHEMICAL BIOLOGY*
  Prescher, J. A., Contag, C. H.
  2010; 14 (1): 80-89
- **Mast Cell-Derived TNF Can Exacerbate Mortality during Severe Bacterial Infections in C57BL/6-KitW-sh/W-sh Mice** *AMERICAN JOURNAL OF PATHOLOGY*
  Piliponsky, A. M., Chen, C., Grimbaldeston, M. A., Burns-Guydish, S. M., Hardy, J., Kalesnikoff, J., Contag, C. H., Tsai, M., Galli, S. J.
  2010; 176 (2): 926-938
- **Timing of Bone Marrow Cell Delivery Has Minimal Effects on Cell Viability and Cardiac Recovery After Myocardial Infarction** *CIRCULATION-CARDIOVASCULAR IMAGING*
  Swijnenburg, R., Govaert, J. A., van der Bogt, K. E., Pearl, J. I., Huang, M., Stein, W., Hoyt, G., Vogel, H., Contag, C. H., Robbins, R. C., Wu, J. C.
  2010; 3 (1): 77-U109
- **From Bench to Bedside with Advanced Dual-Axes Confocal Microendoscope** *23rd IEEE International Conference on Micro Electro Mechanical Systems (MEMS 2010)*
  Piyawattanametha, W., Ra, H., Mandella, M. J., Contag, C. H., Solgaard, O.
  IEEE.2010: 27–30
- **Characterizing deep optical-sectioning microscopy performance with scattering phantoms and numerical simulations** *Conference on Design and Performance Validation of Phantoms Used in Conjunction with Optical Measurements of Tissue II*
  Liu, J. T., Mandella, M. J., Kino, G. S., Contag, C. H.
  SPIE-INT SOC OPTICAL ENGINEERING.2010
- **From Bench to Bedside with Advanced Confocal Microendoscope** *IEEE Photonics Society Winter Topicals Meeting Series*
  Piyawattanametha, W., Mandella, M. J., Ra, H., Liu, J. T., Friedland, S., Qiu, Z., Kino, G. S., Wang, T. D., Contag, C. H., Solgaard, O.
  IEEE.2010: 83–84
- **Surgical dual-axis confocal microscope for brain tumor resection** *IEEE Photonics Society Winter Topicals Meeting Series*
  Liu, J. T., Mandella, M. J., Loewke, N. O., Haeberle, H., Ra, H., Piyawattanametha, W., Solgaard, O., Kino, G. S., Contag, C. H.
  IEEE.2010: 76–77
- **FTIR microspectroscopy for improved prostate cancer diagnosis** *TRENDS IN BIOTECHNOLOGY*
  Mackanos, M. A., Contag, C. H.
  2009; 27 (12): 661-663
- **3-D Near-Infrared Fluorescence Imaging Using an MEMS-Based Miniature Dual-Axis Confocal Microscope** *IEEE JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS*
  Piyawattanametha, W., Ra, H., Mandella, M. J., Loewke, K., Wang, T. D., Kino, G. S., Solgaard, O., Contag, C. H.
  2009; 15 (5): 1344-1350
- **siRNA silencing of keratinocyte-specific GFP expression in a transgenic mouse skin model** *GENE THERAPY*
  Gonzalez-Gonzalez, E., Ra, H., Hickerson, R. P., Wang, Q., Piyawattanametha, W., Mandella, M. J., Kino, G. S., Leake, D., Avilion, A. A., Solgaard, O., Doyle, T. C., Contag, C. H., Kaspar, et al
  2009; 16 (8): 963-972
- **Use of an endoscope-compatible probe to detect colonic dysplasia with Fourier transform infrared spectroscopy** *JOURNAL OF BIOMEDICAL OPTICS*

Mackanos, M. A., Hargrove, J., Wolters, R., Du, C. B., Friedland, S., Soetikno, R. M., Contag, C. H., Arroyo, M. R., Crawford, J. M., Wang, T. D.
2009; 14 (4)

- **Laser-induced disruption of systemically administered liposomes for targeted drug delivery** *JOURNAL OF BIOMEDICAL OPTICS*
  Mackanos, M. A., Larabi, M., Shinde, R., Simanovskii, D. M., Guccione, S., Contag, C. H.
  2009; 14 (4)
- **Lymphoid tissue-specific homing of bone marrow-derived dendritic cells** *BLOOD*
  Creusot, R. J., Yaghoubi, S. S., Chang, P., Chia, J., Contag, C. H., Gambhir, S. S., Fathman, C. G.
  2009; 113 (26): 6638-6647
- **The T Cell STAT Signaling Network Is Reprogrammed within Hours of Bacteremia via Secondary Signals** *JOURNAL OF IMMUNOLOGY*
  Hotson, A. N., Hardy, J. W., Hale, M. B., Contag, C. H., Nolan, G. P.
  2009; 182 (12): 7558-7568
- **Optimized imaging of the growth and metastasis of human breast cancer stem cells in immunodeficient mice**
  Liu, H., Patel, M., Prescher, J., Qian, D., Dalerba, P., Lin, J., Shimono, Y., Dirbas, F., Contag, C., Gambhir, S., Clarke, M.
  AMER ASSOC CANCER RESEARCH.2009
- **Quantifying Cell-Surface Biomarker Expression in Thick Tissues with Ratiometric Three-Dimensional Microscopy** *BIOPHYSICAL JOURNAL*
  Liu, J. T., Helms, M. W., Mandella, M. J., Crawford, J. M., Kino, G. S., Contag, C. H.
  2009; 96 (6): 2405-2414
- **Comparison of Transplantation of Adipose Tissue- and Bone Marrow-Derived Mesenchymal Stem Cells in the Infarcted Heart** *TRANSPLANTATION*
  van der Bogt, K. E., Schrepfer, S., Yu, J., Sheikh, A. Y., Hoyt, G., Govaert, J. A., Velotta, J. B., Contag, C. H., Robbins, R. C., Wu, J. C.
  2009; 87 (5): 642-652
- **Comparison of Transplantation of Adipose Tissue- and Bone Marrow-Derived Mesenchymal Stem Cells in the Infarcted Heart** *TRANSPLANTATION*
  van der Bogt, K. E. A., Schrepfer, S., Yu, J., Sheikh, A. Y., Hoyt, G., Govaert, J. A., Velotta, J. B., Contag, C. H., Robbins, R. C., Wu, J. C.
  2009; 87 (5): 642-652
- **Stem Cell-Mediated Accelerated Bone Healing Observed with in Vivo Molecular and Small Animal Imaging Technologies in a Model of Skeletal Injury** *JOURNAL OF ORTHOPAEDIC RESEARCH*
  Lee, S., Padmanabhan, P., Ray, P., Gambhir, S. S., Doyle, T., Contag, C., Goodman, S. B., Biswal, S.
  2009; 27 (3): 295-302
- **A general method for conditional regulation of protein stability in living animals.** *Cold Spring Harbor protocols*
  Sellmyer, M. A., Thorne, S. H., Banaszynski, L. A., Contag, C. H., Wandless, T. J.
  2009; 2009 (3): pdb prot5173-?
- **Fibered Confocal Microscopy of Bladder Tumors: An ex Vivo Study** *JOURNAL OF ENDOUROLOGY*
  Sonn, G. A., Mach, K. E., Jensen, K., Hsiung, P., Jones, S., Contag, C. H., Wang, T. D., Liao, J. C.
  2009; 23 (2): 197-201
- **CNOB/ChrR6, a new prodrug enzyme cancer chemotherapy** *MOLECULAR CANCER THERAPEUTICS*
  Thorne, S. H., Barak, Y., Liang, W., Bachmann, M. H., Rao, J., Contag, C. H., Matin, A.
  2009; 8 (2): 333-341
- **Development of an optimized activatable MMP-14 targeted SPECT imaging probe** *BIOORGANIC & MEDICINAL CHEMISTRY*
  Watkins, G. A., Jones, E. F., Shell, M. S., VanBrocklin, H. F., Pan, M., Hanrahan, S. M., Feng, J. J., He, J., Sounni, N. E., Dill, K. A., Contag, C. H., Coussens, L. M., Franc, et al
  2009; 17 (2): 653-659
- **Foci of Listeria monocytogenes persist in the bone marrow** *DISEASE MODELS & MECHANISMS*
  Hardy, J., Chu, P., Contag, C. H.
  2009; 2 (1-2): 39-46
- **Sequential in vivo Molecular Imaging with a Dual-Axes Confocal Microscope** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference (CLEO/QELS 2009)*

Ra, H., Gonzalez, E., Piyawattanametha, W., Mandella, M. J., Kaspar, R., Contag, C. H., Kino, G. S., Solgaard, O.
IEEE.2009: 1–2

- **Fiber Optic FTIR Instrument for In Vivo Detection of Colonic Neoplasia** *Conference on Endoscopic Microscopy IV*
  Van Nortwick, M., Hargrove, J., Wolters, R., Crawford, J. M., Arroyo, M., Mackanos, M., Contag, C. H., Wang, T. D.
  SPIE-INT SOC OPTICAL ENGINEERING.2009
- **Trafficking Mesenchymal Stem Cell Engraftment and Differentiation in Tumor-Bearing Mice by Bioluminescence Imaging** *STEM CELLS*
  Wang, H., Cao, F., De, A., Cao, Y., Contag, C., Gambhir, S. S., Wu, J. C., Chen, X.
  2009; 27 (7): 1548-1558
- **Heme oxygenase-1 deficiency leads to disrupted response to acute stress in stem cells and progenitors** *BLOOD*
  Cao, Y., Wagers, A. J., Karsunky, H., Zhao, H., Reeves, R., Wong, R. J., Stevenson, D. K., Weissman, I. L., Contag, C. H.
  2008; 112 (12): 4494-4502
- **Stability Study of Unmodified siRNA and Relevance to Clinical Use** *OLIGONUCLEOTIDES*
  Hickerson, R. P., Vlassov, A. V., Wang, Q., Leake, D., Ilves, H., Gonzalez-Gonzalez, E., Contag, C. H., Johnston, B. H., Kaspar, R. L.
  2008; 18 (4): 345-354
- **Role of HSP70 in Cellular Thermotolerance** *LASERS IN SURGERY AND MEDICINE*
  Beckham, J. T., Wilmink, G. J., Mackanos, M. A., Takahashi, K., Contag, C. H., Takahashi, T., Jansen, E. D.
  2008; 40 (10): 704-715
- **Chemical control of protein stability and function in living mice** *NATURE MEDICINE*
  Banaszynski, L. A., Sellmyer, M. A., Contag, C. H., Wandless, T. J., Thorne, S. H.
  2008; 14 (10): 1123-1127
- **Comparison of different adult stem cell types for treatment of myocardial ischemia** *80th Annual Scientific Session of the American-Heart-Association (AHA)*
  van der Bogt, K. E., Sheikh, A. Y., Schrepfer, S., Hoyt, G., Cao, F., Ransohoff, K. J., Swijnenburg, R., Pearl, J., Lee, A., Fischbein, M., Contag, C. H., Robbins, R. C., Wu, et al
  LIPPINCOTT WILLIAMS & WILKINS.2008: S121–U166
- **In-vivo optical imaging of hsp70 expression to assess collateral tissue damage associated with infrared laser ablation of skin** *JOURNAL OF BIOMEDICAL OPTICS*
  Wilmink, G. J., Opalenik, S. R., Beckham, J. T., Mackanos, M. A., Nanney, L. B., Contag, C. H., Davidson, J. M., Jansen, E. D.
  2008; 13 (5)
- **Overcoming multidrug resistance of small-molecule therapeutics through conjugation with releasable octaarginine transporters** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Dubikovskaya, E. A., Thorne, S. H., Pillow, T. H., Contag, C. H., Wender, P. A.
  2008; 105 (34): 12128-12133
- **Short-duration-focused ultrasound stimulation of Hsp70 expression in vivo** *PHYSICS IN MEDICINE AND BIOLOGY*
  Kruse, D. E., Mackanos, M. A., O'Connell-Rodwell, C. E., Contag, C. H., Ferrara, K. W.
  2008; 53 (13): 3641-3660
- **Three-dimensional in vivo imaging by a handheld dual-axes confocal microscope** *OPTICS EXPRESS*
  Ra, H., Piyawattanametha, W., Mandella, M. J., Hsiung, P., Hardy, J., Wang, T. D., Contag, C. H., Kino, G. S., Solgaard, O.
  2008; 16 (10): 7224-7232
- **Efficient rejection of scattered light enables deep optical sectioning in turbid media with low-numerical-aperture optics in a dual-axis confocal architecture** *JOURNAL OF BIOMEDICAL OPTICS*
  Liu, J. T., Mandella, M. J., Crawford, J. M., Contag, C. H., Wang, T. D., Kino, G. S.
  2008; 13 (3)
- **Integrating the biological characteristics of oncolytic viruses and immune cells can optimize therapeutic benefits of cell-based delivery** *GENE THERAPY*
  Thorne, S. H., Contag, C. H.
  2008; 15 (10): 753-758

- **In vivo analysis of heat-shock-protein-70 induction following pulsed laser irradiation in a transgenic reporter mouse** *JOURNAL OF BIOMEDICAL OPTICS*
  O'Connell-Rodwell, C. E., Mackanos, M. A., Simanovskii, D., Cao, Y., Bachmann, M. H., Schwettman, H. A., Contag, C. H.
  2008; 13 (3)
- **Regulation of maternal and fetal hemodynamics by heme oxygenase in mice** *BIOLOGY OF REPRODUCTION*
  Zhao, H., Wong, R. J., Doyle, T. C., Nayak, N., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  2008; 78 (4): 744-751
- **Enhancing poxvirus oncolytic effects through increased spread and immune evasion** *CANCER RESEARCH*
  Kirn, D. H., Wang, Y., Liang, W., Contag, C. H., Thorne, S. H.
  2008; 68 (7): 2071-2075
- **Detection of colonic dysplasia in vivo using a targeted heptapeptide and confocal microendoscopy** *NATURE MEDICINE*
  Hsiung, P., Hardy, J., Friedland, S., Soetikno, R., Du, C. B., Wu, A. P., Sahbaie, P., Crawford, J. M., Lowe, A. W., Contag, C. H., Wang, T. D.
  2008; 14 (4): 454-458
- **Prevention of acute graft-versus-host disease by blocking T-cell entry to secondary lymphoid organs** *BLOOD*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G. F., Nishimura, R., Baker, E. M., Landan, G., Herman, E. I., Butcher, E. C., Contag, C. H., Negrin, R. S.
  2008; 111 (5): 2919-2928
- **Single-nucleotide-specific siRNA targeting in a dominant-negative skin model** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Hickerson, R. P., Smith, F. J., Reeves, R. E., Contag, C. H., Leake, D., Leachman, S. A., Milstone, L. M., McLean, W. H., Kaspar, R. L.
  2008; 128 (3): 594-605
- **Sustained release of drugs dispersed in polymer nanoparticles** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
  Jacobson, G. B., Shinde, R., Contag, C. H., Zare, R. N.
  2008; 47 (41): 7880-7882
- **Development of therapeutic siRNAs for pachyonychia congenita** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Smith, F. J., Hickerson, R. P., Sayers, J. M., Reeves, R. E., Contag, C. H., Leake, D., Kaspar, R. L., McLean, H. I.
  2008; 128 (1): 50-58
- **MEMS based Dual-Axes Confocal Clinical Endoscope for Real Time in vivo Imaging** *IEEE/LEOS International Conference on Optical MEMS and Nanophotonics*
  Piyawattanametha, W., Mandella, M. J., Ra, H., Liu, J. T., Garai, E., Kino, G. S., Solgaard, O., Contag, C. H.
  IEEE.2008: 42–43
- **Therapeutic implications of nitric oxide generation by tumor-targeting Salmonella typhimurium strains.**
  Barak, Y., Schreiber, F., Thorne, S. H., Contag, C. H., de-Beer, D., Matin, A. C.
  AMER ASSOC CANCER RESEARCH.2007: 3559S
- **Delivery and inhibition of reporter genes by small interfering RNAs in a mouse skin model** *JOURNAL OF INVESTIGATIVE DERMATOLOGY*
  Wang, Q., Ilves, H., Chu, P., Contag, C. H., Leake, D., Johnston, B. H., Kaspar, R. L.
  2007; 127 (11): 2577-2584
- **Image-guided analyses reveal that non-CD4 splenocytes contribute to CD4+T cell-mediated inflammation leading to islet destruction by altering their local function and not systemic trafficking patterns**
  Lee, M., Lee, W., Van, Y., Contag, C. H., Liu, C.
  SPRINGER.2007: S29–S29
- **Image-guided analyses reveal that non-CD4 splenocytes contribute to CD4(+) T cell-mediated inflammation leading to islet destruction by altering their local function and not systemic trafficking patterns** *MOLECULAR IMAGING*
  Lee, M., Lee, W., Van, Y., Contag, C. H., Liu, C.
  2007; 6 (6): 369-383
- **Functional imaging of colonic mucosa with a fibered Confocal microscope for real-time in vivo pathology** *CLINICAL GASTROENTEROLOGY AND HEPATOLOGY*
  Wang, T. D., Friedland, S., Sahbaie, P., Soetikno, R., Hsiung, P., Liu, J. T., Crawford, J. M., Contag, C. H.
  2007; 5 (11): 1300-1305

- **Design and evaluation of a variable aperture collimator for conformal radiotherapy of small animals using a microCT scanner** *MEDICAL PHYSICS*
  Graves, E. E., Zhou, H., Chatterjee, R., Keall, P. J., Gambhir, S. S., Contag, C. H., Boyer, A. L.
  2007; 34 (11): 4359-4367

- **Transplantation of bone-marrow mononuclear cells into the infarcted heart has favorable engraftment compared to mesenchymal stem cells, skeletal myoblasts and fibroblasts**
  van der Bogt, K. E., Sheikh, A. Y., Schrepfer, S., Hoyt, G., Cao, F., Ransohoff, K., Contag, C. H., Robbins, R. C., Wu, J. C.
  LIPPINCOTT WILLIAMS & WILKINS.2007: 397

- **Detection of endogenous biomolecules in Barrett's esophagus by Fourier transform infrared spectroscopy** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Wang, T. D., Triadafilopoulos, G., Crawford, J. M., Dixon, L. R., Bhandari, T., Sahbaie, P., Friediand, S., Soetikno, R., Contag, C. H.
  2007; 104 (40): 15864-15869

- **Accelerated bone repair after plasma laser corticotomies** *ANNALS OF SURGERY*
  Leucht, P., Lam, K., Kim, J., Mackanos, M. A., Simanovskii, D. M., Longaker, M. T., Contag, C. H., Schwettman, H. A., Helms, J. A.
  2007; 246 (1): 140-150

- **Real-time analysis of uptake and bioactivatable cleavage of luciferin-transporter conjugates in transgenic reporter mice** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Wender, P. A., Goun, E. A., Jones, L. R., Pillow, T. H., Rothbard, J. B., Shinde, R., Contag, C. H.
  2007; 104 (25): 10340-10345

- **Combining immune cell and viral therapy for the treatment of cancer** *CELLULAR AND MOLECULAR LIFE SCIENCES*
  Thorne, S. H., Contag, C. H.
  2007; 64 (12): 1449-1451

- **Development of a variable-aperture collimator for small animal radiation**
  Zhou, H., Chatterjee, R., Contag, C., Gambhir, S., Boyer, A., Keall, P., Graves, E.
  AMER ASSOC PHYSICISTS MEDICINE AMER INST PHYSICS.2007: 2436

- **Therapeutic si RNAs for treatment of pachyonychia congenita** *68th Annual Meeting of the Society-for-Investigative-Dermatology*
  Smith, F. J., Hickerson, R. P., Sayers, J., Reeves, R. E., Contag, C. H., Leake, D., Kaspar, R. L., McLean, W.
  NATURE PUBLISHING GROUP.2007: S94–S94

- **In vivo dynamics of regulatory T-cell trafficking and survival predict effective strategies to control graft-versus-host disease following allogeneic transplantation** *BLOOD*
  Nguyen, V. H., Zeiser, R., daSilva, D. L., Chang, D. S., Beilhack, A., Contag, C. H., Negrin, R. S.
  2007; 109 (6): 2649-2656

- **Early CD30 signaling is critical for adoptively transferred CD4(+)CD25(+) regulatory T cells in prevention of acute graft-versus-host disease** *BLOOD*
  Zeiser, R., Nguyen, V. H., Hou, J., Beilhack, A., Zambricki, E., Buess, M., Contag, C. H., Negrin, R. S.
  2007; 109 (5): 2225-2233

- **Prevention of acute graft-versus-host disease by blocking T cell entry to secondary lymphoid organs** *96th Annual Meeting of the United-States-and-Canadian-Academy-of-Pathology*
  Schulz, S., Beilhack, A., Baker, J., Nishimura, R., Landan, G., Baker, E., Herman, E., BUTCHER, E. C., Contag, C. H., Negrin, R. S.
  NATURE PUBLISHING GROUP.2007: 259A–259A

- **Prevention of acute-versus-host disease by blocking t cell entry to secondary lymphoid organs** *96th Annual Meeting of the United-States-and-Canadian-Academy-of-Pathology*
  Schultz, S., Beilhack, A., Baker, J., Nishimura, R., Landan, G., Baker, E., Herman, E. I., BUTCHER, E. C., Contag, C. H., Negrin, R. S.
  NATURE PUBLISHING GROUP.2007: 259A–259A

- **Miniature near-infrared dual-axes confocal microscope utilizing a two-dimensional microelectromechanical systems scanner** *OPTICS LETTERS*
  Liu, J. T., Mandella, M. J., Ra, H., Wong, L. K., Solgaard, O., Kino, G. S., Piyawattanametha, W., Contag, C. H., Wang, T. D.
  2007; 32 (3): 256-258

- **CD4+CD25+regulatory T cells enhance immune reconstitution following allogeneic hematopoietic cell transplantation by protecting thymic and lymphoid compartments from graft-versus-host disease damage without impacting T cell repertoire development** *Tandem BMT Meeting 2007*
  Nguyen, V. H., Chang, D., Shashidhar, S., Bachmann, M., Contag, C. H., Brown, J. M., Negrin, R. S.
  ELSEVIER SCIENCE INC.2007: 20–20

- **Donor CD8(+) T cells mediate graft-versus-leukemia activity without clinical signs of graft-versus-host disease in recipients conditioned with anti-CD3 monoclonal antibody** *JOURNAL OF IMMUNOLOGY*
  Zhang, C., Lou, J., Li, N., Todorov, I., Lin, C., Cao, Y., Contag, C. H., Kandeel, F., Forman, S., Zeng, D.
  2007; 178 (2): 838-850

- **In vivo pathology: Seeing with molecular specificity and cellular resolution in the living body** *ANNUAL REVIEW OF PATHOLOGY-MECHANISMS OF DISEASE*
  Contag, C. H.
  2007; 2: 277-305

- **Regulation of murine maternal and fetal hemodynamic function by heme oxygenase.**
  Zhao, H., Wong, R. J., Doyle, T. C., Contag, C. H., Stevenson, D. K.
  B C DECKER INC.2007: S116

- **Comparison of heme oxygenase activity in gut-associated lymphoid tissues and the intestine.** *8th Conference of the Western Student Medical Research Forum/Western Section of the American-Federation-for-Medical-Research/Western Association-of-Physicians/Western-Society-for-Pediatric-Research/Western-Society-for-Clinical-Investigation*
  Burns-Guydisli, S. M., Wong, R. J., Kafsh, F., Contag, C. H., Stevenson, D. K.
  LIPPINCOTT WILLIAMS & WILKINS.2007: S117–S118

- **Alloreactive T-cell trafficking after hematopoietic stem cell transplantation.** *Journal of stem cells & regenerative medicine*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G., Herman, E., Baker, E., Landan, G., Nishimura, R., Butcher, E., Contag, C., Negrin, R.
  2007; 2 (1): 107-?

- **Alloreactive T-cell trafficking after hematopoietic stem cell transplantation.** *Journal of stem cells & regenerative medicine*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G., Herman, E., Baker, E., Landan, G., Nishimura, R., Butcher, E., Contag, C., Negrin, R.
  2007; 2 (1): 17-?

- **Compact optical design for dual-axes confocal endoscopic microscopes** *Conference on Three-Dimensional and Multidimensional Microscopy - Image Acquisition and Processing XIV*
  Mandella, M. J., Liua, J. T., Piyawattanametha, W., Ra, H., Hsiung, P., Wong, L. K., Solgaard, O., Wang, T. D., Contag, C. H., Kino, G. S.
  SPIE-INT SOC OPTICAL ENGINEERING.2007

- **Three-dimensional In vivo real time imaging by a miniature dual-axes confocal microscope based on a two-dimensional mems scanner** *14th International Conference on Solid-State Sensors, Actuators and Microsystems/21st European Conference on Solid-State Transducers*
  Piyawattanametha, W., Ra, H., Mandella, M. J., Liu, J. T., Wong, L. K., Du, C. B., Wang, T. D., Contag, C. H., Kino, G. S., Solgaard, O.
  IEEE.2007

- **Wavelength-dependent dynamics of heat shock protein 70 expression in free electron laser wounds** *Conference on Thermal Treatment of Tissue - Energy Delivery and Assessment IV*
  Wilmink, G. J., Beckham, J. T., Mackanos, M., Contag, C. H., Davidson, J. M., Jansen, E. D.
  SPIE-INT SOC OPTICAL ENGINEERING.2007

- **Three-Dimensional in vivo Reflectance and Fluorescence Imaging by a Handheld Dual-Axes Confocal Microscope** *Conference on Lasers and Electro-Optics/Quantum Electronics and Laser Science Conference*
  Ra, H., Piyawattanametha, W., Mandella, M. J., Liu, J. T., Wong, L. K., Wang, T. D., Contag, C. H., Kino, G. S., Solgaard, O.
  IEEE.2007: 795–796

- **The potential Salmonella aroA(-) vaccine strain is safe and effective in young BALB/c mice** *NEONATOLOGY*
  Burns-Guydish, S. M., Zhao, H., Stevenson, D. K., Contag, C. H.
  2007; 91 (2): 114-120

- **Molecular Imaging of bone marrow mononuclear cell homing and engraftment in ischemic myocardium** *STEM CELLS*
  Sheikh, A. Y., Lin, S., Cao, F., Cao, Y., van der Bogt, K. E., Chu, P., Chang, C., Contag, C. H., Robbins, R. C., Wu, J. C.
  2007; 25 (10): 2677-2684

- **Methods for imaging cell fates in hematopoiesis.** *Methods in molecular medicine*
  Duda, J., Karimi, M., Negrin, R. S., Contag, C. H.
  2007; 134: 17-34

- **A signal hierarchy model of alloreactive T cell trafficking for the organ manifestation in acute graft-versus-host disease.** *48th Annual Meeting of the American-Society-of-Hematology*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G. F., Nishimura, R., Landan, G., Baker, E. M., Herman, E. I., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2006: 26A–26A

- **Heme oxygenase 1 deficiency compromises stress responses of hematopoietic stem cells.** *48th Annual Meeting of the American-Society-of-Hematology*
  Cao, Y., Wagers, A. J., Karsunky, H., Zhao, H., Reeves, R., Wang, R. J., Stevenson, D. K., Weissman, I. L., Contag, C. H.
  AMER SOC HEMATOLOGY.2006: 395A–395A

- **Early CD30 signaling is critical for adoptively transferred CD4(+)CD25(+) regulatory T cells in prevention of acute graft versus host disease.** *48th Annual Meeting of the American-Society-of-Hematology*
  Zeiser, R., Nguyen, V. H., Hou, J., Beilhack, A., Zambricki, E. A., Buess, M., Contag, C. H., Negrin, R.
  AMER SOC HEMATOLOGY.2006: 906A–907A

- **CD4+CD25+ Regulatory T cells enhance immune reconstitution following allogeneic hematopoietic cell transplantation by protecting thymic and lymphoid compartments from graft-versus-host disease damage without impacting T cell repertoire development.** *48th Annual Meeting of the American-Society-of-Hematology*
  Nguyen, V. H., Chang, D., Shashidhar, S., Bachmann, M., Contag, C. H., Brown, J. M., Negrin, R. S.
  AMER SOC HEMATOLOGY.2006: 25A–25A

- **Expression and regulation of heme oxygenase isozymes in the developing mouse cortex** *PEDIATRIC RESEARCH*
  Zhao, H., Wong, R. J., Nguyen, X., Kalish, F., Mizobuchi, M., Vreman, H. J., Stevenson, D. K., Contag, C. H.
  2006; 60 (5): 518-523

- **Molecular imaging using visible light to reveal biological changes in the brain** *NEUROIMAGING CLINICS OF NORTH AMERICA*
  Contag, C. H.
  2006; 16 (4): 633-?

- **In vivo bioluminescence imaging of inducible nitric oxide expression in atherosclerosis**
  Terashima, M., Ehara, S., Yang, E., Burns-Guydish, S., Tsao, P. S., Contag, C. H., McConell, M. V.
  LIPPINCOTT WILLIAMS & WILKINS.2006: 75

- **Luciferin derivatives for enhanced in vitro and in vivo bioluminescence assays** *BIOCHEMISTRY*
  Shinde, R., Perkins, J., Contag, C. H.
  2006; 45 (37): 11103-11112

- **Dual-axes confocal reflectance microscope for distinguishing colonic neoplasia** *JOURNAL OF BIOMEDICAL OPTICS*
  Liu, J. T., Mandella, M. J., Friedland, S., Soetikno, R., Crawford, J. M., Contag, C. H., Kino, G. S., Wang, T. D.
  2006; 11 (5)

- **Cellular tolerance to pulsed hyperthermia** *PHYSICAL REVIEW E*
  Simanovskii, D. M., Mackanos, M. A., Irani, A. R., O'Connell-Rodwell, C. E., Contag, C. H., Schwettman, H. A., Palanker, D. V.
  2006; 74 (1)

- **Inhibition of CD4(+)CD25(+) regulatory T-cell function by calcineurin-dependent interleukin-2 production** *BLOOD*
  Zeiser, R., Nguyen, V. H., Beilhack, A., Buess, M., Schulz, S., Baker, J., Contag, C. H., Negrin, R. S.
  2006; 108 (1): 390-399

- **Cellular immunotherapy redirected by bispecific antibodies in primary ovarian cancer cells: A preclinical study.** *42nd Annual Meeting of the American-Society-of-Clinical-Oncology*
  Chan, J. K., Hamilton, C. A., Cheung, M. K., Schulz, S., Thorne, S. H., Anderson, E. M., Baker, J., Husain, A., Teng, N. N., Contag, C. H., Negrin, R. S.
  AMER SOC CLINICAL ONCOLOGY.2006: 104S–104S

- **In vivo imaging using bioluminescence: a tool for probing graft-versus-host disease.** *Nature reviews. Immunology*
  Negrin, R. S., Contag, C. H.

2006; 6 (6): 484-490

- **Innovation - In vivo imaging using bioluminescence: a tool for probing graft-versus-host disease** *NATURE REVIEWS IMMUNOLOGY*
  Negrin, R. S., Contag, C. H.
  2006; 6 (6): 484-U2

- **Releasable luciferin-transporter conjugates: Tools for the real-time analysis of cellular uptake and release** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Jones, L. R., Goun, E. A., Shinde, R., Rothbard, J. B., Contag, C. H., Wender, P. A.
  2006; 128 (20): 6526-6527

- **Intracellular cargo delivery by an octaarginine transporter adapted to target prostate cancer cells through cell surface protease activation** *BIOCONJUGATE CHEMISTRY*
  Goun, E. A., Shinde, R., Dehnert, K. W., Adams-Bond, A., Wender, P. A., Contag, C. H., Franc, B. L.
  2006; 17 (3): 787-796

- **Systemic effects of orally-administered zinc and tin (IV) metalloporphyrins on heme oxygenase expression in mice** *PEDIATRIC RESEARCH*
  Morioka, I., Wong, R. J., Abate, A., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  2006; 59 (5): 667-672

- **Selective intratumoral amplification of an antiangiogenic vector by an oncolytic virus produces enhanced antivascular and anti-tumor efficacy** *MOLECULAR THERAPY*
  Thorne, S. H., Tam, B. Y., Kirn, D. H., Contag, C. H., Kuo, C. J.
  2006; 13 (5): 938-946

- **Enhanced killing of primary ovarian cancer by retargeting autologous cytokine-induced killer cells with bispecific antibodies: A preclinical study** *CLINICAL CANCER RESEARCH*
  Chan, J. K., Hamilton, C. A., Cheung, M. K., Karimi, M., Baker, J., Gall, J. M., Schulz, S., Thorne, S. H., Teng, N. N., Contag, C. H., Lum, L. G., Negrin, R. S.
  2006; 12 (6): 1859-1867

- **Induced biliary excretion of Listeria monocytogenes** *INFECTION AND IMMUNITY*
  Hardy, J., Margolis, J. J., Contag, C. H.
  2006; 74 (3): 1819-1827

- **In vivo kinetics of acute graft-versus-host disease in conditioned vs. unconditioned hosts** *32nd Annual Meeting of the American-Society-for-Blood-and-Marrow-Transplantation*
  Beilhack, A., Wai, L. E., Schulz, S., Belhack, G. F., Nishimura, R., Baker, E. M., Herman, E. I., Landan, G., Olson, J. A., Baker, J., Contag, C. H., Negrin, R. S.
  ELSEVIER SCIENCE INC.2006: 51–52

- **Prevention of acute graft-versus-host disease despite compensatory function of lymphoid organs in vivo** *32nd Annual Meeting of the American-Society-for-Blood-and-Marrow-Transplantation*
  Beilback, A., Schulz, S., Baker, J., Beilback, G. F., Nishimura, R., Landan, G., Baker, E. M., Herman, E. I., BUTCHER, E. C., Contag, C. H., Negrin, R. S.
  ELSEVIER SCIENCE INC.2006: 11–11

- **Differential effects of immunosuppressants on adoptively transferred CD4+CD25(high) regulatory T cells in prevention of experimental acute graft-versus-host disease** *32nd Annual Meeting of the American-Society-for-Blood-and-Marrow-Transplantation*
  Zeiser, R., Nguyen, V., Beilhack, A., Schulz, S., Baker, J., Contag, C. H., Negrin, R. S.
  ELSEVIER SCIENCE INC.2006: 69–69

- **New enzyme for reductive cancer chemotherapy, YieF, and its improvement by directed evolution** *MOLECULAR CANCER THERAPEUTICS*
  Barak, Y., Thorne, S. H., Ackerley, D. F., Lynch, S. V., Contag, C. H., Matin, A.
  2006; 5 (1): 97-103

- **A hybrid microCT scanner for image-guided conformal radiotherapy of small animals**
  Graves, E. E., Chatterjee, R., Gambhir, S. S., Contag, C. H., Boyer, A. L.
  ELSEVIER SCIENCE INC.2006: S707–S708

- **A narrowband dual-axes confocal reflectance microscope for distinguishing colonic neoplasia** *Conference on Three-Dimensional and Multidimensional Microscopy - Image Acquisition and Processing XIII*

Liu, J. T., Mandella, M. J., Contag, C. H., Kino, G. S., Wang, T. D.
SPIE-INT SOC OPTICAL ENGINEERING.2006

- **Inhibition of hepatitis CIRFS-mediated gene expression by small hairpin RNAs in human hepatocytes and mice** *1st Annual Meeting of the Oligonucleotide-Therapeutics-Society*
  Ilves, H., Kaspar, R. L., Wang, Q., Seyhan, A. A., Vlassov, A. V., Contag, C. H., Leake, D., Johnston, B. H.
  BLACKWELL PUBLISHING.2006: 52–55

- **The effectiveness of oral tin mesoporphyrin prophylaxis in reducing bilirubin production after an oral heme load in a transgenic mouse model** *BIOLOGY OF THE NEONATE*
  DeSandre, G. H., Wong, R. J., Morioka, I., Contag, C. H., Stevenson, D. K.
  2006; 89 (3): 139-146

- **Immunotherapy of primary ovarian cancer using autologous cytokine induced killer cells retargeted with bispecific antibodies: A preclinical study.** *47th Annual Meeting of the American-Society-of-Hematology*
  Chan, J. K., Hamilton, C. A., Cheung, M. K., Karimi, M., Baker, J., Gall, J. M., Lum, L. G., Schulz, S., Thorne, S. H., Teng, N. N., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2005: 669A–670A

- **Myeloid progenitors protect against radiation-induced intestinal injury**
  Brown, J., Shashidhar, S., Habtezion, A., Burns-Guydish, S. M., Wang, S. Y., Domen, J., Fong, T., Contag, C. H., Omary, M. B.
  AMER SOC HEMATOLOGY.2005: 390B

- **Early treatment with CD4+ CD25+ regulatory T cells provides prolonged suppressive effects which control evolving but not established graft-versus-host-disease.** *47th Annual Meeting of the American-Society-of-Hematology*
  Nguyen, V. H., Zeiser, R., Dasilva, D., Contag, C. N., Negrin, R. S.
  AMER SOC HEMATOLOGY.2005: 379A–379A

- **Prevention of acute graft-versus-host disease despite compensatory function of lymphoid organs in vivo.** *47th Annual Meeting of the American-Society-of-Hematology*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G. F., Nishimura, R., Landan, G., Baker, E. M., Herman, E. I., BUTCHER, E. C., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2005: 173A–173A

- **In vivo effects of cyclosporine a, mycophenolate mofetile and rapamycin on adoptively transferred CD4(+)CD25(+) regulatory T cells in prevention of experimental acute graft-versus-host disease.** *47th Annual Meeting of the American-Society-of-Hematology*
  Zeiser, R., Nguyen, V., Beilhack, A., Baker, J., Schulz, S., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2005: 136A–137A

- **Ex vivo expanded dendritic cells home to T-cell zones of lymphoid organs and survive in vivo after allogeneic bone marrow transplantation** *AMERICAN JOURNAL OF PATHOLOGY*
  Schimmelpfennig, C. H., Schulz, S., Arber, C., Baker, J., Tarner, I., McBride, J., Contag, C. H., Negrin, R. S.
  2005; 167 (5): 1321-1331

- **Hemin-activated macrophages home to the pancreas and protect from acute pancreatitis via heme oxygenase-1 induction** *JOURNAL OF CLINICAL INVESTIGATION*
  Nakamichi, I., Habtezion, A., Zhong, B. H., Contag, C. H., BUTCHER, E. C., Omary, M. B.
  2005; 115 (11): 3007-3014

- **Breast-milk shedding of drug-resistant HIV-1 subtype C in women exposed to single-dose nevirapine** *11th Conference on Retroviruses and Opportunistic Infections*
  Lee, E. J., Kantor, R., Zijenah, L., Sheldon, W., Emel, L., Mateta, P., Johnston, E., Wells, J., Shetty, A. K., Coovadia, H., Maldonado, Y., Jones, S. A., Mofenson, et al
  UNIV CHICAGO PRESS.2005: 1260–64

- **Small hairpin RNAs efficiently inhibit hepatitis CIRES-mediated gene expression in human tissue culture cells and a mouse model** *MOLECULAR THERAPY*
  Wang, Q., Contag, C. H., Ilves, H., Johnston, B. H., Kaspar, R. L.
  2005; 12 (3): 562-568

- **In vivo visualization of cardiac allograft rejection and trafficking passenger leukocytes using bioluminescence imaging** *CIRCULATION*
  Tanaka, M., Swijnenburg, R. J., Gunawan, F., Cao, Y. A., Yang, Y., Caffarelli, A. D., de Bruin, J. L., Contag, C. H., Robbins, R. C.

2005; 112 (9): I105-I110

- **Bioluminescence regenerative cycle (BRC) system: Theoretical considerations for nucleic acid quantification assays** *BIOPHYSICAL CHEMISTRY*
  Hassibi, A., Contag, C., Vlad, M. O., Hafezi, M., Lee, T. H., Davis, R. W., Pourmand, N.
  2005; 116 (3): 175-185
- **In vivo analyses of early events in acute graft-versus-host disease reveal sequential infiltration of T-cell subsets** *BLOOD*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G. F., Wieland, C. B., Herman, E. I., Baker, E. M., Cao, Y. A., Contag, C. H., Negrin, R. S.
  2005; 106 (3): 1113-1122
- **Molecular imaging using labeled donor tissues reveals patterns of engraftment, rejection, and survival in transplantation** *TRANSPLANTATION*
  Cao, Y. A., Bachmann, M. H., Beilhack, A., Yang, Y., Tanaka, M., Swijnenburg, R. J., Reeves, R., Taylor-Edwards, C., Schulz, S., Doyle, T. C., Fathman, C. G., Robbins, R. C., Herzenberg, et al
  2005; 80 (1): 134-139
- **Monitoring age-related susceptibility of young mice to oral Salmonella enterica serovar typhimurium infection using an in vivo murine model** *PEDIATRIC RESEARCH*
  Burns-Guydish, S. M., Olomu, I. N., Zhao, H., Wong, R. J., Stevenson, D. K., Contag, C. H.
  2005; 58 (1): 153-158
- **Real-time in vivo imaging of stem cells following transgenesis by transposition.** *Molecular therapy : the journal of the American Society of Gene Therapy*
  Tolar, J., Osborn, M., Bell, S., McElmurry, R., Xia, L., Riddle, M., Panoskaltsis-Mortari, A., Jiang, Y., McIvor, R. S., Contag, C. H., Yant, S. R., Kay, M. A., Verfaillie, et al
  2005; 12 (1): 42-48
- **Real-time in vivo imaging transgenesis by of stem cells following transposition** *MOLECULAR THERAPY*
  Tolar, J., Osborn, M., Bell, S., McElmurry, R., Xia, L., Riddle, M., Panoskaltsis-Mortari, A., Jiang, Y. H., McIvor, R. S., Contag, C. H., Yant, S. R., Kay, M. A., Verfaillie, et al
  2005; 12 (1): 42-48
- **Emission spectra of bioluminescent reporters and interaction with mammalian tissue determine the sensitivity of detection in vivo** *JOURNAL OF BIOMEDICAL OPTICS*
  Zhao, H., Doyle, T. C., Coquoz, O., Kalish, F., Rice, B. W., Contag, C. H.
  2005; 10 (4)
- **Global analysis of Smad2/3-dependent TGF-beta signaling in living mice reveals prominent tissue-specific responses to injury** *JOURNAL OF IMMUNOLOGY*
  Lin, A. H., Luo, J., Mondshein, L. H., ten Dijke, P., Vivien, D., Contag, C. H., Wyss-Coray, T.
  2005; 175 (1): 547-554
- **Adoptive transfer of mast cells does not enhance the impaired survival of Kit(W)/Kit(W-v) mice in a model of low dose intraperitoneal infection with bioluminescent Salmonella typhimurium** *IMMUNOLOGY LETTERS*
  Chatterjea, D., Burns-Guydish, S. M., Sciuto, T. E., Dvorak, A., Contag, C. H., Galli, S. J.
  2005; 99 (1): 122-129
- **Low levels of Her2/neu expressed by Ewing's family tumor cell lines can redirect cytokine-induced killer cells** *CLINICAL CANCER RESEARCH*
  Verneris, M. R., Arshi, A., Edinger, M., Kornacker, M., Natkunam, Y., Karami, M., Cao, Y. A., Marina, N., Contag, C. H., Negrin, R. S.
  2005; 11 (12): 4561-4570
- **Using in vivo bioluminescence imaging to shed light on cancer biology** *PROCEEDINGS OF THE IEEE*
  Thorne, S. H., Contag, C. H.
  2005; 93 (4): 750-762
- **Bone morphogenetic protein 2 and retinoic acid accelerate in vivo bone formation, osteoclast recruitment, and bone turnover** *TISSUE ENGINEERING*
  Cowan, C. M., Aalami, O. O., Shi, Y. Y., Chou, Y. F., Mari, C., Thomas, R., Quarto, N., Nacamuli, R. P., Contag, C. H., Wu, B., Longaker, M. T.
  2005; 11 (3-4): 645-658

- **In vivo spatial and temporal analyses in mice reveal redundancy of lymphoid tissues in inducing acute GVHD after allogeneic hematopoietic cell transplantation** *Joint Meeting of the American-Society-for-Blood-and-Marrow-Transplantation/Center-for-International-Blood-and-Marrow-Transplant-Research*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G. F., Wieland, C. B., Baker, E. M., Herman, E. I., Landan, G., Olson, J. A., Cao, Y. A., Contag, C. H., Negrin, R. S.
  ELSEVIER SCIENCE INC.2005: 35–35
- **In vivo trafficking of CD4+CD25+ regulatory T-cells in allogeneic recipients using bioluminescence imaging** *Joint Meeting of the American-Society-for-Blood-and-Marrow-Transplantation/Center-for-International-Blood-and-Marrow-Transplant-Research*
  Nguyen, V. H., Wieland, C., Contag, C., Negrin, R.
  ELSEVIER SCIENCE INC.2005: 13–13
- **Cellular tolerance to pulsed heating** *Conference on Optical Interactions with Tissue and Cells XVI*
  Simanovskii, D., Sarkar, M., Irani, A., O'Connell-Rodwell, C., Contag, C., SCHWETTMAN, A., Palanker, D.
  SPIE-INT SOC OPTICAL ENGINEERING.2005: 254–259
- **Effects of metalloporphyrins on survival of mice following oral Salmonella infection.**
  Burns, S. M., Wong, R. J., Contag, C. F., Stevenson, D. K.
  B C DECKER INC.2005: S125
- **Oral administration of metalloporphyrins and its systemic effects on heme oxygenase expression.**
  Morioka, Wong, R. J., Abate, A., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  B C DECKER INC.2005: S125
- **Comparison between PET and bioluminescence imaging for quantitative assessment of tumor burden** *47th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology*
  Maxim, P. G., Thorndyke, B. R., Dandekar, M., Mayer, D., Contag, C. H., Gambhir, S. S., Xing, L.
  ELSEVIER SCIENCE INC.2005: S490–S490
- **T cell trafficking in acute GVHD: In vivo bioluminescence evaluation to elucidate the role of different lymphatic organs.** *46th Annual Meeting of the American-Society-of-Hematology*
  Beilhack, A., Schulz, S., Baker, J., Beilhack, G. F., Wieland, C. B., Baker, E. M., Herman, E. I., Landan, G., Kime, J. A., Cao, Y. A., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2004: 171A–171A
- **Real-time in vivo biodistribution of multipotent adult progenitor cells (MAPC): Role of the immune system in MAPC resistance in non-transplanted and bone marrow transplanted mice.** *46th Annual Meeting of the American-Society-of-Hematology*
  Tolar, J., Bell, S., McElmurry, R., Xia, L. L., McIvor, R. S., Yam, S. R., Kay, M. A., Contag, C. H., Verfaillie, C. M., Blazar, B. R.
  AMER SOC HEMATOLOGY.2004: 147A–148A
- **Transgenesis of multipotent adult progenitor cells (MAPC) with sleeping beauty transposons to determine MAPC homing and persistence in real-time in vivo.** *46th Annual Meeting of the American-Society-of-Hematology*
  Tolar, J., Osborn, M., Bell, S., Xia, L., Riddle, M., Panoskaltsis-Mortari, A., McIvor, S., Stephen, Y. R., Kay, M. A., Contag, C. H., Verfaillie, C. M., Blazar, B. R.
  AMER SOC HEMATOLOGY.2004: 577A–578A
- **In vivo visualization of cardiac allograft rejection and trafficking passenger leukocytes using bioluminescence imaging** *77th Scientific Meeting of the American-Heart-Association*
  Tanaka, M., Swijnenburg, R. J., Gunawan, F., Cao, Y. A., Kofidis, T., Contag, C. H., Robbins, R. C.
  LIPPINCOTT WILLIAMS & WILKINS.2004: 585–85
- **Tumor imaging using a standardized radiolabeled adapter protein docked to vascular endothelial growth factor** *JOURNAL OF NUCLEAR MEDICINE*
  Blankenberg, F. G., Mandl, S., Cao, Y. A., O'Connell-Rodwell, C., Contag, C., Mari, C., Gaynutdinov, T. I., Vanderheyden, J. L., Backer, M. V., Backer, J. M.
  2004; 45 (8): 1373-1380
- **Confocal fluorescence microscope with dual-axis architecture and biaxial postobjective scanning** *JOURNAL OF BIOMEDICAL OPTICS*
  Wang, T. D., Contag, C. H., Mandella, M. J., Chan, N. Y., Kino, G. S.
  2004; 9 (4): 735-742

- **Apoptosis in a rodent model of cranial suture fusion: In situ imaging and gene expression analysis** *PLASTIC AND RECONSTRUCTIVE SURGERY*
  Fong, K. D., Song, H. M., Nacamuli, R. P., Franc, B. L., Mari, C., Fang, T. D., Warren, S. M., Contag, C. H., Blankenberg, F. G., Longaker, M. T.
  2004; 113 (7): 2037-2047

- **Adipose-derived adult stromal cells heal critical-size mouse calvarial defects** *NATURE BIOTECHNOLOGY*
  Cowan, C. M., Shi, Y. Y., Aalami, O. O., Chou, Y. F., Mari, C., Thomas, R., Quarto, N., Contag, C. H., Wu, B., Longaker, M. T.
  2004; 22 (5): 560-567

- **Site-specific integration enhances expression of DNA introduced into skeletal muscle** *7th Annual Meeting of the American-Society-of-Gene-Therapy*
  Wheeler, T. M., Jarrahian, S., Bertoni, C., Olivares, E. C., Doyle, T., Contag, C. H., Calos, M. P., Rando, T. A.
  NATURE PUBLISHING GROUP.2004: S307–S307

- **In vivo bioluminescence imaging for integrated studies of infection** *CELLULAR MICROBIOLOGY*
  Doyle, T. C., Burns, S. M., Contag, C. H.
  2004; 6 (4): 303-317

- **Tissue-specific effects of dexamethasone on heme oxygenase-1 expression in mice** *Annual Meeting of the Pediatric-Academic-Societies*
  Mizobuchi, M., Wong, R. J., Zhao, H., Abate, A., Vreman, H. J., Contag, H., Stevenson, D. K.
  NATURE PUBLISHING GROUP.2004: 459A–459A

- **Role of CpG island methylation in the developmental regulation of heme oxygenase-1 expression in the developing mouse brain** *Annual Meeting of the Pediatric-Academic-Societies*
  Zhao, H., Wong, R. J., Mizobuchi, M., Contag, C. H., Stevenson, D. K.
  NATURE PUBLISHING GROUP.2004: 422A–422A

- **Dynamics of heme oxygenase-1 expression in infection of young mice** *Annual Meeting of the Pediatric-Academic-Societies*
  Burns, S. M., Wong, R. J., Contag, C. H., Stevenson, D. K.
  NATURE PUBLISHING GROUP.2004: 472A–472A

- **Expression of heme oxygenase-1 in response to infection in young mice** *Experimental Biology 2004 Annual Meeting*
  Burns, S. M., Wong, R. J., Stevenson, D. K., Contag, C. H.
  FEDERATION AMER SOC EXP BIOL.2004: A1312–A1312

- **Tissue-specific effects of dexamethasone on heme oxygenase-1 expression** *Experimental Biology 2004 Annual Meeting*
  Wong, R. J., Mizobuchi, M., Zhao, H., Abate, A., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  FEDERATION AMER SOC EXP BIOL.2004: A1311–A1311

- **The E47 transcription factor negatively regulates CD5 expression during thymocyte development** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Yang, Y., Contag, C. H., Felsher, D., Shachaf, C. M., Cao, Y., Herzenberg, L. A., Herzenberg, L. A., Tung, J. W.
  2004; 101 (11): 3898-3902

- **A genetic reporter of thermal stress defines physiologic zones over a defined temperature range** *FASEB JOURNAL*
  O'Connell-Rodwell, C. E., Shriver, D., Simanovskii, D. M., Mcclure, C., Cao, Y. A., Zhang, W. S., Bachmann, M. H., Beckham, J. T., Jansen, E. D., Palanker, D., Schwettman, H. A., Contag, C. H.
  2004; 18 (2): 264-271

- **p47(phox) deficiency impairs NF-kappa B activation and host defense in Pseudomonas pneumonia** *JOURNAL OF IMMUNOLOGY*
  Sadikot, R. T., Zeng, H., Yull, F. E., Li, B., Cheng, D. S., Kernodle, D. S., Jansen, E. D., Contag, C. H., Segal, B. H., Holland, S. M., Blackwell, T. S., Christman, J. W.
  2004; 172 (3): 1801-1808

- **The role of Peyer's patches and mesenteric lymph nodes in acute GVHD: A study guided by bioluminescence imaging in vivo** *Tandem BMT 2004 Meeting*
  Beilback, A., Schulz, S., Wieland, C. B., Beilback, G. F., Baker, J., Cao, Y. A., Herman, E. I., Baker, E. M., Contag, C. H., Negrin, R. S.
  ELSEVIER SCIENCE INC.2004: 5–5

- **Characterization of coelenterazine analogs for measurements of Renilla luciferase activity in live cells and living animals.** *Molecular imaging*

Zhao, H., Doyle, T. C., Wong, R. J., Cao, Y., Stevenson, D. K., Piwnica-Worms, D., Contag, C. H.
2004; 3 (1): 43-54

- **Assessment of cellular response to thermal laser injury through bioluminescence imaging of heat shock protein 70** *Photonics West Conference 2003*
  Beckham, J. T., Mackanos, M. A., Crooke, C., Takahashi, T., O'Connell-Rodwell, C., Contag, C. H., Jansen, E. D.
  AMER SOC PHOTOBIOLOGY.2004: 76–85

- **Performance of dual axes confocal microscope for in vivo molecular and cellular imaging** *Conference on 3-Dimensional and Multidimensional Microscopy - Image Acquisition and Processing XI*
  Kino, G., Wang, T., Contag, C., Mandella, M., Chan, N.
  SPIE-INT SOC OPTICAL ENGINEERING.2004: 35–46

- **Role of CpG island methylation in the transcriptional regulation of heme oxygenase-1 in the developing brain.** *Western Regional Meeting of the American-Federation-for-Medical-Research*
  Zhao, H., Wong, R. J., Mizobuchi, M., Stevenson, D. K., Contag, C. H.
  LIPPINCOTT WILLIAMS & WILKINS.2004: S171–S172

- **Response of heme oxygenase-1 to infection in young mice.** *Western Regional Meeting of the American-Federation-for-Medical-Research*
  Burns, S. M., Wong, R. J., Stevenson, D. K., Contag, C. H.
  LIPPINCOTT WILLIAMS & WILKINS.2004: S123–S123

- **Multi-modality imaging identifies key times for annexin V imaging as an early predictor of therapeutic outcome.** *Molecular imaging*
  Mandl, S. J., Mari, C., Edinger, M., Negrin, R. S., Tait, J. F., Contag, C. H., Blankenberg, F. G.
  2004; 3 (1): 1-8

- **In vivo visualization of the spatial and temporal events in bone marrow engraftment and graft vs. host disease induction by bioluminescence.** *45th Annual Meeting and Exhibition of the American-Society-of-Hematology*
  Beilhack, A., Schulz, S., Wieland, C. B., Beilhack, G. F., Cao, Y. A., Baker, J., Herman, E. I., Baker, E. M., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2003: 944A–944A

- **Survival and homing of ex vivo expanded donor derived dendritic cells after allogeneic BMT.** *45th Annual Meeting and Exhibition of the American-Society-of-Hematology*
  Schimmelpfennig, C. H., Schulz, S., Arber, C., Baker, J., Tarner, I. H., Mcbride, J. M., Fathman, C. G., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2003: 695A–695A

- **In vivo trafficking of activated T cells in allogeneic recipients using bioluminescent imaging.** *45th Annual Meeting and Exhibition of the American-Society-of-Hematology*
  Wieland, C. B., Beilhack, A., Baker, J., Cao, Y. A., Herman, E., Baker, E., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2003: 948A–948A

- **In vivo dynamics of hematopoietic reconstitution from purified stem and progenitor cells.** *45th Annual Meeting and Exhibition of the American-Society-of-Hematology*
  Wagers, A. J., Cao, Y. A., Beilhack, A., Dusich, J., Bachmann, M. H., Negrin, R. S., Weissman, I. L., Contag, C. H.
  AMER SOC HEMATOLOGY.2003: 332A–332A

- **Dual-axes confocal microscopy with post-objective scanning and low-coherence heterodyne detection** *OPTICS LETTERS*
  Wang, T. D., Contag, C. H., Mandella, M. J., Chan, N. Y., Kino, G. S.
  2003; 28 (20): 1915-1917

- **Evaluation of effector cell fate and function by in vivo bioluminescence imaging** *METHODS*
  Edinger, M., Hoffmann, P., Contag, C. H., Negrin, R. S.
  2003; 31 (2): 172-179

- **Breaching biological barriers: protein translocation domains as tools for molecular imaging and therapy.** *Molecular imaging*
  Franc, B. L., Mandl, S. J., Siprashvili, Z., Wender, P., Contag, C. H.
  2003; 2 (4): 313-323

- **Gene transfer via reversible plasmid condensation with cysteine-flanked, internally spaced arginine-rich peptides** *HUMAN GENE THERAPY*
  Siprashvili, Z., Scholl, F. A., Oliver, S. F., Adams, A., Contag, C. H., Wender, P. A., Khavari, P. A.

2003; 14 (13): 1225-1233

- **A potent and specific morpholino antisense inhibitor of hepatitis C translation in mice** *HEPATOLOGY*
  McCaffrey, A. P., Meuse, L., Karimi, M., Contag, C. H., Kay, M. A.
  2003; 38 (2): 503-508
- **Effects of metalloporphyrins on heme oxygenase-1 transcription: correlative cell culture assays guide in vivo imaging.** *Molecular imaging*
  Hajdena-Dawson, M., Zhang, W., Contag, P. R., Wong, R. J., Vreman, H. J., Stevenson, D. K., Contag, C. H.
  2003; 2 (3): 138-149
- **Comparison of gene expression after intraperitoneal delivery of AAV2 or AAV5 in utero** *MOLECULAR THERAPY*
  Lipshutz, G. S., Titre, D., Brindle, M., Bisconte, A. R., Contag, C. H., Gaensler, K. M.
  2003; 8 (1): 90-98
- **In vivo activation of the human CYP3A4 promoter in mouse liver and regulation by pregnane X receptors** *BIOCHEMICAL PHARMACOLOGY*
  Zhang, W. S., Purchio, A., Chen, K., Burns, S. M., Contag, C. H., Contag, P. R.
  2003; 65 (11): 1889-1896
- **Optical monitoring and treatment of potentially lethal wound infections in vivo** *8th International-Photodynamic-Association Congress*
  Hamblin, M. R., Zahra, T., Contag, C. H., McManus, A. T., Hasan, T.
  OXFORD UNIV PRESS.2003: 1717–25
- **Advancing molecular therapies through in vivo bioluminescent imaging.** *Molecular imaging*
  McCaffrey, A., Kay, M. A., Contag, C. H.
  2003; 2 (2): 75-86
- **Identifying key mediators of age-related susceptibility to gastrointestinal infections utilizing microarray analyses guided by bioluminescent imaging**
  Burns, S. M., Shinde, R. R., Stevenson, D. K., Contag, C. H.
  INT PEDIATRIC RESEARCH FOUNDATION, INC.2003: 373A–374A
- **Intestinal absorption of metalloporphyrins and systemic effects on heme oxygenase**
  Wong, R. J., Abate, A., Dennery, P. A., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  INT PEDIATRIC RESEARCH FOUNDATION, INC.2003: 400A
- **Dual-axis confocal microscope for high-resolution in vivo imaging** *OPTICS LETTERS*
  Wang, T. D., Mandella, M. J., Contag, C. H., Kino, G. S.
  2003; 28 (6): 414-416
- **Animal models of bone metastasis** *3rd North American Symposium on Skeletal Complications of Malignancy*
  Rosol, T. J., Tannehill-Gregg, S. H., LeRoy, B. E., Mandl, S., Contag, C. H.
  JOHN WILEY & SONS INC.2003: 748–57
- **Direct intestinal administration of metalloporphyrins and heme oxygenase expression.** *Western Regional Meeting of the American-Federation-for-Medical-Research*
  Wong, R. J., Abate, A., Dennery, P. A., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  LIPPINCOTT WILLIAMS & WILKINS.2003: S140–S141
- **Revealing lymphoma growth and the efficacy of immune cell therapies using in vivo bioluminescence imaging** *BLOOD*
  Edinger, M., Cao, Y. A., Verneris, M. R., Bachmann, M. H., Contag, C. H., Negrin, R. S.
  2003; 101 (2): 640-648
- **Treatment of autoimmune disease by adoptive cellular gene therapy** *10th International Conference on Myasthenia Gravis and Related Disorders*
  Tarner, I. H., Slavin, A. J., McBride, J., Levicnik, A., Smith, R., Nolan, G. P., Contag, C. H., Fathman, C. G.
  NEW YORK ACAD SCIENCES.2003: 512–519
- **A novel nonviral approach to gene therapy for muscle disease mediated by phage phi C31 integrase**
  Wheeler, T. M., Jarrahian, S., Bertoni, C., Olivares, E. C., Contag, C. H., Calos, M. P., Rando, T. A.
  WILEY-LISS.2003: S43

- **Bioluminescence imaging as a marker for cellular Hsp70 response to thermal laser injury** *Conference on Laser-Tissue Interaction XIV*
  Beckham, J. T., Baran, J. A., Mackanos, M., Crooke, C., Takahashi, T., O' Connell-Rodwell, C., Contag, C. H., Jansen, E. D.
  SPIE-INT SOC OPTICAL ENGINEERING.2003: 153–164

- **Apoptosis in a rat model of cranial suture fusion** *10th International Congress of the International-Society-of-Craniofacial-Surgery*
  Fong, K. D., Song, H. M., Nacamuli, R. P., Franc, B., Fang, T. D., Salim, A., Contag, C., Blankenburg, F., Longaker, M. T.
  MEDIMOND PUBLISHING CO.2003: 405–407

- **Myeloid progenitors protect against invasive aspergillosis and Pseudomonas aeruginosa infection following hematopoietic stem cell transplantation** *BLOOD*
  Bitmansour, A., Burns, S. M., Traver, D., Akashi, K., Contag, C. H., Weissman, I. L., Brown, J. M.
  2002; 100 (13): 4660-4667

- **Retroviral gene therapy of collagen-induced arthritis by local delivery of IL-4** *CLINICAL IMMUNOLOGY*
  Tarner, I. H., Nakajima, A., Seroogy, C. M., Ermann, J., Levicnik, A., Contag, C. H., Fathman, C. G.
  2002; 105 (3): 304-314

- **Trafficking of ex vivo expanded donor dendritic cells after allogeneic BMT.** *44th Annual Meeting of the American-Society-of-Hematology*
  Schimmelpfennig, C. H., Mcbride, J. M., Tarner, I. H., Baker, J., McGuire, J., Fathman, C. G., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2002: 408A–408A

- **Impact of three non-myeloablative conditioning regimens on allogeneic bone marrow transplantation in mice with B-cell lymphoma.** *44th Annual Meeting of the American-Society-of-Hematology*
  Schimmelpfennig, C. H., Baker, J., Mont-Reynaud, M. J., Edinger, M., Contag, C. H., Blazar, B. R., Negrin, R. S.
  AMER SOC HEMATOLOGY.2002: 402B–402B

- **Advancing animal models of neoplasia through in vivo bioluminescence imaging** *EUROPEAN JOURNAL OF CANCER*
  Edinger, M., Cao, Y. A., Hornig, Y. S., Jenkins, D. E., Verneris, M. R., Bachmann, M. H., Negrin, R. S., Contag, C. H.
  2002; 38 (16): 2128-2136

- **Visualization of effective tumor targeting by CD8+natural killer T cells redirected with bispecific antibody F(ab ')(2)HER2xCD3** *CANCER RESEARCH*
  Scheffold, C., Kornacker, M., Scheffold, Y. C., Contag, C. H., Negrin, R. S.
  2002; 62 (20): 5785-5791

- **It's not just about anatomy: In vivo bioluminescence imaging as an eyepiece into biology** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Contag, C. H., Ross, B. D.
  2002; 16 (4): 378-387

- **It's not just about anatomy: In vivo bioluminescence imaging as an eyepiece into biology** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Contag, C. H., Ross, B. D.
  2002; 16 (4): 378-387

- **Selection of potential therapeutics based on in vivo spatiotemporal transcription patterns of heme oxygenase-1** *JOURNAL OF MOLECULAR MEDICINE-JMM*
  Zhang, W. S., Contag, P. R., Hardy, J., Zhao, H., Vreman, H. J., Hajdena-Dawson, M., Wong, R. J., Stevenson, D. K., Contag, C. H.
  2002; 80 (10): 655-664

- **Adoptive cellular gene therapy of autoimmune disease.** *Autoimmunity reviews*
  Slavin, A. J., Tarner, I. H., Nakajima, A., Urbanek-Ruiz, I., McBride, J., Contag, C. H., Fathman, C. G.
  2002; 1 (4): 213-219

- **Bioluminescent indicators for in vivo measurements of gene expression** *TRENDS IN BIOTECHNOLOGY*
  O'Connell-Rodwell, C. E., Burns, S. M., Bachmann, M. H., Contag, C. H.
  2002; 20 (8): S19-S23

- **Visualization of tumor and effector cell trafficking in hematologic malignancies**
  Negrin, R., Edinger, M., Verneris, M., Cao, Y. A., Bachmann, M., Contag, C.
  ELSEVIER SCIENCE INC.2002: 105–

- **Dissection of promoter control modules that direct Bmp4 expression in the epithelium-derived components of hair follicles** *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS*
  Zhang, J. H., Tan, X. Y., Contag, C. H., Lu, Y. B., Guo, D. Y., Harris, S. E., Feng, J. Q.
  2002; 293 (5): 1412-1419
- **Regulation of intestine-specific spatiotemporal expression by the rat lactase promoter** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Lee, S. Y., Wang, Z., Lin, C. K., Contag, C. H., Olds, L. C., Cooper, A. D., Sibley, E.
  2002; 277 (15): 13099-13105
- **Developmentally regulated pattern of heme oxygenase-1 expression in the mouse brain**
  Wong, R. J., Nguyen, X. N., Zhao, H., Vreman, H. J., Contag, C. H., Stevenson, D. K.
  NATURE PUBLISHING GROUP.2002: 328A–328A
- **Comparing the host response of neonatal and adult mice to gastrointestinal infections utilizing microarrays**
  Burns, S. M., Stevenson, D. K., Contag, C. H.
  INT PEDIATRIC RESEARCH FOUNDATION, INC.2002: 298A
- **Rapid in vivo assessment of heme oxygenase-1 gene transcription: Involvement of regulatory regions in metalloporphyrin-mediated activation**
  Kazerounizadeh, H. R., Gruber, C. A., Burns, S. M., Hardy, J. W., Wong, R. J., Vreman, H. J., Stevenson, D. K., Contag, C. H.
  NATURE PUBLISHING GROUP.2002: 327A–328A
- **Understanding immune cell trafficking patterns via in vivo bioluminescence imaging** *JOURNAL OF CELLULAR BIOCHEMISTRY*
  Mandl, S., Schimmelpfennig, C., Edinger, M., Negrin, R. S., Contag, C. H.
  2002: 239-248
- **Rapid control of wound infections by targeted photodynamic therapy monitored by in vivo bioluminescence imaging** *PHOTOCHEMISTRY AND PHOTOBIOLOGY*
  Hamblin, M. R., O'Donnell, D. A., Murthy, N., Contag, C. H., Hasan, T.
  2002; 75 (1): 51-57
- **Targeted photodynamic therapy for infected wounds in mice.** *Conference on Optical Methods for Tumor Treatment and Detection - Mechanisms and Techniques in Photodynamic Therapy XI*
  Hamblin, M. R., O'Donnell, D. A., Zahra, T., Contag, C. H., McManus, A., Hasan, T.
  SPIE-INT SOC OPTICAL ENGINEERING.2002: 48–58
- **Advances in vivo bioluminescence imaging of gene expression** *ANNUAL REVIEW OF BIOMEDICAL ENGINEERING*
  Contag, C. H., Bachmann, M. H.
  2002; 4: 235-260
- **Visualization of tumor growth and response to NK-T cell based immunotherapy using bioluminescence** *3rd International Symposium on Transplantation in Hematology and Oncology*
  Negrin, R. S., Edinger, M., Verneris, M., Cao, Y. A., Bachmann, M., Contag, C. H.
  SPRINGER.2002: S44–S45
- **In vivo patterns of heme oxygenase-1 transcription.** *Journal of perinatology*
  Contag, C. H., Stevenson, D. K.
  2001; 21: S119-24
- **Bioluminescence imaging of lymphocyte trafficking in vivo** *EXPERIMENTAL HEMATOLOGY*
  Hardy, J., Edinger, M., Bachmann, M. H., Negrin, R. S., Fathman, C. G., Contag, C. H.
  2001; 29 (12): 1353-1360
- **Real time in vivo imaging of syngeneic and allogeneic T cells after bone marrow transplantation.**
  Edinger, M., Verneris, M. R., Cao, Y., Bachmann, M., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2001: 384A–384A
- **Monitoring the anti tumor activity of expanded CD8(+) NKT cells after allogeneic bone marrow transplantation using bioluminescent imaging.**
  Edinger, M., Verneris, M. R., Cao, Y., Bachmann, M., Contag, C. H., Negrin, R. S.

AMER SOC HEMATOLOGY.2001: 433A–433A

- **Adoptive immunotherapy of experimental autoimmune encephalomyelitis via T cell delivery of the IL-12 p40 subunit** *JOURNAL OF IMMUNOLOGY*
  Costa, G. L., Sandora, M. R., Nakajima, A., Nguyen, E. V., Taylor-Edwards, C., Slavin, A. J., Contag, C. H., Fathman, C. G., Benson, J. M.
  2001; 167 (4): 2379-2387
- **Antigen-specific T cell-mediated gene therapy in collagen-induced arthritis** *JOURNAL OF CLINICAL INVESTIGATION*
  Nakajima, A., Seroogy, C. M., Sandora, M. R., Tarner, I. H., Costa, G. L., Taylor-Edwards, C., Bachmann, M. H., Contag, C. H., Fathman, C. G.
  2001; 107 (10): 1293-1301
- **Carbon monoxide and bilirubin production in neonates** *SEMINARS IN PERINATOLOGY*
  Stevenson, D. K., Vreman, H. J., Wong, R. J., Contag, C. H.
  2001; 25 (2): 85-93
- **In utero delivery of adeno-associated viral vectors: Intraperitoneal gene transfer produces long-term expression** *MOLECULAR THERAPY*
  Lipshutz, G. S., Gruber, C. A., Cao, Y. A., Hardy, J., Contag, C. H., Gaensler, K. M.
  2001; 3 (3): 284-292
- **Revealing the spatiotemporal patterns of bacterial infectious diseases using bioluminescent pathogens and whole body imaging.** *Contributions to microbiology*
  Burns, S. M., Joh, D., Francis, K. P., Shortliffe, L. D., Gruber, C. A., Contag, P. R., Contag, C. H.
  2001; 9: 71-88
- **Retroviral gene therapy of collagen-induced arthritis by local delivery of IL-4**
  Tarner, I. H., Nakajima, A., Seroogy, C. M., Ermann, J., Sandora, M. R., Contag, C. H., Fathman, C. G.
  BIOMED CENTRAL LTD.2001
- **Rapid in vivo functional analysis of transgenes in mice using whole body imaging of luciferase expression** *TRANSGENIC RESEARCH*
  Zhang, W. S., Feng, J. Q., Harris, S. E., Contag, P. R., Stevenson, D. K., Contag, C. H.
  2001; 10 (5): 423-434
- **Prenatal transmission of subtype CHIV-1 in Zimbabwe: HIV-1 RNA and DNA in maternal and cord blood** *13th International AIDS Conference*
  Guevara, H., Johnston, E., Zijenah, L., Tobaiwa, O., Mason, P., Contag, C., Mahomed, K., Hendry, M., Katzenstein, D.
  LIPPINCOTT WILLIAMS & WILKINS.2000: 390–97
- **Visualizing leukemia & lymphoma cell homing and quantification of tumor burden in response to therapy in living animals.**
  Edinger, M., Verneris, M. R., Cao, Y., Bachmann, M. H., Costa, G. L., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.2000: 123A–123A
- **Rapid and quantitative assessment of cancer treatment response using in vivo bioluminescence imaging** *NEOPLASIA*
  Rehemtulla, A., Stegman, L. D., Cardozo, S. J., Gupta, S., Hall, D. E., Contag, C. H., Ross, B. D.
  2000; 2 (6): 491-495
- **Genetic analysis of viral variants selected in transmission of human immunodeficiency viruses to newborns** *AIDS RESEARCH AND HUMAN RETROVIRUSES*
  Kliks, S., Contag, C. H., Corliss, H., Learn, G., Rodrigo, A., Wara, D., Mullins, J. I., Levy, J. A.
  2000; 16 (13): 1223-1233
- **HIV type 1 envelope subtype C sequences from recent seroconverters in Zimbabwe** *AIDS RESEARCH AND HUMAN RETROVIRUSES*
  Batra, M., Tien, P. C., Shafer, R. W., Contag, C. H., Katzenstein, D. A.
  2000; 16 (10): 973-979
- **HO-1 expression in type II pneumocytes after transpulmonary gene delivery** *AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY*
  Weng, Y. H., Tatarov, A., Bartos, B. P., Contag, C. H., Dennery, P. A.
  2000; 278 (6): L1273-L1279
- **Real time in vivo imaging of T cell trafficking in autoimmune disease**
  Sandora, M. R., Costa, G. L., Benson, J. M., Lejon, K., Slavin, A. J., Contag, C. H., Fathman, C. G.
  FEDERATION AMER SOC EXP BIOL.2000: A1148

- **Shining a new light on metalloporphyrins and heme oxygenase**
  Hajdena-Dawson, M., Contag, C., Stevenson, D. K.
  INT PEDIATRIC RESEARCH FOUNDATION, INC.2000: 401A
- **Use of reporter genes for optical measurements of neoplastic disease in vivo** *NEOPLASIA*
  Contag, C. H., Jenkins, D., Contag, F. R., Negrin, R. S.
  2000; 2 (1-2): 41-52
- **Noninvasive monitoring of gene delivery using Salmonella vaccines.**
  Bachmann, M. H., Burns, S. M., Gruber, C., Stevenson, D. K., Contag, C. H.
  LIPPINCOTT WILLIAMS & WILKINS.2000: 43A
- **Carbon monoxide detection and biological investigations.** *Transactions of the American Clinical and Climatological Association*
  Stevenson, D. K., Vreman, H. J., Wong, R. J., Dennery, P. A., Contag, C. H.
  2000; 111: 61-75
- **Visualizing the kinetics of tumor-cell clearance in living animals** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Sweeney, T. J., Mailander, V., Tucker, A. A., Olomu, A. B., Zhang, W. S., Cao, Y. A., Negrin, R. S., Contag, C. H.
  1999; 96 (21): 12044-12049
- **Noninvasive assessment of tumor cell proliferation in animal models.** *Neoplasia*
  Edinger, M., Sweeney, T. J., Tucker, A. A., Olomu, A. B., Negrin, R. S., Contag, C. H.
  1999; 1 (4): 303-310
- **Illuminating drug discovery** *CHEMISTRY & INDUSTRY*
  Contag, C. H., Contag, P. R.
  1999: 664-666
- **Real-time monitoring of Escherichia coli O157 : H7 adherence to beef carcass surface tissues with a bioluminescent reporter** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*
  Siragusa, G. R., Nawotka, K., Spilman, S. D., Contag, P. R., Contag, C. H.
  1999; 65 (4): 1738-1745
- **Transcriptional regulation of heme oxygenase-1 by metalloporphyrins**
  Zhang, W. S., Contag, P. R., Contag, C. H., Stevenson, D. K.
  NATURE PUBLISHING GROUP.1999: 72A–72A
- **Primary subtype C HIV-1 infection in Harare, Zimbabwe** *JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES*
  Tien, P. C., Chiu, T., Latif, A., Ray, S., Batra, M., Contag, C. H., Zejena, L., Mbizvo, M., Delwart, E. L., Mullins, J. I., Katzenstein, D. A.
  1999; 20 (2): 147-153
- **Effects of metalloporphyrins on heme oxygenase-1 expression**
  Zhang, W., Contag, P. R., Contag, C. H., Stevenson, D. K.
  SLACK INC.1999: 6A
- **Bioluminescence for biological sensing in living mammals** *26th Annual Meeting of the International-Society-on-Oxygen-Transport-to-Tissue (ISOTT 98)*
  Zhang, W. S., Contag, P. R., Madan, A., Stevenson, D. K., Contag, C. H.
  KLUWER ACADEMIC/PLENUM PUBL.1999: 775–784
- **Noninvasive monitoring of Salmonella infections in young mice** *Conference on Biomedical Imaging - Reporters, Dyes, and Instrumentation*
  Olomu, I. N., Contag, P. R., Stevenson, D. K., Contag, C. H.
  SPIE - INT SOC OPTICAL ENGINEERING.1999: 125–129
- **Functional analysis of tumor cell growth and clearance in living animals** *Conference on Biomedical Imaging - Reporters, Dyes, and Instrumentation*
  Sweeney, T. J., Mailander, V., Tucker, A. A., Olomu, A. B., Zhang, W. S., Negrin, R. S., Contag, C. H.
  SPIE - INT SOC OPTICAL ENGINEERING.1999: 136–139

- **Functional imaging: monitoring heme oxygenase-1 gene expression in vivo** *Conference on Biomedical Imaging - Reporters, Dyes, and Instrumentation*
  Zhang, W. S., Contag, P. R., Stevenson, D. K., Contag, C. H.
  SPIE - INT SOC OPTICAL ENGINEERING.1999: 130–135
- **Construction and characterization of a red-emitting luciferase** *Conference on Biomedical Imaging - Reporters, Dyes, and Instrumentation*
  Eames, B. F., Benaron, D. A., Stevenson, D. K., Contag, C. H.
  SPIE - INT SOC OPTICAL ENGINEERING.1999: 36–39
- **Visualizing tumor cell growth and response to therapy in the living host.**
  Sweeney, T. J., Olumo, A. B., Mailander, V., Tucker, A. A., Milnick, I., Contag, C. H., Negrin, R. S.
  AMER SOC HEMATOLOGY.1998: 643A–643A
- **Bioluminescent indicators in living mammals** *NATURE MEDICINE*
  Contag, P. R., Olomu, I. N., Stevenson, D. K., Contag, C. H.
  1998; 4 (2): 245-247
- **Visualizing tumor dynamics in vivo.**
  Olomu, A. B., Sweeney, T. J., Mailander, V., Eames, B. F., Negrin, R. S., Stevenson, D. K., Benaron, D. A., Contag, C. H.
  LIPPINCOTT WILLIAMS & WILKINS.1998: 169A–169A
- **Construction of a red-emitting firefly luciferase.**
  Eames, B. F., Benaron, D. A., Stevenson, D. K., Contag, C. H.
  SLACK INC.1998: 94A
- **Involvement of a global regulator in Salmonella virulence.**
  Contag, P. R., Pham, H. H., Olomu, I. N., Stevenson, D. K., Contag, C. H., Falkow, S.
  SLACK INC.1998: 116A
- **Noninvasive monitoring of acute susceptibility and host response to Salmonella infection in living neonatal mice.**
  Olomu, I. N., Contag, C. H., Spilman, S. D., Benaron, D. A., Stevenson, D. K., Contag, P. R.
  SLACK INC.1998: 116A
- **The effects of potential therapeutic agents on transcription of heme oxygenase.**
  Zhang, W., Contag, P. R., Contag, C. H., Hajdena-Dawson, M., Stevenson, D. K.
  SLACK INC.1998: 132A
- **Viral selection during transmission of HIV-1 to infants.**
  Basile, A., Batra, M., Bachmann, M., Zhang, W., Stevenson, D. K., Contag, C. H., Kliks, S.
  SLACK INC.1998: 142A
- **In vivo monitoring of antitumor therapies in intact mice.**
  Sweeney, T. J., Olomu, A. B., Mailander, V., Stevenson, D. K., Contag, C. H., Negrin, R. S.
  LIPPINCOTT WILLIAMS & WILKINS.1998: 91A–91A
- **Mother-to-infant transmission of human immunodeficiency virus type 1 involving five envelope sequence subtypes** *JOURNAL OF VIROLOGY*
  Contag, C. H., EHRNST, A., Duda, J., Bohlin, A. B., Lindgren, S., Learn, G. H., Mullins, J. I.
  1997; 71 (2): 1292-1300
- **Evaluating gene expression using a bioluminescent reporter system in living animals**
  Contag, C. H., Spilman, S. D., Stevenson, D. K., Benaron, D. A.
  SLACK INC.1996: A106
- **Simian immunodeficiency virus from Old World monkeys** *The Human Retroviruses*
  Contag, Christopher H., Stephen Dewhurst, Gregory A. Viglianti, James I. Mullins
  1991: 245-276