

Robert A. Kirken, PhD.

Dean

The University of Texas at El Paso
College of Science
Chemistry & Computer Science Bldg. 3.0202
500 W. University Ave • El Paso, TX 79968
(915) 747-5536
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Education

Undergraduate

1982-1986 B.A. with honors, *cum laude*, (Chemistry) Olivet College, Olivet, MI

Graduate

1986-1991 Ph. D. (Biomedical Sciences) Wright State University, Dayton, OH

Postgraduate Training

1992-1996 National Institute of Health/National Cancer Institute (NIH/NCI), Postdoctoral Research Fellow

Intramural Research Training Assistantship (IRTA), Frederick, MD

Sponsor: Dr. William L. Farrar, Ph.D., Head

Cytokine Molecular Mechanisms Section, National Cancer Institute, Frederick, MD 21702

Current Administrative Experience

Dean College of Science, University of Texas at El Paso

Past Administrative Experience

Department Chair, Biological Sciences Department, University of Texas at El Paso

Duties:

- Oversee the operations and planning for the Biological Sciences Department, a complex environment of students and labs at graduate and undergraduate level and faculty with diverse interests.
 - Responsibility and oversight for an annual operating budget of \$2.5 million and an additional \$10 million in annual research expenditures. The Department's budgets accounts for 60% of the overall College of Science budget at the University.
 - Provide leadership, supervision and mentorship for department faculty, currently comprised of 32 professors with an additional 12 faculty on research and lecture tracks, as well as for the entire 100+ Department employees. During current tenure, have hired one-third of the current faculty.
 - Oversee administration of Biological Sciences degrees at the graduate and undergraduate level, to include 3 BS degrees, 2 PhD degrees, and 1 MS degree. The Department serves nearly 1,500 biology majors and in a typical semester enrolls approximately 3,500 students in about 50 courses.
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- Oversee Department facilities, to include some 148,000 sq. ft. of teaching and research space. Department includes multiple buildings, a vivarium, and BSL-3 laboratory. Laboratories contain state-of-the-art equipment for both research and teaching. The instructional program makes extensive use of facilities available only for research at most comparably-sized or larger universities.
- Helped to oversee and develop the new Biosciences Building (2009) adjacent to the present Biology Building.
- Supervise and administer multiple National Science Foundation (NSF) and National Institute of Health (NIH) training grants for the Department

Accomplishments

- Increased number of biology majors almost three-fold to a current number of 1500 students
- Increased number of graduate students at the MS and PhD level to almost 100
- Program Director and architect of the NIH-sponsored Border Biomedical Research Center, funded at nearly \$13 million.
- Instrumental in design, implementation, and oversight of new 140,000 sq. ft. Bioscience Research Building and renovation of our 100,000 sq. ft. Biology Building.

Academic Planning

- Developed new program offerings to increase University opportunities for students:
 - Biological Sciences degrees at the BS, MS and PhD level
 - BS in Cellular and Molecular Biochemistry
 - BS in Microbiology
 - PhD in Ecology and Evolutionary Biology
- Encourage the participation of students and faculty in unique local research opportunities. The University's location in the northern part of the Chihuahuan Desert and the Rio Grande Valley provides a fascinating setting for learning and researching in habitats ranging from desert to alpine mountain ranges. The El Paso-Ciudad Juárez metroplex has a population of nearly 2 million people, presenting environmental challenges and public health problems characteristic of both industrialized and developing societies. The majority of research programs in the Department are focused toward the biomedical and environmental problems of the region.

Student Success Initiatives

- Strong recruiting and retention of Hispanic students; currently ranked 2nd in the Nation in graduating Hispanic Biology majors.

Academic Appointments

2013-present **Dean College of Science**
 University of Texas at El Paso
 500 W. University Ave.
 Chemistry Computer Science Bldg. 3.0100
 El Paso, TX 79968

915.747.5536 (voice)
915.747.6807 (fax)

- 2005 -2013 **Professor and Chair**
University of Texas at El Paso
Department of Biological Sciences
500 W. University Ave., Biosciences Bldg. 2.120
El Paso, TX 79968
- 2004-2005 **Associate Professor**
University of Texas at Houston Medical School
Department of Integrative Biology and Pharmacology
6431 Fannin St., MSB 4.218
Houston, TX 77030
- 2005-2007 **Visiting Professor**
University of Texas at Houston Medical School
Department of Integrative Biology and Pharmacology
6431 Fannin St., MSB
Houston, TX 77030
- 2002-2005 **Adjunct Asst. Professor**
University of Texas: M.D. Anderson Cancer Center
Department of Bioimmunotherapy
1515 Holcombe Blvd.
Houston, TX 77030
- 2001-2005 **Adjunct Professor**
UT-Houston Medical School
Department of Surgery-Organ Transplantation
6431 Fannin St., MSB 6.240
Houston, TX 77030
- 1998-2004 **Assistant Professor**
University of Texas at Houston Medical School
Department of Integrative Biology and Pharmacology
6431 Fannin St., MSB 4.218
Houston, TX 77030
- 1996-1998 Intramural Research Support Program, (IRSP), Science Applications International Corporation (SAIC) Scientist, National Cancer Institute (NCI), Frederick Cancer Research and Development Center (FCRDC), Frederick, MD 21702

Professional Organizations / Committees

National

1987 - 1991 Biophysical Society Member
1995 - present International Cytokine Society
1999 - present Transplantation Society
2000 - present American Association of Immunologists
2000 - present American Society of Transplant Surgeons
2007 - present American Biochemistry and Molecular Biology

Patents

- Filed Provisional patent, (2002)
Provisional patent: University of Texas-Houston: Novel Jak3 inhibitor with immunosuppressive potential. Registration No. 38,561, Docket No. 2105-00400.
- Submitted and amended Full Patent “Methods for Selectively Inhibiting Janus tyrosine kinase 3 (Jak3) December 10, 2003. Inventors, Drs. Kirken, Kahan, Stepkowski and Priebe-UTH.
- Patent Issued: US 7,365,096. Methods for selectively inhibiting Janus tyrosine kinase 3 (Jak3) 2008
- 2009 Filed Provisional Patent U.S. Patent Application
Title: Biosensor to Detect Infectious Agents
Serial No.: 12/573,100
Filing Date: October 3, 2009
Our File No.: UTEP: 1001
Inventors Drs. Kirken, Wicker, Gossleink and MacDonald.
- 2010 Filed to convert to full Patent U.S. Patent Application
Title: Biosensor to Detect Infectious Agents
Serial No.: 12/573,100
Filing Date: October 3, 2009
Our File No.: UTEP: 1001
Inventors Drs. Kirken, Wicker, Gossleink and MacDonald.

Database Entries from Research

1998	Genebank accession number: AF041336
1999	Protein Research Foundation accession number: 2503639d
2004	PhosphositePlus and UniProtKB/Swiss-Prot entry for Stat6 Serine 756 and Threonine 645
2008	PhosphositePlus and UniProtKB/Swiss-Prot entry for human Prohibitin 2 at Serine 243 and Tyrosine 248
2008	PhosphositePlus and UniProtKB/Swiss-Prot entry for human Jak3 at tyrosine 904 and 939

Honors and Awards

1982 - 1986 Presidential Scholar Award: Academic Excellence, Olivet College

- 1984 - 1986 Student Senate Representative, Olivet College
- 1985 American Chemical Society President, Olivet College Chapter
- 1986 Commencement Ceremony Speaker, Olivet College
- 1986 American Institute of Chemists Student Research Award, Olivet College
- 1987 Sigma Xi Graduate Student Research Lecture Award, Wright State University
- 1992 - 1996 Intramural Research Training Assistantship Award (IRTA), National Institute of Health (NIH)
- 1999 Young Investigator Travel Award: American Soc. Transplant Surgeons
- 2003 - 2004 Promoted to Associate Professor
- 2005 Promoted to Full Professor
- 2006 - 2007 UTEP Office of Research and Sponsored Programs Award for Outstanding Performance in Securing Extramural Funding
- 2007 - 2008 UTEP Office of Research and Sponsored Programs Award for Outstanding Performance in Securing Extramural Funding
- 2008 - 2009 UTEP Office of Research and Sponsored Project Award for Outstanding Leadership and Mentoring Faculty
- 2009 - 2010 UTEP Office of Research and Sponsored Projects Award for Outstanding Performance in Securing Extramural Funding and Faculty Mentoring
- 2010 - 2011 UTEP Office of Research and Sponsored Projects Award for Outstanding Performance in Securing Extramural Funding
- 2011 UTEP College of Science Faculty Marshal
- 2012 UTEP Office of Research and Sponsored Projects Award for Outstanding Performance
- 2012 UTEP Office of Research and Sponsored Projects: One Million Dollar Research Club

Grant Reviewer Positions

- 2004 - 2006 Gulf coast GI Pilot Grant Award Project at UTHSC
- 2004 - 2005 New Investigator Grant Program at UTHSC
- 2004 - 2005 Mentor of Huan Lu UT-Dental Branch NIH grant entitled "Opalescence of Dental Resin Composite".
- 2004 - 2005 Co-Mentor Hesham Amin MD Anderson Cancer Center- NIH KO-8 Training Grant.
- 2005 NIH-NIDDK
- 2007 NIH NIDDK
- 2008 Association for International Cancer Research
- 2009 FWF Austrian Science Fund
- 2009 Association for International Cancer Research
- 2009 Texas Tech University Research Grants
- 2011 FWF Austrian Science Fund
- 2011 RCMI Research Translational NIH pilot grants

2012 RCMI Research Translational NIH pilot grants

Editorial Positions

2000-2003 Assistant Editor, *News in Physiological Sciences* (NIPS)

Adhoc Reviewer:

Circulation Journal

Current Cancer Drug Targets

Cytokine

European Cytokine Network

Journal of Biological Chemistry

Journal of Immunology

Journal of Leukocyte Biology

Molecular Endocrinology

Transplantation

Clinical Experimental Immunology

Transplantation Proceedings

News in Physiological Sciences (NIPS)

Oncogene

Springer Publishing, Biosciences Microbiology and Immunology

Canadian Journal of Chemistry

Leukemia Research

American Journal of Pathology

Expert Review of Clinical Immunology

FEBS Letters

Clinical and Experimental Immunology

Toxins

PLOS One

Biochemical Journal

Service on the University of Texas - Houston Health Science Center

Committees:

- 1999-2000 Strategic Planning for the Research Enterprise, headed by Dean Buja.
Selected by the Dean of the Medical School to develop a strategic plan for moving
The college forward in research and medical education
- 2001-2002 UT-Dental Branch Pharmacology Faculty Search Committee Member.
Assisted in hiring outstanding faculty to promote the mission of the dental school
- 2001-2003 Member of Institutional Research Council Committee headed by George Stancel.
Developed new strategies to move research forward within the greater Houston area
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- 2003-2004 Member of New Investigator Grant Development Steering Committee
Developed new mechanisms to mentor and promote successful Grantsmanship for junior faculty
- 2004-2005 New Investigator Grant Development Program Committee member and Mentor headed by P.J. Davies
Provided oversight and mentoring of new faculty to increase grant success rates
- 2004-2005 Member of the Gulf Coast Consortium for Chemical Genomics Oversight Committee
Provided leadership and oversight on developing chemical libraries and assays
- 2004-2005 Member of Intellectual Property Committee
Evaluated intellectual property developed by the university

Service on the University of Texas-Houston Medical School Committees and Awards

- 1999-2002 Faculty Senate
- 1999-2005 Member of the Cell and Regulatory Biology Steering Committee (CRB)
- 1999-2005 Cell and Regulatory Biology (CRB) Graduate Student Search
- 1998-2001 Department of Integrative Biology and Pharmacology Faculty Search
- 1999-2001 Department of Integrative Biology and Pharmacology Graduate Education Committee
- 1999-2002 Chair and Co-chair of Department of Integrative Biology and Pharmacology Seminar Series
- 2001 Faculty Interviewer for Medical School Applicants
- 2001-2002 Five Year Department of Integrative Biology and Pharmacology Review-Training Committee
- 2002-2003 Renal Transplant Candidate Search and Interview headed by Dr. Bruce Kone
- 2003-2004 Dean's Excellence Teaching Award

Service on Local and National Committees

- 2006-2007 Reviewer for the National Institutes of Health-NIDDK
- 2008-present RCMI-Translational Network Core Lab Subcommittee Chair
Provide leadership to research cores that span 18 minority institutions
- 2009-present Supported the Regional Economic Development Corporation group, El Paso
Supported efforts to entice and recruit companies to the El Paso region
- 2009-present Director of the Core Research Laboratories for 18 Research Centers at Minority Institutions belonging to the Research Translational Network
- 2011 Steering Committee Member Appointed by University of Texas System Chancellor Dr. Francisco Cigarroa for 2010 UT System Technology Commercialization Symposium January 17 & 18, 2011. Developed new strategies to enhance intellectual property development and commercialization of UT System inventions

2011-present RTRN Steering Committee Vice Chair Elect

Service on University of Texas Health Science Center (UTHSC) Graduate School Committees and Awards:

1999-2005	Graduate School and Biomedical Sciences Student Recruitment
1999-2004	Graduate School and Biomedical Sciences Admission Committee
2003-2004	CHAIR, Graduate School and Biomedical Sciences Admission Committee
2003	GSBS Dean's Excellence Award Recipient
2004	Attended GSBS Graduation
2005	Member of Internal Reviewer of the Genes & Development Program within GSBS
2005	Chaired GSBS Exam Committee for Rebecca Corrigan
2005	Member of GSBS-UTHSC Pharmacoinformatics Training Grant Committee
2007-2008	Graduate School and Biomedical Sciences Student Recruitment

Directed Graduate School Rotational Students

1998	Qi Shen	2012	Alejandro Bugarini
1999	Fariba Behbod	2012	Alejandra Saenz
2000	Josh Vincentz	2012	Damaris Rosado
2002	Jeremy Ross	2012	George Martinez
2002	Morgan McKeller	2012	Blanca Ruiz
2003	Hanyin Cheng	2012	Mayra Canales
2003	Brett Ewald	2012	Cristina Arenaz
2004	Nancy Seibert	2012	Derrick Oaxaca
2004	Georgialina Rodriguez		
2005	Famourou Kourouma		
2005	Abhishek Mitra		
2007	Laura Torres		
2009	Mathew Gaynor		
2009	Jason Meyer		
2010	Blanca Ruiz		
2011	G. Steven Martinez		

Graduate Student Thesis and Exam Committee Member

1998-2003	Served on Ph.D. thesis and Exam committee for Qi Shen in Department of Integrative Biology and Pharmacology; successfully defended 2003
1998-2001	Served as thesis advisor for Fariba Behbod in the Department of Integrative Biology and Pharmacology; successfully defended 2001.
1999-2000	Served on Ph.D. thesis committee for Cheryl Komanduri in Department of Neurology
1999-2001	Served on Ph.D. thesis committee for Barton W. Trawick in Department of Surgery-Organ Transplantation; successfully defended 2001
1999-2001	Served on Ph.D. thesis committee for Christopher Carlson in Department of Integrative Biology and Pharmacology; successfully defended 2001

1999-2001 Served on Ph.D. thesis committee for Ginny Graham in Department of Integrative Biology and Pharmacology; successfully defended 2002

2000-2004 Served on Ph.D. thesis committee for John Langowski in M.D. Anderson Cancer Center

2000-2002 Served on M.Sci. thesis committee for Alan Zarrinnesan in Department of Integrative Biology and Pharmacology; successfully defended 2002

2000-2001 Served on Ph.D. thesis committee for Jennifer Carter in M.D. Anderson Cancer Center

2001-2003 Served on M.Sci. thesis committee for Roger Belizaire in Department of Neurology; successfully defended 2003

2001-2004 Served on Ph.D. thesis and exam committee for Zhiyong Ren in M.D. Anderson Cancer Center

2002-2004 Served on Ph.D. thesis committee for Morgan McKeller in M.D. Anderson Cancer Center

2002-2005 Served on Ph.D. thesis committee for Janci Chunn in Department of Biochemistry, University of Texas-Houston Medical School

2002-2004 Served on Ph.D. thesis committee for Melissa Adams in Department of Biochemistry, University of Texas-Houston Medical School

2002-2005 Served on Ph.D. thesis committee for Xiaochong Wu in Department of Integrative Biology and Pharmacology, University of Texas-Houston Medical School

2003-2005 Served on Ph.D. thesis committee for Ben Mull, M.D. Anderson Cancer Center

2003-2007 Served as Ph.D. advisor for Hanyin Cheng in Department of Integrative Biology and Pharmacology, University of Texas-Houston Medical School

2003-2007 Served as Ph.D. advisor for Jeremy Ross in Department of Integrative Biology and Pharmacology, University of Texas-Houston Medical School

2004-2005 Served on Ph.D. thesis committee for Rebecca Corrigan, Department of Biochemistry and Molecular Biology

2004-2009 Served as Ph.D. advisor for Georgialina Rodriguez in Department of Integrative Biology and Pharmacology, University of Texas-Houston Medical School

2004 Chaired Candidacy Exam for Rebecca Corrigan

2004-2005 Served as M.Sci thesis committee member for Brett Ewald, M.D Anderson Cancer Center

2004-2005 Served on Ph.D. thesis committee of Cherie Roche, Department of Pathology, University of Texas-Houston Medical School

2005 Served on Ph.D. thesis committee for Adrienne McCampbell, Department of Integrative Biology and Pharmacology, University of Texas-Houston Medical School

2005 Served on Ph.D. thesis committee for Svitlana Kurinna, Institute of Molecular Medicine

2006-2008 Served on Ph.D. thesis committee for Zaineb Al-Dahwi, UTEP

2006 Served on Ph.D. thesis committee for Patricia Garrido, UTEP

2005-2007 Served on Ph.D. thesis committee for Juan Hernandez, UTEP

2007-2008 Served as thesis committee member for Laura Torres, UTEP Biological Sciences

2009-2010 Serve as PhD thesis committee member for Johanny Meneses, UTEP Biological

Sciences

- 2010-Present Served as Ph.D. thesis committee mem. for Chuck Gilbert, UTEP Biological Sciences
2010-2012 Served as mentor for Damaris Rosado who graduated with MS in 2012

Student Sponsorships

Candidates for Postgraduate Doctoral Degree

- 1998-2001 Fariba Behbod
1999-2002 Zsuzsanna Nagy
2003-2007 Hanyin Cheng
2003-2007 Jeremy Ross
2008-2009 Georgialina Rodriguez
2006-2010 Abhisek Mitra

Current Ph.D. Candidates

- 2010-present Blanca Ruiz
2010-present Georg Steven Martinez

Graduated M.S. Candidates

- 2012 Damaris Rosado

Undergraduate Students

- 1998 Ardavan Behbod
1999 Ana Petkovska
2000 Cindy Herrick
2002 Qian Wu
2006 Gabriela Federico, Valentina Montoya
2007 Jessica Hernandez,
2007 Omar Khateeb
2007-2007 Damaris Rosado
2005-2007 Elizabeth Salazar,
2007 Blanca Soria
2009 Hadit Morales
2009 Juan Bacerra
2009 Justine Murray
2009 John Wilson
2010 Gloria Herrera
2010 Jennifer Stalter
2010 Rafael Torres
2010 Adriana Saldivar
2011 Derrick Oaxaca
2011 Alejandra Saenz

Postdoctoral Fellows

2001-2004 Yuling Wang
2003-2010 Zsuzsanna Nagy
2007-present Jeremy Ross
2009-present Georgialina Rodriguez

Technicians

1997-2000 Rebecca A. Erwin-Cohen
2001-2005 Judy Kao
2006 Cynthia Perez
2007-2008 Christina Gutierrez
2009-2010 Stephen Martinez
2012-Present Elsa Warden

Teaching Responsibilities

1998 Seminars in Regulatory Biology, GS040751, (6 hrs.)
1999-2005 Mechanisms of Hormone Action, GS130024, (6 hrs.)
1999 Topics in Molecular Medicine, GS2106111100, (1 month)
1999-2005 Cell Biology Course number GS040013100, (4 hrs.)
1999-2005 Medical Pharmacology course-Section IV, Toxicology II, (1 hr.)
2000-2005 Medical Pharmacology course-Section III, Antimicrobial Chemo., (2 hrs.)
1999-2005 Summer Students Research Program Lecturer
2006-present Senior Seminar course Biol 4192
2008-present Lectures in Structure and Function of Macromolecules Biol 5340
2008-present Lectures in Advanced Immunological Concepts Biol 5326

Current Grant Support

1. Research Center at Minority Institutions and Borders Biomedical Research Center. NIH grant (PI Natalicio). Co-PI R.A. Kirken, Program Director. 5G12RR008124. July 1, 2009 to June 30, 2014. \$12,379,750.
2. Hispanic Health Disparities Research Center. NIH Grant (PI Provencio Vasquez, E), Kirken Co-I at 10% effort. June 1, 2009 to May 31, 2014. \$4,618,451.

Treatment of immune mediated diseases that affect the Hispanic community. PI F. Pericle, Co-PI R.A. Kirken NIH SBIR 1R43RR032354-01. 12-2010-6-2011, \$138,400.

3. Tumor Banking for the Treatment of Leukemia and Lymphoma. PI R.A. Kirken. Marsh Foundation. 12-20-2010-12-19-2011, 36,000.
4. Tumor Banking for the Treatment of Leukemia and Lymphoma. PI R.A. Kirken. Marsh Foundation. 12-24-2011-12-19-2012, 150,000.
5. “Jak3 as a target for the treatment of Leukemia”. Coldwell Foundation. (PI Kirken) \$100,000 01/11-5/30/12.
6. Novel Therapeutic Strategies to treat certain forms of Leukemia. Marsh Foundation. (PI Kirken) \$107,503.00. December 31, 2012 – December 30, 2013.
7. Premier Biomedical, Selective Depletion of Reactive Disease Causing Molecules”. (PI Kirken). \$262,272. 8/1/2012 – 7/31/ 2013.
- 8.

Past Grant Support

1. “Effects of Prodigiosin on JAK3”, P.I.:B.D. Kahan, Co-P.I.: Kirken, R.A., Pharmacia & Upjohn. 07/01/99-06/30/00, \$25,000.
2. “Stat6 as a target to treat airway hyperresponsiveness”, P.I.: R.A. Kirken, American Lung Association, 07/01/00-06/30/03, \$105,000.
3. “Jak Stat pathways as cancer therapeutic targets”, P.I.: M. Talpaz, Co-Investigator: R.A. Kirken, M.D. Anderson Multidisciplinary Research Program, 07/01/01-06/31/03, \$250,000.
4. “Genetic disease due to Jak3 deficiency”. Sponsor: R.A. Kirken, Recipient: F. Behbod, Schissler Foundation, 12/01/00-11/30/01, \$20,000.
5. “Identification of Jak3 substrates”. Sponsor: R.A. Kirken, Recipient: Z. Nagy, Gibco-BRL-Life Sciences Award, 09/01/00, \$5,000.
6. “Plethysmograph work station”, P.I.: R.A. Kirken, University of Texas Tobacco Settlement, Equipment Grant, 2003, \$13,500.
7. “Transcription Factor Stat5a/b: A novel target for regulating T-cell activity and allograft rejection”, P.I.:R.A. Kirken, Roche Organ Transplantation Research Foundation, 07/01/00-12/31/03, \$200,000.
8. “The Stat5a/b proline-directed serine kinase represents a new molecular target for promoting cardiac allograft acceptance”, PI: R.A. Kirken, AHA, 07/01/02-06/30/04, \$78,000.
9. “Signaling pathways in Lupus T-cells”, P.I.:R.A. Kirken, NIH-RO3, declined, 12/01/04-11/30/07, \$223,083.
10. Pharmacology of cyclosporine based immunosuppression”, PI: B.D. Kahan, (Co-Investigator) R.A. Kirken, (20%), NIH-RO1, 07/01/01–06/30/05, \$1,190,000.

11. "Role of IL4/IL4R in Transplantation tolerance", PI: S.M. Stepkowski, (Co-Investigator) R.A. Kirken, (20%), NIH-R21, 09/01/01–08/31/05, \$669,750.
12. "NIH T32-\$5,000,000 Training Program in Craniofacial-Oral Biology Research Grant, Funding Period: 08/01/03-07/31/08. Co-Investigator: R.A. Kirken. (UT-Dental Branch). Funded Jeremy Ross.
13. NIH R21 \$200,000 for "The role of Socs in regulation of transplantation tolerance". P.I. Stepkowski. R.A. Kirken Co-investigator, (10%) NIHR21, 04/1/04-3/31/2005, \$200,000.
14. "Screening for small molecule inhibitors of Stat5", P.I. R.A. Kirken, NIH-RO3,10/01/04-9/30/05 \$74,250.
15. "Clonal Deletion of T and B Cells" P.I. S. Stepkowski, Co-PI R.A. Kirken (20%) NIH-RO1, 7/01/2004-6/31/2009, \$1,000,000 direct
16. "Pharmacoinformatics". Mentor to Post-doctoral Fellow Zsuzsanna Nagy. UT Health Science Center NIHT32 Training Grant Funded salary position, 4/1/2005-3/31/2006, \$49,487.
17. "Validation of a putative drug target for the treatment of Leukemia". Coldwell Foundation. (PI Kirken) \$100,000 10/01/06-09/30/07.
18. "Joint program between UTEP and UTMB: Proteomics-DNA Work Station for Infectious Disease Surveillance on the US-Mexico Border". (PI Kirken and Castro), LERR Funds from UT System awarded to UTEP. \$1,000,000.
19. "Nanodrop Spectrophotometer Package". (PIs Kirken and K. Johnson), Mckee Foundation, \$15,000, February 14, 2008.
20. Research Center at Minority Institutions and Borders Biomedical Research Center. NIH grant (PI Natalicio). R.A. Kirken, Deputy Director. 5G12RR008124. June 1, 2003-May 31, 2008, \$9,260,913.
21. "Validation of a putative drug target for the treatment of Leukemia". Coldwell Foundation. (PI Kirken) \$100,000 10/01/07-09/30/08.
22. T-cell growth factor pathways and immune modulation", P.I.: R.A. Kirken, NIH-RO1, 07/01/03-12/31/08, \$1,171,539.
23. Research Center at Minority Institutions and Borders Biomedical Research Center. NIH grant (PI Natalicio). R.A. Kirken, Program Director. 5G12RR008124. Bridge funds May 15, 2008 to March 1, 2009. \$704,706.
24. "NC1153 a novel Jak3 inhibitor". P.I. R.A. Kirken. Novartis Pharmaceuticals. December 1 2004 to November 30, 2008, \$318,374.
25. Texas Ignition Fund, "NC1153 as a novel agent to block allograft rejection", PI R.A. Kirken, September, 1, 2008, August 30, 2009. \$50,000.
26. Boeing Corporation. "IATCS Coolant Support and Design Phase 1: Degradation of OPA. PI R.A. Kirken. 1/30/09-9/30/09, \$135,720.
27. "Jak3 as a target for the treatment of Leukemia". Coldwell Foundation. (PI Kirken) \$135,000 10/01/08-5/30/10.

28. "Jak3 as a target for the treatment of Leukemia". Coldwell Foundation. (PI Kirken) \$125,000 2/01/10-1/31/11.
29. Research Center at Minority Institutions and Borders Biomedical Research Center. NIH grant (PI Natalicio). R.A. Kirken, Program Director. 5G12RR008124. Supplemental Funds May 31, 2008 to June 30, 2011. \$480,362.

PUBLICATIONS

Selected Abstracts

1. Prochaska, L.J., Fink, P.S., Leffak, I.M. and **Kirken, R.A.**: Characterization of bacterial DNA homologous to bovine mitochondrial DNA encoding cytochrome c oxidase subunit III. FASEB J. 2: A2775, 1989.
2. **Kirken, R.A.** and Prochaska, L.J.: An alternative procedure for the isolation of Bacillus PS3 cytochrome c oxidase. FASEB J. 4:A2772, 1990.
3. **Kirken, R.A.**, and Prochaska, L.J.: Structural and functional characterization of Bacillus PS3 cytochrome c oxidase. Gordon Conference on Energy Coupling Mechanisms. New Hampshire, 1991.
4. **Kirken, R.A.** and Prochaska, L.J. Comparison of the terminal oxidases from Bacillus PS3 (caa3) and E. coli (oo3) using limited proteolysis and chemical modification. FASEB J. 6: A-192, 1992.
5. Farrar, W.L., Garcia, G.G., Evans, G.A., **Kirken, R.A.**, and Howard, O.M.Z.: Characterization of a 97 kDa tyrosine kinase associated with the IL-2 receptor complex: Lack of requirement for src-related enzymes. J. Cell. Biochem. 17B (E 507):111, 1993.
6. Evans, G.A., **Kirken, R.A.**, and Farrar, W.L.: IL-2-dependent activation of receptor specific and mitogenic tyrosine kinase pathways: Increased activity of a p97 mitogenic pathway in HTLV-1 transformed T cells. J. Cell. Biochem. 17A: 252, 1993.
7. **Kirken, R.A.**, Rui, H., Howard, O.M.Z., and Farrar, W.L.: Comparative analysis of prolactin and IL-2 receptor-associated phosphotyrosyl proteins and tyrosine kinase activity in lymphocytes. Neuroendocrinology VI International Prolactin Congress. (D 7): 21, 1993.
8. **Kirken, R.A.**, Rui, H.R., and Farrar, W.L.: Activation of distinct receptor-associated tyrosine kinases by IL-2 and prolactin in T lymphocytes; Role of JAK family kinases. J. Cell. Biochem. 18D: 403, 1994.
9. Kawamura, M., Johnston, J.A., **Kirken, R.A.**, Chen, Y.Q., Lal, B.K., Blake, J.E., Staples, A.L., Subota, K., Ortaldo, J.R., McVicar, D., and O'Shea, J.J.: L-JAK, a novel Janus kinase protein tyrosine kinase that is expressed in activated leukocytes and is functionally coupled to the Interleukin-2 (IL-2) receptor. Tenth Annual Meeting on Oncogenes: 36, 1994.

10. **Kirken, R.A.**, Rui, H. and Farrar, W.L.: The Nb2 lymphoma as a model for studies of signal transduction by receptors for prolactin and three cytokines which utilize the IL2 receptor γ -chain, interleukins 2,4,7. The Endocrine Society, 76th Meeting: 446, 1994.
11. Rui, H., DaSilva, L., **Kirken, R.A.**, Howard, O.M.Z. and Farrar, W.L.: Interaction of the prolactin receptor with the cytoplasmic tyrosine kinase JAK2. The Endocrine Society, 76th Meeting: 334, 1994.
12. Malabarba, M.G., **Kirken, R.A.**, Rui, H., Kawamura, M., O'Shea, J.J., and Farrar, W.L.: Interaction of JAK3 and JAK1 with the IL4 receptor complex. J. Cell. Biochem. 19A:55, 1994.
13. Rui, H., Erwin, R., **Kirken, R.A.**, and Farrar, W.L. Genistein and Staurosporine block prolactin-induced tyrosine phosphorylation of Shc without inhibiting JAK2: Evidence for Shc phosphorylation by a downstream tyrosine kinase. J. Cell. Biochem. 19A:352, 1994.
14. **Kirken, R.A.**, Rui, H., Malabarba, M.G., Kawamura, M., O'Shea, J.J., and Farrar, W.L.: Interaction of JAK1 and JAK3 tyrosine kinases with the IL2 receptor complex. J. Cell. Biochem. 19A: 38, 1994.
15. Malabarba, M.G., Rui, H., Erwin, R.A., Farrar, W.L., and **Kirken, R.A.**: Interleukin 13 utilizes the interleukin 4 receptor α -chain and the interleukin 2 receptor γ -chain. N.I.H Research Festival. 53, 1995.
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51. Ross, J.A., Nagy, Z.S., and **Kirken, R.A.** The Phb1/2 phospho-complex is required for mitochondrial homeostasis and survival of human T cells. *J. Biol. Chem*, 283, 4699-4713, 2008.
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54. Cheng, H., Ross, J.A. Frost, J.F., and **Kirken, R.A.** Phosphorylation of human Jak3 at tyrosines 904 and 939 positively regulates its activity. *Mol. Cell. Biol.* 28: 2271-2282, 2008.

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57. Nagy, ZS., Ross, J.A., Rodriguez, G. Bader, J. Dimmock, J. and **Kirken, R.A.**, Uncoupling JAK3 activation induces apoptosis in human lymphoid cancer cells via regulating critical survival pathways. *FEBS let.* [epub ahead of print 2010]. 584(8): 1515-20, 2010.
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59. Nagy, Z.S., Ross, J.A., Rodriguez, G, Balint, B.L., Szeles, L., Nagy, L., **Kirken, R.A.** Genome wide mapping of IL-2 induced STAT5 target genes reveals PDE4B as a putative STAT5 regulated gene in human activated PBMCs and lymphoid cancer cells. *PLOS ONE* in Press, 2013.
60. Ross, J.A., Rodriguez, G., and **Kirken, R.A.**, Analysis of Janus tyrosine kinase phosphorylation and activation. *Methods Mol. Biol.* 967: 3-20, 2013.
61. Rodriguez, G., Ross, J.A., Nagy, Z.S., and **Kirken, R.A.** Forskolin inducible cAMP pathway negatively regulates T-cell proliferation by uncoupling the Interleukin-2 receptor complex. *J. Biol. Chem.*, in press 2013.

Invited Articles (Reviews, Editorials, etc.) in Journals

1. **Kirken, R.A.**, Rui, H., Howard, O.M.Z., and Farrar, W.L.: Involvement of JAK-family tyrosine kinases in hematopoietin receptor signal transduction. *Prog. Growth Factor Res.* 5:195-211, 1994.
2. **Kirken, R.A.**, Evans, G.A., Duhe, R.J., DaSilva, L., Malabarba, M.G., Erwin, R.A., and Farrar, W.L.: Mechanisms of cytokine signal transduction: IL2, IL4 and prolactin as hematopoietin receptor models. *Vet. Immunol. Immunopathol.* 63:27-36, 1998.
3. Stepkowski, S.M. and **Kirken, R.A.**: The role of IL-2 in allograft rejection-a lesson learned from experimental work. *Transplantation.* 69:2480-2483, 2000.

4. **Kirken, R.A.:** Targeting Jak3 for immune suppression and allograft acceptance. *Transplant Proceedings*. 33:3268-3270, 2001.
5. **Kirken, R.A.** and Stepkowski, S.M.: New directions in T cell signal transduction and transplantation tolerance. *Current Opinions in Organ transplantation*.7:18-25, 2002.
6. **Kirken, R.A.** and Wang, Y.: Molecular action of Sirolimus: Sirolimus and mTor. *Transplant Proceedings*, 35: S227-230, 2003.
7. Kahan, B.D., **Kirken, R.A.**, Stepkowski, S.M.: New Approaches to transplant immunosuppression. *Transplantation Proceedings*, 35 (5):1621-3, 2003.
8. Nagy, Z.S., Ross, J., Cheng, H., Stepkowski, S.M. and **Kirken, R.A.** Regulation of lymphoid cell apoptosis by Jaks and Stats. *Critical Reviews in Immunology* 24: 87-110, 2004.
9. Stepkowski, S.M. and **Kirken, R.A.** Unique advantage of Janus kinase 3 as a target for selective and nontoxic immunosuppression. *Expert Review of Clinical Immunology* 1: 307-310, 2005.
10. Stepkowski, S.M., and **Kirken, R.A.** Jaks and Stats regulate critical T-cell activities required for allograft rejection and transplantation tolerance. *Transplantation*, 82: 295-303, 2006.
11. Ross, J.A., Nagy, Z.S., Cheng, H., Stepkowski, S.M., and **Kirken, R.A.** Regulation of T cell homeostasis by JAKs and STATs. *Arch. Immunol. Ther.*, 55: 231-245, 2007.
12. Stepkowski, S.M., Chen, W., Ross, J., Nagy, Z., and **Kirken, R.A.** Stat3: An Important Regulator of Multiple Cytokine Functions. *Transplantation* 85 (10): 1372-1377, 2008.
13. Ross, J. A., Rodriguez, G. and **Kirken, R.A.** Analysis of Janus Tyrosine Kinase Phosphorylation and Activation. *Methods in Molecular Biology* 967: 3-20, 2013.

Books

1. Rui, H., Kirken, R.A., Howard, O.M.Z., Duhe, R.J., Evans, G.A., and Farrar, W.L.: The role of hematopoietic growth factors in signal transduction. *Immunopharmacology of Allergic diseases*, Robert G. Townley and Devendra K. Agrawal, Editors, Marcel Dekker, Inc., pp 29-77, 1996.
2. Evans, G.A., Duhe, R.J., Kirken, R.A., DaSilva, L., Erwin, R.A., Malabarba, M.G., and Farrar, W.L.: Cytokine driven signal transmission, In *New Technologies in Cell Cycle*, Brian Metcalf, Robert Roffolo, and George Poste, Editors, Harwood Academic Publishers, Amsterdam, pp 91-116, 1997.

Professional Communications

Presentations:

- 1993 **Kirken, R.A.**, Howard, O.M.Z., and Farrar, W.L. Talk entitled “Comparative analysis of prolactin and IL-2 receptor-associated phosphotyrosyl proteins and tyrosine kinase activity in lymphocytes”. Neuroendocrinology VI International Prolactin Congress. (D 7): 21 1993, Paris, France, Plenary Lecture.
- 1993 **Kirken, R.A.** “IL2 activates a 116 kDa Tyrosine kinase”, Moffitt Cancer Institute, University of S. Florida, 1993.
- 1996 **Kirken, R.A.** Chaired International Meeting on Standardization and Calibration, of Cytokine Immunoassays. London, England, 1996.
- 1997 **Kirken, R. A.** Talk entitled “IL2-related cytokines: Jak3 and Stat5 signaling pathways”. Baylor College of Medicine, 1997.
- 1997 **Kirken, R.A.** Talk entitled “Signaling pathways mediated by IL-2 and related cytokines: Functional role of JAKs, STATs and MAP kinases. UT-Houston Medical School, December 18, 1997.
- 1997 **Kirken, R.A.** Talk entitled “Activation and regulation of a Stat5 serine kinase”. Invited Speaker: Uniformed Services University of Health Sciences, 1997.
- 1998 **Kirken, R.A.** Talk entitled “Signaling pathways mediated by IL2 and related cytokines: Role of JAKs, STATs and MAP Kinases in immune regulation”. November 9, 1998. M.D. Anderson, Houston, TX, November 9, 1998.
- 1999 **Kirken, R.A.** Talk entitled “Cytokine induced serine phosphorylation and regulation of Stat5a/b activity in lymphocytes”. National Cancer Institute Workshop: Serine/threonine phosphorylation in cytokine signaling. March 31, 1999. Plenary Lecture.
- 1999 **Kirken, R. A.**, Erwin-Cohen, R.A., Behbod, F., Wang, M., Ku, J., Stepkowski, S.M., Kahan, B.D. Talk entitled “Tyrphostin AG490 blocks activation of JAK3 and rejection of heart allografts in rats”. 25th Annual Scientific Meeting of the American Society of Transplant Surgeons. Chicago, Illinois, May 17, 1999.
- 1999 **Kirken, R.A.** The Woodlands Conference Center, TX. Talk entitled “Stat5a/b as Molecular Targets for Immune Suppression”. October 16, 1999.
- 2000 **Kirken, R.A.** UT-Shared Department of Integrative Biology and Pharmacology and Internal Medicine Seminar entitled “Stat5a/b Roles in cancer and organ rejection”.
- 2000 **Kirken, R.A.** Texas Medical Center. “Jak3 as a molecular target for controlling allograft rejection”. July 17, 2000.

- 2000 **Kirken, R.A.**, Erwin-Cohen, R., Behbod, F., Wang, M.E., Stepkowski, S.M., Kahan, B.D. Talk entitled “Tyrophostin B42 selectively inhibits activation of the JAK3/STAT5/MAPK pathway and rejection of heart allografts in rats”. XVIII International Congress of the Transplantation Society, Rome, Palazzo dei Congressi, August 27-September 1, 2000.
- 2001 **Kirken, R.A.** Talk entitled: “Roles for Jak3 and Stat5 in T cell Mediated Diseases”. Institute of Molecular Medicine, University of Texas-Houston. September 14, 2001.
- 2001 **Kirken, R.A.** Talk entitled, “New strategies to identify immunosuppressive drugs that act synergistically to prolong allograft survival”. University of Texas at Houston. January 14, 2002.
- 2001 **Kirken, R.A.** Talk entitled “T-cell signaling pathways”. Symposium Sixth International Conference on Tolerance Induction. Tucson, AZ, January 21, 2001. Plenary Lecture.
- 2001 **Kirken, R.A.**, Behbod, F., Erwin-Cohen, R., Kahan, B.D., Nagy, Z., Wang, M.E. Talk entitled “Concomitant inhibition of Jak3 and calcineurin-but not rapamycin-dependent signaling pathways synergistically prolong the survival of heart allografts”. 2001 A Transplant Odyssey, Istanbul Convention & Exhibition Center, Istanbul, Turkey, August 20–23, 2001. Plenary Lecture.
- 2002 **Kirken, R.A.** Talk entitled: “Transcription factor Stat5a/b: a novel target for regulating T cell activity and allograft rejection”. New Trends in Immune Suppression. Geneva, Switzerland, February 9, 2002. Plenary Lecture.
- 2002 **Kirken, R.A.** Talk entitled, “Jak3 and Stat5 as molecular targets for promoting allograft acceptance”. Horizons in Transplantation: From theory to Practice. Amelia Island, Florida, April 24, 2002. Plenary Lecture.
- 2002 **Kirken, R.A.** Talk entitled: “IL2 regulates the activation of multiple Raf isoforms (A, B and C) in primary human T-cells: Role of Rafs in T-cell growth and rat heart allograft survival”. American Society of Transplantation, Washington, D.C. April 28, 2002.
- 2002 **Kirken, R.A.** Talk entitled: “Roles for Jak3 and Stat5 in T cell Mediated Diseases”. University of Debrecen, Hungary, October 18, 2002.
2002 Kirken, R.A. Talk entitled, “A Role for Jak3/Stat5a/b pathway in T cell-derived disease”. University of Texas at Houston Dental Branch. November 21, 2002.
- 2002 **Kirken, R.A.** Talk entitled “Specific Inactivation of the Common IL2 Receptor

Gamma-Chain, and to a Lesser Extent Constitutively Active Stat3, Induces Apoptosis in a Human Lymphoma Cell Line”. American Society of Hematology, Philadelphia, PA, Dec. 6-10, 2002.

- 2003 **Kirken, R.A.** Talk entitled, “Stat5 regulation of T-cell activity”, University of Texas Health Science Center and the Department of Cardiology. October 5, 2003.
- 2003 **Kirken, R.A.** Talk entitled “Stat5a/b-regulation of T-cells and disease”. Texas Health Science Center, Division of Cardiology, Houston, TX, October 30, 2003.
- 2003 **Kirken, R.A.** Talk entitled “Stat5a/b: A target for regulating hematopoietic cancers”. M.D. Anderson Cancer Center, Department of Molecular Hematology and Therapy, Houston, TX, November 17, 2003.
- 2004 **Kirken, R.A.** Talk entitled “New candidates for Jak3 antagonism”. University of Texas Health Science Center, Division of Immunology, Houston, TX, March 26, 2004.
- 2004 **Kirken, R.A.** Talk entitled “New candidates for Jak3 antagonism”. University of Texas Health Science Center Summer Research Program, Houston, TX, June 7, 2004.
- 2005 **Kirken, R.A.** Talk entitled “So you want to make a drug?”. University of Texas Health Science Center, Houston, TX, February 18, 2005.
- 2005 **Kirken, R.A.** Talk entitled “Roles for Jak3 and Stat5 in T cell Mediated Diseases”. University of Texas El Paso, TX, April 1, 2005.
- 2005 **Kirken, R.A.** Talk entitled “NC1153 Biochemistry”. 28th Annual Divisional Retreat, The Division of Immunology and Organ Transplantation, UTHSC, April 21-23, 2005.
- 2008 **Kirken, R.A.** Talk entitled: “Career Opportunities in Biological Sciences” Seminar – NIH Sponsored Bridges Program.
- 2009 **Kirken, R.A.** Outreach Program-Talk entitled “Career Opportunities in Biological Sciences” Seminar –NIH Sponsored Bridges Program.
- 2010 **Kirken, R.A.** Talk entitled, “Signaling pathways and Cancer”, Southwest Association of Hispanic American Physicians. El Paso, TX January 19, 2010.
- 2011 **Kirken, R.A.** Talk entitled, “Jak3 as a Target of T-cell Mediated Diseases”.

Clemson University, November 7, 2011.

- 2012 **Kirken, R.A.** Talk entitled, “New Concepts in cell Signaling and Treatment Strategies”, Southwest Association of Hispanic American Physicians. El Paso, TX November 2-3, 2012.

Community Engagement

- 2010 **Kirken, R.A.** Keynote Speaker to the El Paso Medical Society and its annual installation dinner. El Paso Club, El Paso, TX. January 13, 2010.
- 2010 **Kirken, R.A.** Outreach Presentation to Mesita Elementary School. “What is a Scientist?” El Paso, TX. January 25, 2010.
- 2010 **Kirken, R.A.** Keynote Speaker to the UTEP Centennial Commission. The University of Texas at El Paso. February 10, 2010.
- 2010 **Kirken, R.A.** Organize and present, Novartis Research Institute Visit, University of Texas at El Paso, March, 2, 2010.
- 2010 **Kirken, R.A.** Healthcare & Pharma: Needs, Limitations and Opportunities, University of Texas at El Paso, The Osher Lifelong Learning Institute, April 19, 2010.
- 2010 **Kirken, R.A.** Outreach Presentation to Mesita Elementary School. “Science is Fun!” El Paso, TX. December 17, 2010.
- 2011 **Kirken, R.A.** Keynote Speaker to the El Paso Rotary Club West Chapter. “Cancer”. El Paso, TX. August 29, 2011.
- 2011 **Kirken, R.A.** Outreach Presentation to Mesita Elementary School. “Science Fair Projects!” El Paso, TX. December 6, 2011.
- 2012 **Kirken, R.A.** Outreach to local schools to visit UTEP to support “Brain Awareness Week”, March 26 and June 12, 2012.
- 2012 **Kirken, R.A.** Girl Scouts of America 100 Year Anniversary. “Future Scientists of America.” November 3, 2012.