

CURRICULUM VITAE

GARRY P. NOLAN, Ph.D.

EDUCATION

UNDERGRADUATE SCHOOL

1979-1983 **Cornell University**
B.S., Biology, specialization in Genetics
Research: Rhizobium/Legume Microbial Genetics, Advisor: Professor Aladar Szalay

GRADUATE SCHOOL

1983-1989 **Scientific Advisor: Professor Leonard Herzenberg Ph.D.,**
Department of Genetics, Stanford University

- **Research: Immunogenetics, Individual Cell Gene Expression**
- **Thesis: *Individual cell gene regulation studies and in situ detection of transcriptionally-active chromatin using fluorescence-activated cell sorting with a viable cell fluorogenic assay***

1989-1990 **Continuing Post-Graduate Research:**
Epigenetics of Mammalian Gene Expression;
Whole Animal Cell Sorting.

POSTDOCTORAL WORK

1990-1993 **Scientific Advisor: Professor David Baltimore**
Postdoctoral Fellow

- **NIH Fellowship Program**
- **Leukemia Society Special Fellow**

Research conducted at:

- **Whitehead Institute for Biomedical Research (MIT)**
- **Rockefeller University**

Research:

- **The NF- κ B/I κ B proteins (cloning and characterization of p65/RelA).**
- **Development of 293T based retroviral packaging and delivery systems**

FACULTY POSITIONS

2011-present **Rachford and Carlota A. Harris Professor**
Department of Pathology, Stanford University School of Medicine

2009-present **Professor (Tenure)**
Department of Microbiology and Immunology, Stanford University School of Medicine

1999-2009 **Associate Professor (Tenure)**
Department of Molecular Pharmacology, Stanford University School of Medicine

1995- 1999 **Assistant Professor, Joint Appointment**
Department of Microbiology and Immunology, Stanford University School of Medicine

1993-1999 **Assistant Professor**
Department of Molecular Pharmacology, Stanford University School of Medicine

OVERVIEW:

Dr. Nolan is the Rachford and Carlota A. Harris Professor in the Department of Pathology at Stanford University School of Medicine. He trained with Leonard Herzenberg (for his Ph.D.) and Nobelist Dr. David Baltimore (for postdoctoral work for the first cloning/characterization of NF- κ B p65/RelA and the development of rapid retroviral production systems). He has published over 330 research papers, is the holder of 50 US patents, and has been honored as one of the top 25 inventors at Stanford University.

Dr. Nolan is the first recipient of the Teal Innovator Award (2012) from the Department of Defense (a \$3.3 million grant for advanced studies in ovarian cancer), the first recipient of an FDA BAAA to an academic institution (\$3 million for “Bio-agent protection” grant from the FDA for a “Cross-Species Immune System Reference”), received the award for “Outstanding Research Achievement in 2011” from the Nature Publishing Group for his development of CyTOF applications in the immune system, Elected as a Fellow of the American Institute for Medical and Biological Engineering, and is the recipient of the Ernest Cotlove Award from the Academy of Clinical Laboratory Physicians & Scientists.

Dr. Nolan is an outspoken proponent of translating public & private investment in basic research to serve the public welfare. Dr. Nolan was the founder of Rigel Inc. (NASDAQ: RIGL), and Nodality, Inc., a diagnostics development company and serves on the Boards of Directors of several companies, as well as consults for other biotechnology companies. DVS Sciences, on which he is Chair of the Scientific Advisory Board, was recently sold ([link](#)) underscoring the considerable interest in the technology in academic and clinical venues. He was the co-Founder of BINA, a sequence analysis company sold to Roche, and is the co-Founder of Apprise, Akoya, and IonPath—all companies in the single cell analysis or pathology imaging arena. The latter 3 companies are either venture funded or recently acquired.

Dr. Nolan’s areas of research include hematopoiesis, cancer and leukemia, autoimmunity and inflammation, and computational approaches for network and systems immunology. His most recent efforts are focused on a single cell analysis advance using a mass spectrometry-flow cytometry hybrid device, the so-call “CyTOF”. The approach uses an advanced ion plasma source to determine the levels of tagged reagents bound to cells—enabling a vast increase in the number of parameters that can be measured per cell. Another recent innovation is termed molecular ion beam imaging (MIBI) a system that also uses mass tags that will enable sub-light imaging (50 nm resolution) of tissue sections as well as the CODEX system enabling 50 or more parameters per image. Dr. Nolan’s efforts are to enable a deeper understanding not only of normal immune function, trauma, and other inflammatory events but also detailed substructures of leukemias and solid cancers—which will enable wholly new understandings that will enable better management of disease and clinical outcomes.

HONORS AND FELLOWSHIPS

National Science Foundation Fellowship. Organization and Function of the Eukaryotic Genome. Spetsai, Greece. September 1988.

Awarded American Cancer Society Fellowship (declined).

National Institutes of Health Fellowship: June 1990-June 1992.

Leukemia Society Special Fellow: July 1992-June 1995.

Leukemia Society Scholar Award: July 1995-June 2000.

Hume Faculty Scholar: 1993-1998

Board of Trustees, Leukemia Society of America, Northern California: 1995-1998.

1996 Burroughs Wellcome Fund New Investigator Award: July 1996 - June 2000.

Stanford University: Howard Hughes Medical Institute Junior Faculty Scholar Award. May 1997 - April 1998.

Leukemia and Lymphoma Society: Stohlman Scholar. January 2000 – December 2000.

Nature Publishing Group "Outstanding Research Achievement for 2011" for Mass Cytometry and CyTOF.

Department of Defense Teal Innovator Award, 2012.

Elected as a Fellow of the American Institute for Medical and Biological Engineering, 2014 (induction in 2015).

Cotlove Award, Academy of Clinical Laboratory Physicians & Scientists (2015).

International Society for Laboratory Hematology Award (2021)

University of Bern - Hans Sigrist Prize (2021)

Keio University Medical Science Prize. (2022)

M.D. Anderson Award (2022)

Stanford Lifetime Achievement Award (2024)

NIH BOARDS

Co-Chair, trans-NIH Roadmap Initiative on Cellular Signatures.

National Heart, Lung, and Blood Institute Board of External Experts.

NCI-Frederick Advisory Committee.

NATIONAL SOCIETIES

American Association for the Advancement of Science

Society of Developmental Biology

American Society for Microbiology

American Society for Gene Therapy

American Association of Immunologists

EDITORIAL BOARDS

Chemistry and Biology (1997-1999)

Gene Therapy & Molecular Biology

Genes to Cells

Molecular Therapy (American Cancer Society)

Molecular Systems Biology

Open Network Biology

TEACHING

1983	Teaching Assistant: "Medical Genetics", Stanford University School of Medicine
1988	Instructor/Lecturer: EMBO Course "Flow Cytometry and Sorting in Molecular Biology", Cologne, Germany
1989	Instructor/Lecturer: International Becton Dickinson Immunocytometry Series. Applications of Flow Cytometry to Molecular Biology
1993-1998	Instructor/Lecturer: Medical Pharmacology, Advanced Immunology, Stanford University School of Medicine
1994	Instructor/Course Director: Advanced Immunology, Stanford University School of Medicine
1994-1996	Lecturer: Antimicrobiology and Antiviral Therapy, Stanford University School of Medicine
1996	Lecturer: Virology, Stanford University School of Medicine
1998	Instructor/Course Director: Gene Therapy, Stanford University School of Medicine
2000	Instructor/Course Director: Gene Therapy, Stanford University School of Medicine
2001	Instructor/Course Director: Gene Therapy, Stanford University School of Medicine
2002	Instructor/Course Director: Stem Cells & Gene Therapy, Stanford University

2003 Instructor/Course Director: Stem Cells & Gene Therapy, Stanford University
2006 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling course
2007 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling course
2008 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling course
2009 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling course
2010 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling / Immune Monitoring course
2011 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling / Immune Monitoring course
2012 Instructor/Course Director: NIH Sponsored Phospho-Flow signaling / Immune Monitoring course

INVITED SPEAKER (SELECTED LIST)

1988 University of Koln, EMBO Flow Cytometry Course, Koln
1988 Institute Pasteur, Unite de Biologie Moleculaire du Developement, Paris
1988 Karolinska Institute, Department of Tumour Biology, Stockholm
1989 Becton Dickinson Immunocytometry Systems, San Francisco
1989 7th International Congress of Immunology, Workshop, Berlin
1989 Genentech, Division of Molecular Biology, South San Francisco
1990 Genentech, Flow Cytometry Meeting, South San Francisco
1991 RIKEN Frontier Research Program, Tsukuba, Japan
1991 Tokyo University, Institute of Medicine, Japan
1991 Osaka University, Department of Molecular Biology, Japan
1992 Kyoto University, Japan
1993 Systemix, Palo Alto, CA
1993 DNAX, Palo Alto, CA
1994 Tularik, Inc., South San Francisco
1994 Leukemia Society Mtg., Dublin, Ireland
1995 Roche, Inc., Palo Alto, CA
1995 University of Michigan, Ann Arbor, MI
1995 Pfizer, Inc., Groton, CT
1996 Chiron
1996 Applied Immune Science
1996 UC Irvine
1996 Cornell Medical Center
1996 Columbia Medical Center
1996 MIT
1996 Harvard School of Public Health
1996 UCSF Grand Rounds
1996 The Burnham Institute, La Jolla, CA
1997 Amgen Institute, Toronto, Ontario. Canada

1997 Harvard University, Dept. of Cell Biology
1997 MIT, Dept. of Biology and Whitehead Institute
1998 Amgen Institute, Thousand Oaks, CA
1998 Amgen Institute, Toronto, Ontario, CA
1998 Genentech, South San Francisco, CA
1998 UCSF, Immunology Program, CA
1998 University of Michigan, HHMI, Ann Arbor, MI
1998 Merck & Co., Inc. West Point, PA
1999 Amgen Institute, Toronto, Ontario, Canada
1999 Novartis Pharmaceuticals, New Jersey
1999 Yale University
1999 University of Rochester, New York
1999 University of Pennsylvania
1999 University of California, San Diego
2000 Weizmann Institute, Visiting Scholar Program, Academic Year 2000
2000 Duke University, North Carolina
2000 University of Texas Southwestern, Texas
2000 Cold Spring Harbor Laboratory, New York
2001 New York Academy of Sciences, New York
2002 University of California, Berkeley
2002 Cold Spring Harbor Laboratory, New York
2002 American Biological Safety Association, San Francisco
2003 ICOS Corporation, Bothell, WA
2003 Fox Chase Cancer Center, Philadelphia, PA
2003 EMBO Course, Deutsches Rheuma-Forschungszentrum Berlin (DRFZ), Germany
2003 Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT
2003 BD Biosciences, Denmark
2004 University of California, Berkeley
2004 Johnson and Johnson, New Brunswick, NJ
2004 University of Virginia, Charlottesville, VA
2004 UCSD, San Diego, CA
2004 Amgen, Thousand Oaks, CA
2005 University of Miami, Miami, FL
2005 University of Washington, Seattle, WA
2005 Genentech, South San Francisco, CA
2005 University of Toronto, Toronto, Canada
2005 MIT University, Cambridge, MA

2005 Harvard University, Cambridge, MA
2005 Albert Einstein, New York, NY
2005 Bristol Myers Squibb, NJ
2005 Case Western Reserve, OH. "The Greenfield Lecture"
2005 Agilent, CA
2005 Genome Canada, Montreal
2005 Williams College, MA "Distinguished Speaker"
2006 Saban Research Institute, USC, CA
2006 Scripps, San Diego, CA
2006 University of New Mexico, Albuquerque, NM
2006 UCLA, Los Angeles, CA
2007 GlaxoSmithKline, New York
2007 Seminars at Penn AFRCRI, Philadelphia, PA
2007 MD Anderson, Houston, TX
2007 Memorial Sloan Kettering, New York
2007 FASEB, San Francisco
2007 Leukemia and Lymphoma Society, Anaheim. CA
2007 Columbia University, New York
2007 NIH Immunology Interest Group, Bethesda, MD
2007 Massachusetts General Hospital, Boston, MA
2007 NIH, Cancer Stem Cell Workshop, Bethesda, MD
2007 Targegen, San Diego, CA
2007 Emory University, Atlanta, GA
2008 MD Anderson, Houston, TX
2008 Georgia Tech Integrative BioSystems Institute, Atlanta, GA
2008 Eastern Cooperative Oncology Group, Ft. Lauderdale, FL
2009 Donald Wassenberg Memorial Lecture on Genetic Disease Research, San Diego CA
2009 ETH Zurich, Biosystems Science and Engineering, Basel, Switzerland
2010 UCLA, Los Angeles, CA
2010 Genentech, South San Francisco, CA
2010 Affymetrix, Santa Clara, CA
2011 Gilead, Foster City, CA
2011 St. Jude Children's Research Hospital, Memphis, TN
2011 University of Virginia, Charlottesville, VA
2011 Vancouver BC Cancer Agency, Vancouver, Canada
2011 21st Annual Conference of the German Society For Cytometry, Bonn
2011 ETH, Zurich, Switzerland
2012 Lawrence Berkeley National Laboratory, Berkeley, CA
2012 Memorial Sloan Kettering Cancer Center, New York, NY

2012 Northwestern University Physical Science of Cancer, Evanston, IL
 2012 University of California, San Diego, CA
 2012 AstraZeneca, Waltham, MA
 2012 Novo Nordisk, Copenhagen, Denmark
 2012 Max Planck Institute, Munich, Germany
 2012 Miltenyi Biotec GmbH, Gladbach, Germany
 2013 The Scripps Research Institute, Florida
 2013 Seattle Genetics, Seattle, WA
 2013 Cell Signaling Technology, Danvers, MA
 2013 Pfizer Inc., Groton, CT
 2013 Thermo Fisher Scientific, Waltham, MA
 2013 Merck Research Labs, Boston, MA
 2013 Washington University, St. Louis, MO
 2013 Novartis, Basel, Switzerland
 2013 Karolinska Institute, Stockholm, Sweden
 2013 Department of Microbiology & Immunology, Columbia University, New York, NY
 2013 Vanderbilt University, Nashville, TN
 2014 Harvard Medical School, Boston Children's Hospital, Boston, MA
 2014 Harvard Medical School, Mass General Hospital, Boston, MA
 2014 University of Minnesota, Minneapolis, MN
 2015 NIH Immunology Interest Group Seminar, Bethesda, MD
 2015 Institute for Cellular and Molecular Biology at the University of Texas at Austin, TX
 2015 Distinguished Lecture Series, Fox Chase Cancer Center, Philadelphia, PA
 2015 Juno Therapeutics, Seattle, WA

INVITED SYMPOSIA SPEAKER (SELECTED LIST)

08/1995 Gordon Conference, Medicinal Chemistry, New Hampshire
 08/1995 Gallo Lab Meeting, NIH, Bethesda, MD
 09/1995 Symposia of the Society of Developmental Biology, San Diego, CA
 10/1995 Transcription Meeting, Ireland
 10/1995 Gene Therapy Course, Italy
 10/1995 Frontiers in Gene Therapy, Vanderbilt University, Nashville, TN
 04/1997 Keystone Symposia, Molecular and Cellular Biology of Gene Therapy
 04/1997 EMBO Meeting: Viral Vectors in Basic Biology, Heidelberg
 04/1997 NATO Advanced Study Institute on Gene Therapy. Spetsai, Greece
 10/1997 The Twelfth Rinshoken International Conference, Tokyo, Japan
 01/1998 Keystone Symposia, Molecular and Cellular Biology of Gene Therapy
 03/1998 NIH Policy Meeting on Lentiviral Vectors, Bethesda, MD
 03/1998 Keystone Symposia, HIV Pathogenesis and Treatment
 04/1998 IBC Genomics and Proteomics Conference, La Jolla, Session Chair

05/1998 The American Society of Gene Therapy (Inaugural Meeting), Seattle
 06/1998 Protein Genomics, CHI Conference, Session Chair, Boston
 07/1998 Int'l Centre for Genetic Engineering and Biotechnology, Lecture Course, Udine, Italy
 10/1998 Int'l Symposia on Protein Interaction Technologies, San Francisco
 11/1998 Sixth Meeting of the European Working Group on Human Gene Transfer and Therapy, Israel
 01/1999 Keystone Symposia, Molecular and Cellular Biology of Gene Therapy
 02/1999 American Academy of Allergy, Asthma and Immunology, Orlando, FL
 06/1999 The American Society of Gene Therapy, 2nd Annual Meeting, Washington, DC
 07/1999 NIH, National Heart, Lung and Blood Institute Workshop
 08/1999 Turku BioCity Symposium, Turku, Finland
 01/2000 Keystone Symposia, Gene Therapy: The Next Millennium
 04/2000 Cambridge Health Institute 2nd Annual Protein Discovery Technologies
 05/2000 amfAR/TAG conference
 05/2000 American Society for Gene Therapy 3rd Annual Meeting, Denver, CO
 08/2000 IBC 5th International Conference Biomolecular Diversity, Waltham, MA
 10/2000 Leukemia & Lymphoma Society Stohlman Scholar Symposia, Indianapolis, IN
 01/2001 AMSMIC Annual Conference
 05/2001 American Society for Gene Therapy 4th Annual Meeting, Seattle, WA
 08/2001 Gene Therapy & Molecular Biology International Conference 2001, Corfu, Greece
 10/2002 American Biological Safety Association 45th Biological Safety Conference, San Francisco, CA
 11/2002 The Leukemia & Lymphoma Society's N. California Div. Scientific Symposium, Oakland, CA
 12/2002 IBC's Cell-Based Assays & Screening, Philadelphia, PA
 02/2003 Leukemia & Lymphoma Soc., Miami, FL
 03/2003 Keystone Symposia, Molecular Targets for Cancer Therapy, Banff, Canada
 03/2003 IBC, Protein Discovery and Engineering, San Francisco, CA
 05/2003 FOCIS 3rd Annual Meeting, Paris, France
 06/2003 IBC's 2nd Cell Based Assay and Screening Symposium, San Francisco, CA
 09/2003 6th Conference on Protein Expression in Animal Cells, Mont-Tremblant, Canada
 11/2003 AACR-NCI-EORTC International Conference, Boston, MA
 02/2004 GRC Peptides Chemistry and Biology, Ventura, CA
 03/2004 AACR 95th Annual Meeting, Orlando, FL
 06/2004 CHI Beyond Genome: Proteomics, San Francisco, CA
 07/2004 FOCIS 4th Annual & 12th International Congress of Immunology Meeting, Montreal, Canada
 09/2004 13th Conference of the International Society of Differentiation, Honolulu, HI
 10/2004 NIAID/NIH - Twinbrook Seminar Series, Rockville, MD
 12/2004 University of Helsinki, Helsinki, Finland
 01/2005 NIH, Standard in Proteomics workshop, Bethesda, MD
 02/2005 Keystone Symposia, Banff, Canada
 03/2005 IBC USA Conferences, ScreenTech & TargetTalk conference, San Diego, CA

03/2005 Novartis Pharma, Basel, Switzerland
 03/2005 Jahnsenn, Brusells, Austria
 03/2005 Lilly Systems Biology Pte. Ltd, Singapore
 05/2005 BCCR 6th Conference on Cancer Research 2005, Bergen, Norway
 06/2005 Serono Conference, Philadelphia, PA
 10/2005 University of Chicago, Proteomics Symposia, IL
 10/2005 Stem Cells and Hematopoietic Tumors, Germany
 11/2005 Shanghai, China, Systems Biology
 12/2005 Opening Speaker, ASCB Plenary talk, San Francisco, CA
 02/2006 Keystone, Vancouver, Signaling Networks
 02/2006 Targeted Therapies in Leukemia, Portugal
 02/2006 Keystone, Santa Fe, Cancer and Kinases
 02/2006 Cambridge Health, Plenary, Molecular Diagnostics, San Francisco
 02/2006 Keynote Speaker, Royal Society of Pathology, Sydney
 05/2006 Opening Speaker, International Society of Analytic Cytometry, ISAC, Quebec
 11/2006 Nature Chemical Biology Symposium
 12/2006 ASH, Orlando, FL
 03/2007 Cooperative USA/Japan Cancer, Hawaii
 04/2007 AACR, Philadelphia, PA
 06/2007 EHA, Vienna
 02/2008 NIH Nanotechnology Workshop, Bethesda, MD
 03/2008 Frontiers of Cancer Nanotechnology, Atlanta, GA
 05/2008 ICBP 2nd Data Integration Workshop, San Francisco
 05/2008 EU-NCI (USA) Conference, Genva, Belgium
 05/2008 CNIO, Madrid
 07/2008 Breast Cancer Congress, Hawaii
 09/2008 NCI Nanotechnology Alliance Investigators Meeting, Chicago
 09/2008 MMHCC/NIH Symposium, Boston
 09/2008 AACR Int'l Conf. on Molecular Diagnostics in Cancer Therapeutic Development, Philadelphia
 01/2009 "Omics meets cell Biology" Keystone. Symposia Plenary Speaker.
 02/2009 Keynote Speaker, Cancer Profiling and Pathways, Moscone Center, San Francisco.
 05/2010 ISAC, Emergent Technologies and Engineering Innovations Showcase, Seattle
 07/2010 Allen Institute Workshop on Reverse Engineering Cell Networks, Seattle
 08/2010 14th International Congress of Immunology, Kobe, Japan
 10/2010 ITI Symposium on New Technologies in Immune Phenotyping, Stanford
 11/2010 Keynote Speaker, Flow Informatics and Computational Cytometry, Seattle, WA
 12/2010 Uppsala Universitet, Sweden
 04/2011 La Jolla Institute for Allergy and Immunology, La Jolla, CA
 04/2011 AACR 102nd Annual Meeting, Orlando, FL

05/2011 Stanford Immunology Seminar, Stanford, CA
 06/2011 World Pharma Congress, Philadelphia, PA
 06/2011 45th Joint (US – Japan) Working Conference on Immunology, Stanford, CA
 06/2011 Internal Medicine Grand Rounds, Stanford, CA
 10/2011 Broad, Single Cell Approaches to Host Immunity and Microbes, Cambridge, MA
 10/2011 MSKCC, "Systems Biology of Diversity in Cancer" Symposium, New York, NY
 10/2011 EMBL, Structure and Dynamics of Protein Networks, Heidelberg, Germany
 10/2011 1st International SystemsX.ch Conference on Systems Biology, Basel, Switzerland
 01/2012 Lawrence Berkeley National Laboratory, Berkeley, CA
 02/2012 Keystone Symposia - Technological Innovation
 03/2012 19th Conference on Retroviruses and Opportunistic Infections, Seattle, WA
 03/2012 Keystone Symposia Regulation of Lymphocyte Signaling 2012
 03/2012 U.S. Human Proteome Organization (US HUPO), San Francisco, CA
 03/2012 Northwestern University Physical Sciences Oncology Center, Evanston, IL
 03/2012 BioMedicine in 4D Conference, Portland, OR
 04/2012 NIH Common Fund Single Cell Analysis Workshop, Bethesda, MD
 04/2012 NYU School of Medicine - Honors Program Lecture Series, New York, NY
 04/2012 Center for Cancer Systems Biology, Stanford, CA
 05/2012 Integrative Network Biology 2012, Snekkersten, Denmark
 05/2012 Max Planck Institute, Munich, Germany
 06/2012 ISAC, CYTO 2012, Leipzig, Germany
 07/2012 European Proteomics Association, Glasgow, Scotland
 08/2012 Clinical Biomarkers & New Frontiers in Cancer Summit, San Francisco, CA
 09/2012 European Congress of Immunology 2012, Glasgow, Scotland
 09/2012 From the Laboratory to the Clinic, Trinity College, Oxford, England
 10/2012 Society for Immunotherapy of Cancer, Bethesda, MD
 11/2012 World Genome Data Analysis Summit, San Francisco, CA
 01/2013 Society for Laboratory Automation and Screening, Orlando, FL
 01/2013 CellTech 2013, San Diego, CA
 02/2013 Personalized Medicine World Congress, Mountain View, CA
 03/2013 Affinity Proteomics, Alpbach, Austria
 03/2013 DRFZ 9th Spring School, Ettal, Germany
 03/2013 Max Planck Institute, Berlin, Germany
 03/2013 "LINCS" Data Forum, Harvard, Cambridge, MA
 04/2013 Frederick National Laboratory for Cancer Research, Frederick, MD
 05/2013 International Society for Laboratory Hematology, Toronto, Canada
 07/2013 Molecular Mechanisms of Lymphocyte Function, FASEB Conference, Colorado
 07/2013 Physical Biology of Stem Cells, Cambridge Stem Cell Institute, Cambridge, UK
 09/2013 Mass Cytometry and Cell Cycle, Mexico City, Mexico (by WebEx)

09/2013 Nuclear Reprogramming and the Cancer Genome, Nature & Ludwig Institute, Oxford, U

10/2013 Multiparameter Mass Cytometry (MMC) and analysis tools, INSERM, Paris, France

10/2013 ACR/ARHP Annual Meeting, San Diego, CA

11/2013 8th Cell Based Assay & Screening Technologies Conference, San Francisco, CA

12/2013 Inaugural NCI Current Topics in Cancer Systems Biology Meeting, Nashville, TN

01/2014 Next-generation synthetic lethal screens for KRAS cancers, NCI, Frederick, MD

02/2014 Molecular Medicine Tri-Conference, San Francisco, CA

02/2014 New Technologies Applicable to Study of T-cell lymphomas, San Diego, CA

02/2014 Single Cell Symposia, University of Pennsylvania, Philadelphia, PA

03/2014 American Association of Cancer Researchers (AACR), San Diego, CA

03/2014 Keynote, Translational Research and Applied Medicine Program, Stanford, CA

05/2014 Cotlove Award Lecture, Academy of Clinical Laboratory, San Francisco, CA

05/2014 Keynote Speaker, TRAM Symposia and Retreat, Stanford, CA

06/2014 Keynote, MCMi Regulatory Science Symposium, Silver Spring, MD

06/2014 Fluidigm Symposium, Tokyo, Japan

06/2014 Dana Farber Cancer Center, Boston, MA

06/2014 Nature Conference - Genomic Technologies & Biomaterials, San Diego, CA

09/2014 The Immune System and Cancer, Banbury Center of Cold Spring Harbor Laboratory, NY

09/2014 Translating Imaging and Other Novel Approaches, Trinity College, Oxford, UK

10/2014 Science Day at MedImmune, Mountain View, CA

10/2014 "Intra-Patient Tumor Heterogeneities: Stanford Cancer institute

10/2014 Bill and Melinda Gates Foundation - 2014 Grand Challenges Meeting, Seattle, WA

11/2014 International Society for Computational Biology, San Diego

12/2014 Department of Defense OCRP Programmatic Review, Baltimore, MD

01/2015 Google Stand Up to Cancer (SU2C), Mountain View, CA

01/2015 Stanford Medicine Leadership Retreat, Sausalito, CA

02/2015 AACR: Translation of the Cancer Genome, , San Francisco, CA

03/2015 American Institute for Medical and Biological Engineering, Washington, DC

04/2015 Institute for Cellular & Molecular Biology, University of Texas, Austin, TX

05/2015 Immunology Forum Seminar, Johns Hopkins School of Medicine, Baltimore, MD

05/2015 Interrogating Complex Biological Systems Symposium, Baltimore, MD

06/2015 14th Annual Koch Institute Cancer Research Symposium, MIT, Cambridge, MA

06/2015 Cold Spring Harbor Labs "Single Cell Analysis Course", Cold Spring Harbor, NY

06/2015 Plenary Speaker, FOCIS 2015, San Diego, CA

07/2015 SU2C - Google[x] Technology and Analysis Satellite Meeting, Boston, MA

07/2015 Protein Society 29th Annual Symposium, Barcelona, Spain

09/2015 Tisch Cancer Institute "Frontiers in Oncology" Lecture, New York, NY

09/2015 Second Edition Systems Biology of Infection Symposium, Zurich, Switzerland

09/2015 University of California San Francisco Human Immunology, San Francisco, CA

09/2015 Seminar, Baylor, TX
09/2015 Sanger Institute, Cambridge, UK
09/2015 Joint CRI-CIMT-EATI-AACR Meeting, New York, NY
10/2015 Frontiers in Medicine, Stanford, CA
10/2015 DFCI-Oncology, Boston, MA
10/2015 Parker Institute for Cancer Immunotherapy, New York, NY
10/2015 Sino-US Symposium, Stanford, CA
10/2015 Fluidgm Talk, Berkley, CA
01/2016 Personalized Medicine World Conference 2016, Mountain View, CA
02/2016 Big Data to Human Immune Responses, Irvine CA
04/2016 Realize the Practical Applications of RNA-Seq, San Francisco, CA
05/2016 Harvard Annual Pathology Retreat, Boston, MA
05/2016 The American Association of Immunologists, Seattle, WA
05/2016 Gladstone, San Francisco, CA
05/2016 Actelion Pharmaceuticals Ltd, Allschwil, Switzerland
06/2016 Changing Views in Cancer, Charité, Berlin
06/2016 TxSACT, Houston, TX
07/2016 GRC, Hong Kong, China
07/2016 SATU Sympoisum, Taiwan, R.O.C.
07/2016 Institute of Molecular Biology Academia Sinica, Sinica, Taipei
09/2016 EarthRise at IONS, Petaluma, CA
09/2016 Stanford Immunology Scientific Conference, Stanford, CA
09/2016 AMGEN, San Francisco, CA
09/2016 Animal Model Development Workshop, Bethesda, MA
09/2016 MedImmune, Mountain View, CA
09/2016 Nature Conference, Seattle, WA
10/2016 Cell Symposia, Berkley, CA
10/2016 Human Cells, London, England
10/2016 AACR, Boston, MA
10/2016 University of Pennsylvania, Philadelphia, PA
10/2016 Parker Institute Retreat, Middleburg, VA
11/2016 UCSF Pathology Department, San Francisco, CA
12/2016 17th Annual PI Meeting, Bethesda, MD
01/2017 Genome Sciences Seminar UW, Seattle, WA
01/2017 Mass Spectrometry: Applications to the Clinical Laboratory –MSACL, Palm Springs, CA
02/2017 Advances in Genome Biology and Technology – AGBT, Ft. Lauderdale, FL
02/2017 Immune Mediated Inflammatory Diseases – Wellcome, London, England
03/2017 La Jolla Institute for Allergy and Immunology, La Jolla, CA
03/2017 Wayne State School of Medicine, Detroit, MI

03/2017 Keystone, Vancouver, BC
03/2017 Association of Bimolecular Recourse Facilities - ABRF, San Diego, CA
04/2017 AACR Annual meeting, Washington, DC
04/2017 ISB Symposium, Seattle, WA
04/2017 UT Southwestern, Dallas, TX
04/2017 MD Anderson, Houston, TX
04/2017 PICI Institute, Santa Barbara, CA
04/2017 RNA Seq 2017, San Francisco, CA
05/2017 National Jewish Health, Denver, CO
05/2017 Memorial Sloan Kettering, New York, NY
05/2017 ASGCT 20th Annual meeting, Washington, DC
05/2017 Filovirus workshop, Rockville, MD
05/2017 Keystone 2017, Stockholm, Sweden
05/2017 Human Cell Atlas, Stockholm, Sweden
06/2017 FOCIS 2017, Chicago, IL
06/2017 Pezcoller Symposium, Trento, IT
06/2017 FDA Science Board Silver Springs, MD
07/2017 FASEB Snowmass Village, CO
09/2017 UCSF Immunology Seminar, San Francisco, CA
09/2017 Genetech, South San Francisco, CA
10/2017 AACR Meeting, Boston MA
09/2017 NHLBI-2017 Biomedicine Lecture Series, Washington, DC
10/2017 KI/MIT Immune Engineering Symposium, Boston, MA
11/2017 International Symposium of the Princess Takamatsu Cancer Research Fund, Tokyo, Japan
12/2017 ASCB Meeting, Philadelphia, PA
12/2017 CCHI Annual Meeting, Rockville, MD
01/2018 CZI Investigator Meeting, San Francisco, CA
02/2018 Cancer UK UCSF, San Francisco, CA
03/2018 ITI Human Immune Monitoring Technology and Bioinformatics Conference, Stanford, CA
04/2018 Systems Immunology Kickoff Meeting
04/2018 Special Circuits and Epigenomics Seminar at the Board Institute, Cambridge, MA
04/2018 AACR Annual Meeting, Chicago, IL
05/2018 Spring Research Festival, Frederick, MD
07/2018 Grand Challenge Cancer Research, London, United Kingdom
07/2018 Curious Future Insight, Frankfurt, Germany
07/2018 Flowcytometry 2018, Edinburgh, Scotland
07/2018 Distinguished Speaker at the CRUK, Glasgow, Scotland
07/2018 Wellcome Genome, Hinxton, United Kingdom
07/2018 Barbraham Institute Lecture, Cambridge, United Kingdom

09/2018 DoD Ovarian Cancer Academy, Seattle, WA
 09/2018 Keynote Speaker at Cell Therapies and Bioengineering, San Francisco
 10/2018 Single Cell Biology Symposium, Seattle WA
 10/2018 IDS 16th International Congress, London, UK
 11/2018 Space Symposium, Boston
 12/2018 Single Cell Symposium, Paris
 01/2019 Cancer UK Meeting, London United Kingdom
 01/2019 Broad Klarman Cell Observatory Yearly Symposia.
 02/2019 7th Annual Klarman Cell Observatory Retreat, Cambridge, MA
 03/2019 Medimmune Laboratory, Rockville, MD
 03/2019 Systems Immunology U19, Rockville, MD
 04/2019 Medimmune Laboratory of Pathology, Bethesda, MA
 05/2019 AAI Immunology – NIAID Symposium, San Diego, CA
 06/2019 Lecture Invitation to Albert Einstein College, New York, NY
 06/2019 President’s Research Seminar Series, New York, NY
 06/2019 HTAN F2F Meeting, Cambridge, MA
 08/2019 CRUK STORMing Cancer, Montreal, Canada
 08/2019 HIV Workshop, Bethesda, MD
 09/2019 DANA – FARBER, Boston, MA
 09/2019 ThinkLab, Celsius Therapeutics, Boston, MA
 09/2019 Celsius Single Cell Genomics Symposium, Boston, MA
 09/2019 Wyss Institute Symposium, Boston, MA
 10/2019 Keynote Speaker at Stanford University
 10/2019 NCI Symposium, Bethesda, MD
 11/2019 Princess Takamatsu Symposium, Tokyo, Japan
 01/2020 Keynote symposia Denver, Colorado
 02/2020 CRUK Summit London United Kingdom
 03/2020 NBCC Artemis Project Meeting Calistoga, CA
 04/2020 AACR Annual Meeting _ San Diego, CA _Virtual
 05/2020 Frontiers in Cancer Immunotherapy Meeting - Virtual
 05/2020 HTAN F2F Meeting – Virtual
 06/2020 HTAN Lab workshop - Virtual
 07/2020 AACR COVID-19 And Cancer Virtual
 08/2020 NCI Workshop - Virtual
 08/2020 AACR Meeting – Virtual
 09/2020 Think Lab Meeting – Virtual
 10/2020 Single Cell Omics Conference Beijing – Virtual
 11/2020 Samuel Waxman Cancer Research Gala – Virtual
 11/2020 British Society for Immunology Conference - Virtual

01/2021 AACR Artificial Intelligence Conference - Virtual

02/2021 TAMS Plenary Seminar- Virtual

03/2021 CRUK Summit- Virtual

04/2021 ICG Seminar - virtual

04/2021 AACR Annual Meeting - Virtual

04/2021 HMS Seminar- Virtual

04/2021 JHMS Lecture - Virtual

04/2021 UC Chicago Seminar - Virtual

04/2021 Live GenomeWeb Webinar – Virtual

05/2021 ISLH – Presidential Symposium – Virtual

05/2021 Translational Research Seminar – Virtual

06/2021 Medical Discovery Institute San Diego – Invitation to Virtual Seminar

06/2021 Invitation to speak at FOCIS 2021 – Virtual

09/2021 CRUK City of London Centre - Cancer Evolution Symposium Virtual

09/2021 GRACE LECTURE @ EPFL- Invitation from Douglas HANAHAN -Switzerland

11/2021 Invitation to Present: National Academies Immune System Workshop Virtual

12/2021 Symposium Speaker Hans Sigrist Prize– University of Bern Virtual

01/2022 Invited speaker for UCSF Symposium Virtual

02/2022 AKOYA BIOSCIENCES - Discovering the Rules of Cancer via Tissue Schematics

03/2022 AKOYA BIOSCIENCES - The Politics of Cellular Neighborhoods

03/2022 John Mendelsohn Visiting Professor, MD Anderson Cancer Center – Virtual

03/2022 Annual GECCO meeting-Virtual

04/2022 Invited speaker for Gladstone-UCSF Institute of Genomic Immunology Seminar

04/2022 SITC 2022 Speaker Invitation: The Tumor Microenvironment- San Diego CA

04/2022 PICI Retreat_ Healdsburg, CA Virtual

04/2022 Keynote Speaker - The Convergence of AI and Biology workshop – Virtual

05/2022 Keynote Speaker - Frontiers in Cancer Immunotherapy, NYAS

05/2022 Akoya Webinar- virtual

05/2022 PCA Multiplex Microscopy Symposium – Virtual

05/2022 NIH 2021-2022 Immunology Seminar

06/2022 AGBT 2022 General Meeting - Orlando, Florida

06/2022 Invited Speaker to Emerging Systems Medicine – Stockholm – Virtual

06/2022 CRUK STORMing – Cancer Grand Challenges Summit - Washington D.C.,

06/2022 Invited Speaker - FOCIS 2022 San Francisco CA

07/2022 Invited Speaker – 2022 immunoengineering GRC – Ventura California

08/2022 Invited Speaker – University of Hong Kong – virtual

09/2022 Distinguished speaker Seminar at Genentech San Francisco, California

09/2022 Keynote Speaker – 10th Year Anniversary for SB12 Boston

09/2022 Invited Speaker – Pfizer Seminar

10/2022	Distinguished Lecture Series Roswell Park Buffalo, NY
11/2022	The CRCL 5th International Cancer Symposium, Lyon France
11/2022	CGC Challenge Setting Workshop - San Francisco, CA
11/2022	Speaker Invitation for RNAscope Spatial Biology Symposium at Stanford, CA
03/2023	CRUK Summit, London
03/2023	Keynote Speaker- Analytical, life Science & Diagnostics Association, MP, CA
03/2023	ITI Annual Human Immune Monitoring Technology Conference at Stanford, CA
04/2023	UAB 35 th Bertram M Marx Lecture Birmingham Alabama
04/2023	Parker Institute for Cancer Immunotherapy 2023 Spring Retreat, Hawaii
05/2023	SITC Workshop, Boston
05/2023	CSB Science Circle
05/2023	ReMS Talk Stanford University
06/2023	Keynote Lecture - German Society of Pathology Annual Meeting 2023 Leipzig
06/2023	Keynote Speaker - TRAM Symposium and Retreat, Stanford University
07/2023	Speaker at FASEB2023
10/2023	Allison Institute Seminar
11/2023	Allison Institute Symposium
11/2023	Cell Press live Webinar.
12/2023	Dana- Farber Cancer Institute
03/2024	MD Anderson – Cancer Institute TX
03/2024	Keystone Symposia, Whistler, Canada
04/2024	AACR Meeting San Diego, CA
04/2024	PICI retreat Healdsburg, CA
04/2024	CCSB Symposium Stanford University
05/2024	Keynote retreat MD Anderson, TX
06/2024	Nobel Symposium, Stockholm
09/2024	Spatial Biology Summit, Stfn
09/2024	EMBO Workshop London
11/2024	Salk Institute Cancer Day Symposium, San Diego
11/2024	Australian and New Zealand Society for Immunology

PUBLICATIONS

1. Lee IT, Nakayama T, Wu C-T, Goltsev Y, Jiang S, Gall PA, Liao C-K, Shih L-C, Schürch CM, McIlwain DR, Chu P, Borchard NA, Zarabanda D, Dholakia SS, Yang A, Kim D, Kanie T, Lin C-D, Tsai M-H, Phillips KM, Kim R, Hwang PH, **Nolan GP**, Nayak J V, Jackson PK. Robust ACE2 protein expression localizes to the motile cilia of the respiratory tract epithelia and is not increased by ACE inhibitors or angiotensin receptor blockers. *medRxiv Prepr Serv Heal Sci*. Published online May 12, 2020. doi:10.1101/2020.05.08.20092866
2. Culos A, Tsai AS, Stanley N, Becker M, Ghaemi MS, McIlwain DR, Fallahzadeh R, Tanada A, Nassar H, Espinosa C, Xenochristou M, Ganio E, Peterson L, Han X, Stelzer IA, Ando K, Gaudilliere D, Phongpreecha T, Marić I, Chang AL, Shaw GM, Stevenson DK, Bendall S, Davis KL, Fantl W, **Nolan GP**, Hastie T, Tibshirani R, Angst MS, Gaudilliere B, Aghaeepour N. Integration of mechanistic immunological knowledge into a machine learning pipeline improves predictions. *Nat Mach Intell*. 2020;2(10):619-628. doi:10.1038/s42256-020-00232-8
3. Lee IT, Nakayama T, Wu CT, Goltsev Y, Jiang S, Gall PA, Liao CK, Shih LC, Schürch CM, McIlwain DR, Chu P, Borchard NA, Zarabanda D, Dholakia SS, Yang A, Kim D, Chen H, Kanie T, Lin C Der, Tsai MH, Phillips KM, Kim R, Overdeest JB, Tyler MA, Yan CH, Lin CF, Lin YT, Bau DT, Tsay GJ, Patel ZM, Tsou YA, Tzankov A, Matter MS, Tai CJ, Yeh TH, Hwang PH, **Nolan GP**, Nayak J V., Jackson PK. ACE2 localizes to the respiratory cilia and is not increased by ACE inhibitors or ARBs. *Nat Commun*. 2020;11(1). doi:10.1038/s41467-020-19145-6

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6. O’Huallachain M, Bava FA, Shen M, Dallett C, Paladugu S, Samusik N, Yu S, Hussein R, Hillman GR, Higgins S, Lou M, Trejo A, Qin L, Tai YC, Kinoshita SM, Jager A, Lashkari D, Goltsev Y, Ozturk S, **Nolan GP**. Erratum: Author Correction: Ultra-high throughput single-cell analysis of proteins and RNAs by split-pool synthesis (Communications biology (2020) 3 1 (213)). *Commun Biol*. 2020;3(1):279. doi:10.1038/s42003-020-1019-9
7. O’Huallachain M, Bava FA, Shen M, Dallett C, Paladugu S, Samusik N, Yu S, Hussein R, Hillman GR, Higgins S, Lou M, Trejo A, Qin L, Tai YC, Kinoshita SM, Jager A, Lashkari D, Goltsev Y, Ozturk S, **Nolan GP**. Ultra-high throughput single-cell analysis of proteins and RNAs by split-pool synthesis. *Commun Biol*. 2020;3(1). doi:10.1038/s42003-020-0896-2
8. Schürch CM, Bhate SS, Barlow GL, Phillips DJ, Noti L, Zlobec I, Chu P, Black S, Demeter J, McIlwain DR, Kinoshita S, Samusik N, Goltsev Y, **Nolan GP**. Erratum: Coordinated Cellular Neighborhoods Orchestrate Antitumoral Immunity at the Colorectal Cancer Invasive Front (Cell (2020) 182(5) (1341–1359.e19), (S0092867420308709), (10.1016/j.cell.2020.07.005)). *Cell*. 2020;183(3):838. doi:10.1016/j.cell.2020.10.021
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RESEARCH

ACTIVE

Title: **The Lung PCA: A Multi-Dimensional Atlas of Pulmonary Premalignancy**

Major Goals: The goal of this project is the creation of a lung pre-tumor cell atlas with CODEX and MIBI. Both 2D and 3D cellular architectures of cellularity (and subcellular) will be created in the course of this project. We will analyze up to 20 tumor slices by CODEX or MIBI with 40 antibodies each, and undertake analysis of the resulting data by providing cellular neighborhoods and pattern distributions across the studied cancer subtypes.

Status of Support: Active

Project Number: U2CCA233238
 Name of PD/ PI: Avrum E. Spira (contact) (Co-I Garry Nolan)
 Source of Support: Boston University/National Institutes of Health
 Primary Place of Performance: Stanford University
 Project/Proposal Start and End Date: 09/2018 – 08/2024
 Total Award Amount: \$701,277
 Person Months (Calendar) per budget period

Year	Person Months
1. 2024	0.12 calendar

Title: STrOmAl Reprogramming (STORMing) of Epithelial Cells: Providing New Directions to Prevent and Revert Chronic Inflammation-Associated Cancers

Major Goals: Bayesian clustering algorithm that simultaneously segments, assigns molecules to cells and identifies cell types and their canonical spatial neighborhoods. Multiview clustering approach integrating all 3 datatypes, map cell-cell interactions and how these interactions influence cell state and deposit all algorithms on GitHub

Status of Support: Active
 Project Number: C27165/A29073
 Name of PD/ PI: Garry Nolan
 Source of Support: Cancer Research UK (CRUK)
 Primary Place of Performance: Stanford University
 Project/Proposal Start and End Date: 01/2019 – 04/2024
 Total Award Amount: \$2,684,343
 Person Months (Calendar) per budget period

Year	Person Months
1. 2024	0.12 calendar

Title: Pancreatic Cancer Development: Genetic and Immune Regulation

Major Goals: We seek to discover, apply, and translate science about pancreatic cancer (PDAC), with the ultimate goal of improving care for patients with this disease. To address fundamental, persistent questions about the biology of PDAC, we have assembled a superb, interactive team of productive collaborators to lead our Projects and Research Cores that will identify genetic, immune cell, and cancer-associated fibroblasts based interactions and pathways that regulate the inception and progression of PDAC. Advances from studies proposed here could broadly impact pancreas cancer biology and drive translational efforts in PDAC.

Status of Support: Active
 Project Number: P01CA244114
 Name of PD/ PI: Seung Kim (Garry Nolan: Other Senior/Key)
 Source of Support: National Institutes of Health
 Primary Place of Performance: Stanford University
 Project/Proposal Start and End Date: 08/2021 – 07/2026
 Total Award Amount: \$10,210,791 (Nolan's amount: \$13,000)
 Person Months (Calendar) per budget period

Year	Person Months
1. 2024	0.12 calendar
2. 2025	0.12 calendar
3. 2026	0.12 calendar

Title: Pathology and Pathogenesis of Coronavirus Infections in Animal Models

Major Goals: We propose to profile pathology and pathogenesis of multiple CoV infections (COVID-19, SARS, MERS) in NHP challenge models in support of MCM development under the Animal Rule and to compare

biomarkers of disease and immune correlates of protection in animal model species and community-acquired infections in humans to help inform future regulatory decisions.

Status of Support: Active

Project Number: 75F40120C00176

Name of PD/ PI: Garry Nolan

Source of Support: Food and Drug Administration

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 09/2020 – 12/2025

Total Award Amount: \$2,750,500 (Nolan's amount: \$2,730,500)

Person Months (Calendar) per budget period

Year	Person Months
1. 2024	0.36 calendar
2. 2025	0.36 calendar

Title: **Systems analysis of mechanisms driving response to immunotherapy in clear cell cancers**

Major Goals: This study will use systems biology approaches to (i) elucidate and compare the cell types and their transcriptional states present in ccOC and ccRCC; (ii) characterize the spatial architecture of these cells within tumors using the CODEX (CODetection by indEXing) single cell proteomic imaging platform; and (iii) model and validate cell-cell interactions in the spatial tumor microenvironment that drive clear cell cancer response to immunotherapy through extensions of causal signaling inference algorithms to incorporate spatial context, and to optimize experimental validations in mouse models that maximize the information gain about interaction networks.

Status of Support: Active

Project Number: U01CA264611

Name of PD/PI: Gentles, Andrew

Role: Co-Investigator

Source of Support: National Institutes of Health

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 09/2022 – 08/2027

Total Award Amount (including Indirect Costs): \$2,600,257 (Nolan's amount: \$780,700)

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
1. 2024	0.96 calendar
2. 2025	0.96 calendar
3. 2026	0.96 calendar
4. 2027	0.96 calendar

Title: **Development of outpatient antiviral cocktails against SARS-CoV-2 and other potential pandemic RNA viruses.**

Major Goals: The overall platform and objective of the Stanford AViDD Center, "SyneRx," is to develop outpatient antiviral cocktails against SARS-CoV-2 and other potential pandemic RNA viruses. The goal of each of our 7 Projects is to develop towards the clinic a novel direct-acting antiviral (DAA) with a distinct mechanism of action, so that they can be used alone and in combination with other agents—providing additive, and ideally synergistic antiviral activity.

Status of Support: Active

Project Number: 1 U19 AI171421-01

Name of PD/PI: Glenn, Jeffrey

Role: Co-Investigator, Core 2

Source of Support: National Institutes of Health

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 05/2022 – 04/2025

Total Award Amount (including Indirect Costs): \$115,512,181 (Nolan's amount: \$20,360)

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
1. 2024	0.12 calendar
2. 2025	0.12 calendar

Title: Stanford Tissue Mapping Center – HubMAP

Major Goals: Build three-dimensional multi-modal (snRNA, snATAC, CODEX, multiplex FISH) spatial maps that will give the greater scientific community insights into the molecular underpinnings of normal bowel function.

Status of Support: Active

Project Number: U54HG012723

Name of PD/PI: Michael Snyder

Role: Co-PI/MPI

Source of Support: National Institutes of Health

Primary Place of Performance: Stanford University, Palo Alto

Project/Proposal Start and End Date: 09/2022 - 06/2026

Total Award Amount: \$7,146,092 (Nolan's amount: \$996,976)

Person Months (Calendar) per budget period

Year	Person Months
1.2024	1.20 calendar
2.2025	1.20 calendar
3.2026	1.20 calendar

Title: High-dimensional Immunofluorescence Atlas of Tissue Architecture and Microbiome in Pediatric Fibro-stenosing Crohn's Disease

Major Goals: Aim 1: Identify spectral features associated with Crohn's-dependent inflammation for guided analysis of areas of interest and to help enable future diagnostics; Aim 2: Identify enriched and depleted cell types using scRNA-seq; Aim 3: Identify architectural and microbial differences between pediatric fibrostenosing CD and healthy gut.

Status of Support: Active

Project Number: 270533

Name of PD/PI: Stephan Rogalla

Role: Co-PI

Source of Support: Stanford Maternal and Child Health Research Institute

Primary Place of Performance: Stanford University, Palo Alto

Project/Proposal Start and End Date: 07/2022 - 06/2024

Total Award Amount: \$200,000 (Nolan's amount: \$5,244)

Person Months (Calendar) per budget period

Year	Person Months
1. 2024	0.12 calendar

Title: Role of the microenvironment in ovarian cancer metastasis

Major Goals: The Nolan lab will perform multi-parameter CODEX imaging on tumor samples prepared in Dr Fuh's lab at UCSF. The ovarian tumors to be analyzed will be produced by the Fuh Lab and will be generated through genetic models or patient derived xenografts. This are the ovarian tumor types that will be analyzed by CODEX in the Nolan Lab. For each tumor, 2 to 3 replicates will be imaged and when possible tumor sites far apart within the same tumor.

Status of Support: Active

Project Number: R01CA234553

Name of PD/PI: Fuh, Katherine

Role: Co-Investigator

Source of Support: University of California, San Francisco/National Institutes of Health
 Primary Place of Performance: Stanford University
 Project/Proposal Start and End Date: 09/2022 - 08/2024
 Total Award Amount (including Indirect Costs): \$179,894
 Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
1. 2024	0.60 calendar

Title: PICI Master Agreement MCA 1.1

Major Goals: The Parker-Stanford partnership will create a powerful synergy that will enable the deep scientific and clinical resources within Stanford Medicine to be rapidly and efficiently translated into new immunotherapies for patients with cancer.

Status of Support: Active

Project Number: 295755

Name of PD/PI: Mackall, Crystal

Role: Other Senior/Key

Source of Support: Parker Institute for Cancer Immunotherapy

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 12/2023 – 12/2028

Total Award Amount (including Indirect Costs): \$15,000,000 (Nolan’s amount: \$1,150,000)

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
1. 2024	0.6 calendar
2. 2025	0.6 calendar
3. 2026	0.6 calendar
4. 2027	0.6 calendar
5. 2028	0.6 calendar

Title: Investigating DCIS progression via 3D volumetric imaging and single-cell spatial-omics

Major Goals: Our goal will be to create and integrate the cellular landscape and 3D structural information, creating a first-ever map of the 3D human DCIS “tissue-omics” atlas. We will also develop the computational framework to explore the intricate interplay between the structural and cellular determinants of the DCIS.

Status of Support: Active

Project Number: 326390

Name of PD/PI: Nolan, Garry

Source of Support: Stanford Cancer Institute

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 03/2024 – 02/2025

Total Award Amount (including Indirect Costs): \$46,300

Person Months (Calendar/Academic/Summer) per budget period.

Year	Person Months
1. 2025	0.12 calendar

PENDING

NONE

IN-KIND

Summary of In-Kind Contribution: Post-doctoral fellow, Dr. Antonio Delgado-Gonzalez, who conducts research activities in the Nolan lab. Stipend and fellowship allowance supported by Ovarian Cancer Research Alliance.

Status of Support: Active

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 03/2023 – 02/2025

Person Months (Calendar) per budget period

Year	Person Months
1. 2025	NA

Estimated Dollar Value of In-Kind Information: \$75,000

Summary of In-Kind Contribution: Post-doctoral fellow, Dr. Maximilian Haist, who conducts research activities in the Nolan lab. Salary supported by The Deutsche Forschungsgemeinschaft (DFG).

Status of Support: Active

Primary Place of Performance: Stanford University

Project/Proposal Start and End Date: 09/2022 – 08/2024

Person Months (Calendar) per budget period

Year	Person Months
1. 2024	NA

Estimated Dollar Value of In-Kind Information: \$94,120

Overlap:

NONE