



Ryan Spitler

Deputy Director, Precision Health and Integrated Diagnostics Center, Rad/Precision Health and Integrated Diagnostics

 Curriculum Vitae available Online

Bio

BIO

Dr. Spitler is the Deputy Director of the Precision Health and Integrated Diagnostics Center at Stanford University. He completed his Post Doctoral Research Fellowship (SCIT) at Stanford University School of Medicine, conducting research in the developing field of Magnetogenetics for remote controlled cellular reprogramming and developed smart MRI cell tracking tools for oncology cell tracking studies. He has designed numerous biological models, synthetic biology approaches and worked on the development of new technologies in a number of scientific areas ranging from medical devices to gene therapy. Prior to his position at Stanford, Dr. Spitler received his Ph.D. in Cellular and Developmental Biology at the Beckman Laser Institute at the University of California, Irvine. His research at the Beckman Laser Institute included developing and characterizing new nitric oxide-based drugs, laser, and LED-based multimodal wound healing therapies some of which are currently being used in the clinic as a result of his work.

Dr. Spitler received his Bachelor's of Science degree in Molecular Cell and Developmental Biology from the University of California, Santa Cruz, where he worked in the area of structural biology. Over the past two decades he has held a number of academic and industrial positions and has served as an advisor or advisory board member for a number of Bay Area companies. Dr. Spitler is the recipient of the Stanford Cancer Imaging Fellowship Training Award, RSL Innovation Challenge Award, the Biophotas Research Fellowship, and the Stanford Center for Biomedical Imaging Achievement Award.

HONORS AND AWARDS

- RSL Innovation Challenge Grant, Radiological Sciences Laboratory - Stanford School of Medicine (2015-2016)
- Stanford Cancer Imaging Training Fellowship, National Cancer Institute (2014-2016)
- Biophotas Research Fellowship, Biophotas Inc., Beckman Laser Institute, University of California Irvine (2013-2014)
- Military Photomedicine Program, Beckman Laser Institute, University of California Irvine (2010-2014)
- Achievement Award in Biomedical Imaging, Stanford University (2010)

Publications

PUBLICATIONS

- **Toward achieving precision health** *SCIENCE TRANSLATIONAL MEDICINE*
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- **Cell Labeling with Magneto-Endosymbionts and the Dissection of the Subcellular Location, Fate, and Host Cell Interactions** *MOLECULAR IMAGING AND BIOLOGY*
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- **Iron oxide nanoparticles inhibit tumour growth by inducing pro-inflammatory macrophage polarization in tumour tissues.** *Nature nanotechnology*
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- **Protein corona: Opportunities and challenges** *INTERNATIONAL JOURNAL OF BIOCHEMISTRY & CELL BIOLOGY*
Zanganeh, S., Spitler, R., Erfanzadeh, M., Alkilany, A. M., Mahmoudi, M.
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- **Combination of low level light therapy and nitrosyl-cobinamide accelerates wound healing** *JOURNAL OF BIOMEDICAL OPTICS*
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2015; 20 (5)
- **Comparison of laser and diode sources for acceleration of in vitro wound healing by low-level light therapy** *JOURNAL OF BIOMEDICAL OPTICS*
Spitler, R., Berns, M. W.
2014; 19 (3)
- **Nitrosyl-cobinamide (NO-Cbi), a new nitric oxide donor, improves wound healing through cGMP/cGMP-dependent protein kinase.** *Cellular signalling*
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2013; 25 (12): 2374-2382
- **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., Shorestein, J., Judge, A., Spitler, R., Contag, C., Wong, S. P., Harbottle, R. P., MacLachlan, I., Johnston, B. H.
2013; 2
- **cGMP-dependent protein kinase IB regulates breast cancer cell migration and invasion via interaction with the actin/myosin-associated protein caldesmon.** *Journal of cell science*
Schwappacher, R., Rangaswami, H., Su-Yuo, J., Hassad, A., Spitler, R., Casteel, D. E.
2013; 126: 1626-1636
- **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
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- **In Vitro Evolution of Ligands to the Membrane Protein Caveolin** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
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2011; 133 (25): 9855-9862
- **Non-damaging Retinal Phototherapy: Dynamic Range of Heat Shock Protein Expression** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*
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- **Increased interstitial pressure improves nucleic acid delivery to skin enabling a comparative analysis of constitutive promoters** *GENE THERAPY*
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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*
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