

Stanford



Paul Bollyky

Associate Professor of Medicine (Infectious Diseases) and of Microbiology and Immunology

Medicine - Infectious Diseases

CLINICAL OFFICES

- **Infectious Disease**

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Bio

BIO

Dr. Bollyky is an Immunologist and Infectious Disease specialist at Stanford Medical Center.

CLINICAL FOCUS

- Infectious Disease
- Wound infections
- Microbial biofilms
- Diabetic wounds

ACADEMIC APPOINTMENTS

- Associate Professor, Medicine - Infectious Diseases
- Associate Professor, Microbiology & Immunology
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Fellow, Infectious Disease Society of America (2019)
- Elected to membership in the American Society of Clinical Investigators, (ASCI) (2018)
- Harrington Scholar Innovator, Harrington Discovery Institute (2017)
- Transformative Research Award, Dr. Ralph and Marian Falk Medical Research Trust (2017)
- Grand Challenges Award, Bill & Melinda Gates Foundation (2016)
- Catalyst Award, Dr. Ralph and Marian Falk Medical Research Trust (2015)
- Outstanding Faculty Mentor Award, Stanford Immunology (2015)

- Career Development Award, Juvenile Diabetes Research Foundation (2012)
- Elected to membership, Western Society of Clinical Investigators (2012)
- Young Investigator Award, University of Washington Diabetes Research Council (2012)
- Excellence in Teaching Award, Harvard Medical School (2004)
- Soma Weiss Prize for Student Research, Harvard Medical School (2001)
- North Senior Scholar, St. John's College, Oxford (1997)
- Marshall Scholar, British Marshall Scholarship Fund (1994)

PROFESSIONAL EDUCATION

- Board Certification: Infectious Disease, American Board of Internal Medicine (2007)
- Fellowship: University of Washington Infectious Disease Program (2007) WA
- Residency: Brigham and Women's Hospital Internal Medicine Residency (2004) MA
- Medical Education: Harvard Medical School (2001) MA
- PhD, Oxford University (1998)
- B.A., Columbia University, Biology (1994)

LINKS

- <http://bollykylab.com>: <http://bollykylab.com>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

We are a translational immunology lab in the Division of Infectious Diseases at Stanford University.

Current areas of investigation include:

Bacteriophage / Human Immune Interactions

We recently reported that bacteriophage present at sites of bacterial infection are internalized by mammalian cells and that they trigger anti-viral immune responses that antagonize anti-bacterial responses. Current efforts are focused on understanding how bacteriophage interact with mammalian cells, how this infection influences local immunity, and how phage shape the immune response to commensal and pathogenic bacteria. Most of this work is being done in wound and lung infection models.

The Phage Microbiome (the "phageome") in Human Health and Disease

We have identified novel roles for bacteriophage (the "Phageome") in the pathogenesis of wound and lung infections. We recently reported that filamentous phage produced by *P. aeruginosa* act as structural elements in microbial biofilms and that phage thereby impact the bioactivity of antibiotics. Moreover, phage also indirectly alter the course of infections through effects on bacterial phenotypes and microbial ecology.

Phage Therapy and Wound and Lung Infections

We are involved in several studies looking at lytic phage therapy for bacterial infections and are interested in the interplay between human immunity and lytic phage.

Pericellular Matrix and Immune Cell Interactions

A coat of extracellular matrix surrounds cells and influences cell-cell interactions. We are working to understand how this glycocalyx is regulated and how it contributes to antigen presentation, phagocytosis, cytokine signaling, and cytolytic killing.

Extracellular Matrix and Immune Regulation

We use models of autoimmunity and infection to learn how the extracellular matrix and inflammation influences innate immunity, and local immune regulation.

Looking for a lab?

We are actively recruiting structural biologists, biochemists, immunologists, and microbiologists for post-doctoral positions in the lab. If interested, please contact Dr. Bollyky at pbollyky@stanford.edu

For Stanford Undergraduates interested in joining the lab, we require a minimum commitment of a full year (including full-time work in the lab for at least one summer).

We take high school and undergraduate students through the SSRP program: <https://biosciences.stanford.edu/prospective/diversity/ssrp/>

Teaching

COURSES

2019-20

- Translational Immunology: IMMUNOL 209 (Win, Spr)

2018-19

- Translational Immunology: IMMUNOL 209 (Win, Spr)

2017-18

- Translational Immunology: IMMUNOL 209 (Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Justin Arredondo-Guerrero, Caleb Glassman

Postdoctoral Faculty Sponsor

Qingquan Chen, Sally Demirdjian, Ievgen Koliesnik, Jonas Van Belleghem, Christiaan de Vries

Doctoral Dissertation Advisor (AC)

Graham Barlow, Naomi Haddock, Payton Marshall, Hunter Martinez, Carlos Medina, Medeea Popescu

Postdoctoral Research Mentor

Qingquan Chen, Sally Demirdjian, Ievgen Koliesnik, Jonas Van Belleghem, Christiaan de Vries

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Immunology (Phd Program)
- Infectious Diseases (Fellowship Program)
- Microbiology and Immunology (Phd Program)
- Pediatric Infectious Diseases (Fellowship Program)

Publications

PUBLICATIONS

- **Filamentous bacteriophages are associated with chronic Pseudomonas lung infections and antibiotic resistance in cystic fibrosis** *SCIENCE TRANSLATIONAL MEDICINE*
Burgener, E. B., Sweere, J. M., Bach, M. S., Secor, P. R., Haddock, N., Jennings, L. K., Marvig, R. L., Johansen, H., Rossi, E., Cao, X., Tian, L., Nedelec, L., Molin, et al
2019; 11 (488)
- **Bacteriophage trigger antiviral immunity and prevent clearance of bacterial infection.** *Science (New York, N.Y.)*
Sweere, J. M., Van Belleghem, J. D., Ishak, H., Bach, M. S., Popescu, M., Sunkari, V., Kaber, G., Manasherob, R., Suh, G. A., Cao, X., de Vries, C. R., Lam, D. N., Marshall, et al
2019; 363 (6434)
- **Interactions between Bacteriophage, Bacteria, and the Mammalian Immune System.** *Viruses*
Van Belleghem, J. D., D#browska, K., Vaneechoutte, M., Barr, J. J., Bollyky, P. L.
2018; 11 (1)
- **Hyaluronan synthesis is necessary for autoreactive T-cell trafficking, activation, and Th1 polarization.** *Proceedings of the National Academy of Sciences of the United States of America*
Kuipers, H. F., Rieck, M., Gurevich, I., Nagy, N., Butte, M. J., Negrin, R. S., Wight, T. N., Steinman, L., Bollyky, P. L.
2016; 113 (5): 1339-1344
- **Filamentous Bacteriophage Promote Biofilm Assembly and Function** *CELL HOST & MICROBE*
Secor, P. R., Sweere, J. M., Michaels, L. A., Malkovskiy, A. V., Lazzareschi, D., Katznelson, E., Rajadas, J., Birnbaum, M. E., Arrigoni, A., Braun, K. R., Evanko, S. P., Stevens, D. A., Kaminsky, et al
2015; 18 (5): 549-559
- **Inhibition of hyaluronan synthesis restores immune tolerance during autoimmune insulinitis.** *The Journal of clinical investigation*
Nagy, N., Kaber, G., Johnson, P. Y., Gebe, J. A., Preisinger, A., Falk, B. A., Sunkari, V. G., Gooden, M. D., Vernon, R. B., Bogdani, M., Kuipers, H. F., Day, A. J., Campbell, et al
2015
- **The Immune Response to Chronic Pseudomonas aeruginosa Wound Infection in Immunocompetent Mice.** *Advances in wound care*
Sweere, J. M., Ishak, H., Sunkari, V., Bach, M. S., Manasherob, R., Yadava, K., Ruppert, S. M., Sen, C. K., Balaji, S., Keswani, S. G., Secor, P. R., Bollyky, P. L.
2020; 9 (2): 35-47
- **Hydrogel-based delivery of Il-10 improves treatment of bleomycin-induced lung fibrosis in mice** *BIOMATERIALS*
Shamskhov, E. A., Kratochvil, M. J., Orcholski, M. E., Nagy, N., Kaber, G., Steen, E., Balaji, S., Yuan, K., Keswani, S., Danielson, B., Gao, M., Medina, C., Nathan, et al
2019; 203: 52-62
- **4-Methylumbelliferyl glucuronide contributes to hyaluronan synthesis inhibition.** *The Journal of biological chemistry*
Nagy, N., Gurevich, I., Kuipers, H. F., Ruppert, S. M., Marshall, P. L., Xie, B. J., Sun, W., Malkovskiy, A. V., Rajadas, J., Grandoch, M., Fischer, J. W., Frymoyer, A. R., Kaber, et al
2019
- **Perspectives of Phage Therapy in Non-bacterial Infections** *FRONTIERS IN MICROBIOLOGY*
Gorski, A., Bollyky, P. L., Przybylski, M., Borysowski, J., Miedzybrodzki, R., Jonczyk-Matysiak, E., Weber-Dabrowska, B.
2019; 9
- **4-Methylumbelliferone improves the thermogenic capacity of brown adipose tissue.** *Nature metabolism*
Grandoch, M., Flögel, U., Virtue, S., Maier, J. K., Jelenik, T., Kohlmorgen, C., Feldmann, K., Ostendorf, Y., Castañeda, T. R., Zhou, Z., Yamaguchi, Y., Nascimento, E. B., Sunkari, et al
2019; 1 (5): 546-59
- **Quantitative assessment of bacterial growth phase utilizing flow cytometry.** *Journal of microbiological methods*
Khomtchouk, K. M., Weglarz, M., Bekale, L. A., Kolesnik, I., Bollyky, P. L., Santa Maria, P. L.
2019: 105760

- **T Lymphocytes Attenuate Dermal Scarring by Regulating Inflammation, Neovascularization, and Extracellular Matrix Remodeling.** *Advances in wound care*
Wang, X., Balaji, S., Steen, E. H., Li, H., Rae, M. M., Blum, A. J., Miao, Q., Butte, M. J., Bollyky, P. L., Keswani, S. G.
2019; 8 (11): 527–37
- **The Innate Sense of Bacteriophages.** *Cell host & microbe*
Bollyky, P. L., Secor, P. R.
2019; 25 (2): 177–79
- **Adenosine and hyaluronan modulate lung fibrosis and pulmonary hypertension in combined pulmonary fibrosis and emphysema (CPFE).** *Disease models & mechanisms*
Collum, S. D., Molina, J. G., Hanmandlu, A., Bi, W., Pedroza, M., Mertens, T. C., Wareing, N., Wei, W., Wilson, C., Sun, W., Rajadas, J., Bollyky, P. L., Philip, et al
2019
- **Salivary thiocyanate as a biomarker of Cystic Fibrosis Transmembrane Regulator function.** *Analytical chemistry*
Malkovskiy, A. V., Yacob, A. A., Dunn, C. E., Zirbes, J. M., Ryan, S. P., Bollyky, P. L., Rajadas, J., Milla, C. E.
2019
- **Natural Tr1-like cells do not confer long-term tolerogenic memory.** *eLife*
Yadava, K., Medina, C. O., Ishak, H., Gurevich, I., Kuipers, H., Shamskhou, E. A., Koliesnik, I. O., Moon, J. J., Weaver, C., Nadeau, K. C., Bollyky, P. L.
2019; 8
- **Extracellular matrix and the maintenance and loss of peripheral immune tolerance in autoimmune insulinitis.** *Current opinion in immunology*
Medina, C. O., Nagy, N., Bollyky, P. L.
2018; 55: 22–30
- **Hyaluronan levels are increased systemically in human type 2 but not type 1 diabetes independently of glycemic control.** *Matrix biology : journal of the International Society for Matrix Biology*
Nagy, N., Sunkari, V. G., Kaber, G., Hasbun, S., Lam, D. N., Speake, C., Sanda, S., McLaughlin, T. L., Wight, T. N., Long, S. R., Bollyky, P. L.
2018
- **DIFFERENTIAL REGULATION OF EXOSOME PRODUCTION BY MECHANICAL TENSION INFLUENCES FIBROGENIC PHENOTYPES**
Blum, A., Wang, X., Steen, E., Li, H., Fahrenholtz, M., Templeman, N., Ning, Y., Bollyky, P., Keswani, S., Balaji, S.
WILEY.2018: A11
- **Chitin, chitinases, and chitin lectins: Emerging roles in human pathophysiology.** *Pathophysiology : the official journal of the International Society for Pathophysiology*
Ziatabar, S., Zepf, J., Rich, S., Danielson, B. T., Bollyky, P. I., Stern, R.
2018
- **Hyaluronan: A Master Switch Between Vascular Homeostasis and Inflammation.** *Circulation research*
Grandoch, M., Bollyky, P. L., Fischer, J. W.
2018; 122 (10): 1341–43
- **Macrophages and innate immune memory against Staphylococcus skin infections.** *Proceedings of the National Academy of Sciences of the United States of America*
Van Belleghem, J. D., Bollyky, P. L.
2018
- **Hyaluronan in immune dysregulation and autoimmune diseases.** *Matrix biology : journal of the International Society for Matrix Biology*
Nagy, N., Kuipers, H. F., Marshall, P. L., Wang, E., Kaber, G., Bollyky, P. L.
2018
- **Implant-Associated Bacterial Biofilm and Quorum Sensing in Periprosthetic Joint Infections.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*
Mooney, J. A., Pridgen, E. M., Manasherob, R., Suh, G., Blackwell, H. E., Barron, A. E., Bollyky, P. L., Goodman, S. B., Amanatullah, D. F.
2018
- **A Consensus Definitive Classification of Scavenger Receptors and Their Roles in Health and Disease** *JOURNAL OF IMMUNOLOGY*

- PrabhuDas, M. R., Baldwin, C. L., Bollyky, P. L., Bowdish, D. M., Drickamer, K., Febbraio, M., Herz, J., Kobzik, L., Krieger, M., Loike, J., McVicker, B., Means, T. K., Moestrup, et al
2017; 198 (10): 3775-3789
- **Role of dendritic cell maturation factors produced by human invariant NKT cells in immune tolerance** *JOURNAL OF LEUKOCYTE BIOLOGY*
Lee, H., Jie, H. B., Bollyky, P. L., Sarracino, D., Kim, T., Wilson, B. S.
2017; 101 (4): 989-1003
 - **Interleukin-10-mediated regenerative postnatal tissue repair is dependent on regulation of hyaluronan metabolism via fibroblast-specific STAT3 signaling** *FASEB JOURNAL*
Balaji, S., Wang, X., King, A., Le, L. D., Bhattacharya, S. S., Moles, C. M., Butte, M. J., Perez, V. A., Liechty, K. W., Wight, T. N., Crombleholme, T. M., Bollyky, P. L., Keswani, et al
2017; 31 (3): 868-881
 - **Phosphorylation of α B-crystallin supports reactive astrogliosis in demyelination.** *Proceedings of the National Academy of Sciences of the United States of America*
Kuipers, H. F., Yoon, J., van Horssen, J., Han, M. H., Bollyky, P. L., Palmer, T. D., Steinman, L.
2017; 114 (9): E1745-E1754
 - **Modified High-Molecular-Weight Hyaluronan Promotes Allergen-Specific Immune Tolerance** *AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY*
Gebe, J. A., Yadava, K., Ruppert, S. M., Marshall, P., Hill, P., Falk, B. A., Sweere, J. M., Han, H., Kaber, G., Medina, C., Mikecz, K., Ziegler, S. F., Balaji, et al
2017; 56 (1): 109-120
 - **Filamentous Bacteriophage Produced by Pseudomonas aeruginosa Alters the Inflammatory Response and Promotes Noninvasive Infection In Vivo** *INFECTION AND IMMUNITY*
Secor, P. R., Michaels, L. A., Smigiel, K. S., Rohani, M. G., Jennings, L. K., Hisert, K. B., Arrigoni, A., Braun, K. R., Birkland, T. P., Lai, Y., Hallstrand, T. S., Bollyky, P. L., Singh, et al
2017; 85 (1)
 - **Pseudomonas phage inhibition of Candida albicans.** *Microbiology (Reading, England)*
Nazik, H., Joubert, L. M., Secor, P. R., Sweere, J. M., Bollyky, P. L., Sass, G., Cegelski, L., Stevens, D. A.
2017
 - **Hyaluronan synthase 3 promotes plaque inflammation and atheroprogession.** *Matrix biology : journal of the International Society for Matrix Biology*
Homann, S., Grandoch, M., Kiene, L. S., Podsvyadek, Y., Feldmann, K., Rabausch, B., Nagy, N., Lehr, S., Kretschmer, I., Oberhuber, A., Bollyky, P., Fischer, J. W.
2017
 - **Human Chitotriosidase Does Not Catabolize Hyaluronan.** *International journal of biological macromolecules*
Danielson, B., Chen, C. H., Kaber, G., Mochly-Rosen, D., Grimes, K., Stern, R., Bollyky, P. L.
2017
 - **Hyaluronan content governs tissue stiffness in pancreatic islet inflammation.** *The Journal of biological chemistry*
Nagy, N., de la Zerda, A., Kaber, G., Johnson, P. Y., Hu, K. H., Kratochvil, M. J., Yadava, K., Zhao, W., Cui, Y., Navarro, G., Annes, J. P., Wight, T. N., Heilshorn, et al
2017
 - **Inhibition of Hyaluronan Synthesis Attenuates Pulmonary Hypertension Associated with Lung Fibrosis.** *British journal of pharmacology*
Collum, S. D., Chen, N. Y., Hernandez, A. M., Hanmandlu, A., Sweeney, H., Mertens, T. C., Weng, T., Luo, F., Molina, J. G., Davies, J., Horan, I. P., Morrell, N. W., Amione-Guerra, et al
2017
 - **The formation and function of tertiary lymphoid follicles in chronic pulmonary inflammation.** *Immunology*
Yadava, K., Bollyky, P., Lawson, M. A.
2016; 149 (3): 262-269
 - **The pharmacokinetics and dosing of oral 4-methylumbelliferone for inhibition of hyaluronan synthesis in mice.** *Clinical and experimental immunology*
Kuipers, H. F., Nagy, N., Ruppert, S. M., Sunkari, V. G., Marshall, P. L., Gebe, J. A., Ishak, H. D., Keswani, S. G., Bollyky, J., Frymoyer, A. R., Wight, T. N., Steinman, L., Bollyky, et al
2016; 185 (3): 372-381

- **Pf4 bacteriophage produced by *Pseudomonas aeruginosa* inhibits *Aspergillus fumigatus* metabolism via iron sequestration** *MICROBIOLOGY-SGM*
Penner, J. C., Ferreira, J. A., Secor, P. R., Sweere, J. M., Birukova, M. K., Joubert, L., Haagenzen, J. A., Garcia, O., Malkovskiy, A. V., Kaber, G., Nazik, H., Manasherob, R., Spormann, et al
2016; 162 (9): 1583-1594
- **Filamentous bacteriophage organize the *Pseudomonas aeruginosa* biofilm matrix into a liquid crystal.** *Microbial Cell*
Secor, P. R., Michaels, L. A., Sweere, J. M., Singh, P. K., Parks, W. C., Bollyky, P. L.
2016; 3 (1): 49-52
- **Chemokine Involvement in Fetal and Adult Wound Healing.** *Advances in wound care*
Balaji, S., Watson, C. L., Ranjan, R., King, A., Bollyky, P. L., Keswani, S. G.
2015; 4 (11): 660-672
- **Angiopoietin-1 improves endothelial progenitor cell-dependent neovascularization in diabetic wounds** *SURGERY*
Balaji, S., Han, N., Moles, C., Shaaban, A. E., Bollyky, P. L., Crombleholme, T. M., Keswani, S. G.
2015; 158 (3): 846-856
- **The Role of Interleukin-10 and Hyaluronan in Murine Fetal Fibroblast Function In Vitro: Implications for Recapitulating Fetal Regenerative Wound Healing** *PLOS ONE*
Balaji, S., King, A., Marsh, E., LeSaint, M., Bhattacharya, S. S., Han, N., Dhamija, Y., Ranjan, R., Le, L. D., Bollyky, P. L., Crombleholme, T. M., Keswani, S. G.
2015; 10 (5)
- **The role of interleukin-10 and hyaluronan in murine fetal fibroblast function in vitro: implications for recapitulating fetal regenerative wound healing.** *PLoS one*
Balaji, S., King, A., Marsh, E., LeSaint, M., Bhattacharya, S. S., Han, N., Dhamija, Y., Ranjan, R., Le, L. D., Bollyky, P. L., Crombleholme, T. M., Keswani, S. G.
2015; 10 (5)
- **Regulatory T Cells Resist Cyclosporine-Induced Cell Death via CD44-Mediated Signaling Pathways.** *International journal of cell biology*
Ruppert, S. M., Falk, B. A., Long, S. A., Bollyky, P. L.
2015; 2015: 614297-?
- **4-methylumbelliferone treatment and hyaluronan inhibition as a therapeutic strategy in inflammation, autoimmunity, and cancer.** *Frontiers in immunology*
Nagy, N., Kuipers, H. F., Frymoyer, A. R., Ishak, H. D., Bollyky, J. B., Wight, T. N., Bollyky, P. L.
2015; 6: 123-?
- **Hyaluronan and hyaluronan-binding proteins accumulate in both human type 1 diabetic islets and lymphoid tissues and associate with inflammatory cells in insulinitis.** *Diabetes*
Bogdani, M., Johnson, P. Y., Potter-Perigo, S., Nagy, N., Day, A. J., Bollyky, P. L., Wight, T. N.
2014; 63 (8): 2727-2743
- **Adenoviral-mediated gene transfer of insulin-like growth factor 1 enhances wound healing and induces angiogenesis** *JOURNAL OF SURGICAL RESEARCH*
Balaji, S., LeSaint, M., Bhattacharya, S. S., Moles, C., Dhamija, Y., Kidd, M., Le, L. D., King, A., Shaaban, A., Crombleholme, T. M., Bollyky, P., Keswani, S. G.
2014; 190 (1): 367-377
- **Comparison of interleukin 10 homologs on dermal wound healing using a novel human skin ex vivo organ culture model** *JOURNAL OF SURGICAL RESEARCH*
Balaji, S., Moles, C. M., Bhattacharya, S. S., LeSaint, M., Dhamija, Y., Le, L. D., King, A., Kidd, M., Bouso, M. F., Shaaban, A., Crombleholme, T. M., Bollyky, P., Keswani, et al
2014; 190 (1): 358-366
- **Tissue integrity signals communicated by high-molecular weight hyaluronan and the resolution of inflammation.** *Immunologic research*
Ruppert, S. M., Hawn, T. R., Arrigoni, A., Wight, T. N., Bollyky, P. L.
2014; 58 (2-3): 186-192
- **Evaluation of in vivo T cell kinetics: use of heavy isotope labelling in type 1 diabetes.** *Clinical and experimental immunology*
Bollyky, J. B., Long, S. A., Fitch, M., Bollyky, P. L., Rieck, M., Rogers, R., Samuels, P. L., Sanda, S., Buckner, J. H., Hellerstein, M. K., Greenbaum, C. J.
2013; 172 (3): 363-374
- **Reactivation of latent viruses in individuals receiving rituximab for new onset type 1 diabetes** *JOURNAL OF CLINICAL VIROLOGY*
Kroll, J. L., Beam, C., Li, S., Viscidi, R., Digheero, B., Cho, A., Boulware, D., Pescovitz, M., Weinberg, A.

2013; 57 (2): 115-119

- **IL-10 induction from implants delivering pancreatic islets and hyaluronan.** *Journal of diabetes research*
Bollyky, P. L., Vernon, R. B., Falk, B. A., Preisinger, A., Gooden, M. D., Nepom, G. T., Gebe, J. A.
2013; 2013: 342479-?
- **Science and government. Obama and the promotion of international science.** *Science*
Bollyky, T. J., Bollyky, P. L.
2012; 338 (6107): 610-612
- **The Role of Hyaluronan and the Extracellular Matrix in Islet Inflammation and Immune Regulation** *CURRENT DIABETES REPORTS*
Bollyky, P. L., Bogdani, M., Bollyky, J. B., Hull, R. L., Wight, T. N.
2012; 12 (5): 471-480
- **Hyaluronan and versican in the control of human T-lymphocyte adhesion and migration** *MATRIX BIOLOGY*
Evanko, S. P., Potter-Perigo, S., Bollyky, P. L., Nepom, G. T., Wight, T. N.
2012; 31 (2): 90-100
- **Reversal of Diabetes in Mice With a Bioengineered Islet Implant Incorporating a Type I Collagen Hydrogel and Sustained Release of Vascular Endothelial Growth Factor** *CELL TRANSPLANTATION*
Vernon, R. B., Preisinger, A., Gooden, M. D., D'Amico, L. A., Yue, B. B., Bollyky, P. L., Kuhr, C. S., Hefty, T. R., Nepom, G. T., Gebe, J. A.
2012; 21 (10): 2099-2110
- **Low-Dose Antigen Promotes Induction of FOXP3 in Human CD4(+) T Cells** *JOURNAL OF IMMUNOLOGY*
Long, S. A., Rieck, M., Tatum, M., Bollyky, P. L., Wu, R. P., Muller, I., Ho, J., Shilling, H. G., Buckner, J. H.
2011; 187 (7): 3511-3520
- **Antigen-based therapy with glutamic acid decarboxylase (GAD) vaccine in patients with recent-onset type 1 diabetes: a randomised double-blind trial** *LANCET*
Wherrett, D. K., Bundy, B., Becker, D. J., Dimeglio, L. A., Gitelman, S. E., Goland, R., Gottlieb, P. A., Greenbaum, C. J., Herold, K. C., Marks, J. B., Monzavi, R., Moran, A., Orban, et al
2011; 378 (9788): 319-327
- **Co-stimulation modulation with abatacept in patients with recent-onset type 1 diabetes: a randomised, double-blind, placebo-controlled trial** *LANCET*
Orban, T., Bundy, B., Becker, D. J., Dimeglio, L. A., Gitelman, S. E., Goland, R., Gottlieb, P. A., Greenbaum, C. J., Marks, J. B., Monzavi, R., Moran, A., Raskin, P., Rodriguez, et al
2011; 378 (9789): 412-419
- **ECM components guide IL-10 producing regulatory T-cell (TR1) induction from effector memory T-cell precursors** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Bollyky, P. L., Wu, R. P., Falk, B. A., Lord, J. D., Long, S. A., Preisinger, A., Teng, B., Holt, G. E., Standifer, N. E., Braun, K. R., Xie, C. F., Samuels, P. L., Vernon, et al
2011; 108 (19): 7938-7943
- **Isolated Infection of a Decommissioned Penile Prosthesis Reservoir with Actinomyces neuii** *JOURNAL OF SEXUAL MEDICINE*
Hsi, R. S., Hotaling, J. M., Spencer, E. S., Bollyky, P. L., Walsh, T. J.
2011; 8 (3): 923-926
- **Effect of rituximab on human in vivo antibody immune responses.** *The Journal of allergy and clinical immunology*
Pescovitz, M. D., Torgerson, T. R., Ochs, H. D., Ocheltree, E., McGee, P., Krause-Steinrauf, H., Lachin, J. M., Canniff, J., Greenbaum, C., Herold, K. C., Skyler, J. S., Weinberg, A.
2011; 128 (6): 1295-1302.e5
- **Peptide-MHC Cellular Microarray with Innovative Data Analysis System for Simultaneously Detecting Multiple CD4 T-Cell Responses** *PLOS ONE*
Ge, X., Gebe, J. A., Bollyky, P. L., James, E. A., Yang, J., Stern, L. J., Kwok, W. W.
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