

## Curriculum Vitae

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**Name:** Renato J. Aguilera, Ph.D.

**Current Position:** Professor, Department of Biological Sciences, The University of Texas at El Paso, 500 W. University Dr., El Paso, TX 79968-0519

### Education:

Institution and Location	Degree/Year	Major/Field of Study
University of Texas at El Paso	B.S. 1981	Microbiology
University of Texas at El Paso	M.S. 1982	Biology (Immunochemistry)
University of California at Berkeley	Ph.D. 1987	Immunology
University of California at Berkeley	Postdoc.1987-1989	Immunology

### Research and Professional Experience:

1980-1982	Graduate Fellow, Department of Biology, University of Texas at El Paso
1982-1985	National Science Foundation Pre-doctoral Fellow, Department of Immunology, University of California at Berkeley
1986-1987	Ford Foundation Dissertation Fellow, Department of Immunology, University of California at Berkeley
1987-1989	UC President's Postdoctoral Fellow, Department of Molecular and Cellular Biology, Div. of Immunology, University of California at Berkeley
1989-1997	Assistant Professor, Department of Molecular, Cell and Developmental Biology, University of California at Los Angeles (UCLA)
1990-2002.	Member of the Molecular Biology Institute and Jonsson Comprehensive Cancer Center at UCLA
1992-2002.	Member of the Executive Committee of the Center for Academic and Research Excellence (CARE) at UCLA
1993-1996	Board of Directors, Society for the Advancement of Chicanos and Native Americans in Science
1993-1997	Member of the Leadership Committee Jonsson Comprehensive Cancer Ctr. at UCLA
1996-1997	Co-Director of the Minority Access to Research Careers Program (MARC U*STAR) at UCLA
1997-2002.	Associate Professor, Department of Molecular, Cell and Developmental Biology, UCLA
1998-2002.	Director of the Minority Access to Research Careers Program (MARC U*STAR) at UCLA
2002-2005	Deputy Director of the Border Biomedical Research Center, The University of Texas at El Paso.
2003-2008	Board of Scientific Counselors of the National Institute of Environmental Health Sciences
2005-2011	Director of the NIGMS SCORE Program at UTEP
2014-2016	Co-Director of the Administrative Unit of the Building Scholars Program at UTEP
2012-2016	Director of the NSF Grant Student Mentoring to Achieve Retention: Triads in Science at UTEP
2007-2024	Director of the Cellular Characterization and Biorepository Core facility of the Border Biomedical Research Center (BBRC) at UTEP
2004-2023	Director of the NIGMS RISE Scholars Program, UTEP.
2002-2023	Director of the Graduate Program in Biology, UTEP
2022-2027	Director of the NIGMS U-RISE undergraduate training program, UTEP.
2022-2027	Director of the NIGMS G-RISE graduate training program, UTEP.
2002-present	Professor, Department of Biological Sciences, UTEP
2012-present	Deputy Director of the Border Biomedical Research Center, UTEP
2019-present	Director of the Research Infrastructure Core and Genomic Analysis Facility of the BBRC at UTEP
2020-present	Chief Scientific Officer of Armaceutica Inc.

## **Honors and Awards and Special Recognition:**

- National Science Foundation Pre-Doctoral Fellowship (1982-1985)
- Ford Foundation Dissertation Fellowship (1986-1987)
- University of California, President's Postdoctoral Fellowship (1987-1989)
- Two Thousand Notable American Men (1993)
- Who's Who Among Hispanic Americans (1994) and Who's Who in Technology (1994)
- Who's Who Among American Universities and Colleges (1982; 1995)
- Distinguished Faculty Teaching Award, Mol. Cell and Dev. Biology Dept., UCLA (1995)
- Faculty profile published in the NIGMS Minority Programs Update (F'99)
- Who's Who in Science and Engineering (1997; 2000)
- Who's Who in America (1999-2000)
- Hispanic Power Hitter recognition in Hispanic Engineer magazine (2002-2003).
- Who's Who in Science Higher Education (2004)
- Who's Who Among Executives and Professionals (2005)
- Recipient of a UT STARS Award (F'2006)
- Distinguished Faculty Teaching Award, College of Science, UTEP (S' 2007)
- Nominated for the Minnie Stevens Piper Professorship (F'2007)
- Featured in Biomedical Faces of Science (2010).
- UTEP Outstanding Performance Award in Securing Extramural Funding (2010-12)
- UTEP Millionaire Research Award for research expenditures over 1 million dollars (2012, 2015)
- Awarded the ASM William A. Hinton Research Training Award (S'2010)
- Commencement Ceremony Gran Marshal (May 2013; May 2014).
- Awarded the SACNAS Distinguished Research Mentor Award (F'2013)
- Awarded the McDonalds Hispanos Triunfadores Award (F'2013)
- Mentoring Keynote, American Society for Cell Biology (2014)
- Elected Lifetime Fellow of the American Society for Cell Biology (2017)
- Albert Nelson Marquis Lifetime Achievement Award (2018)
- Who's Who in the World (2018)
- Presidential Lecturer at Texas A&M International University (2019)
- Awarded the SACNAS Distinguished Scientist Award (F'2019)
- Featured Hispanic Scientist on National Institute on Minority Health and Health Disparities for Hispanic Heritage Month (F'2021)
- EE Just Award Lecture, American Society for Cell Biology (2022)
- Elected Life Fellow of the California Academy of Sciences (2024)

## **Invited Lectures/Symposia (2005-present):**

- Invited speaker, San Francisco State University, San Francisco, CA Spring 2005
- Invited speaker, University of Texas Medical Branch, Galveston, TX, Spring 2005
- Invited speaker, San Marcos State University, San Marcos, TX, Spring 2006
- Invited speaker, UCLA, MARC Program, Spring, 2006
- Conference speaker, Health Disparities Symposium (RCMI), San Juan, Puerto Rico Fall 2006
- Invited speaker, California State University, Northridge, CA, Spring 2007
- Conference speaker, SACNAS Conference, SACNAS Conference, Kansas City, MO, October, 2007
- Session Chair and Moderator, SACNAS Conference, Salt Lake City, Utah, October, 2008
- Session Chair and Moderator, SACNAS Conference, Anaheim, CA, October, 2010
- Session Chair and Moderator, SACNAS Conference, Anaheim, CA, October, 2010
- Keynote Speaker, 13<sup>th</sup> Biomedical and Comparative Immunology Symposium at Florida International University, March 2011

- Keynote Speaker, The STEM Day Celebration at The University of Texas Permian Basin September 2011
- Invited Speaker at The Institute on Teaching & Mentoring, Tampa, FL, November 2011 and 2012
- Keynote Speaker, American Biomedical Research Symposium for Minority Students, November 2011
- Keynote Speaker, American Biomedical Research Symposium for Minority Students, November 2011
- Keynote Speaker, Cell Biology at the Frontier of Collaborative Effort a University of New Mexico retreat for postdoctoral fellows, October 2012
- Invited Speaker at The Institute on Teaching & Mentoring, November 2011 and 2012
- Session Chair and Speaker at Ford Senior Fellows Conference , Anaheim, CA, September 2012-2014
- Organizer and Speaker of the ASCB Junior Faculty and Postdoctoral Career Development Workshop S'2008-2013
- Invited Speaker at the interdisciplinary forum for the advancement of ideas and research for a healthy world. Feb 13, 2013. College of Health Sciences (UTEP). Title: "The search for anti-cancer drugs has led to the finding of novel anti-lymphoma compounds"
- Invited Speaker, Clemson University Biological Sciences Department Seminar Series. August 2013
- Invited Speaker, California State University at Northridge, Biological Sciences Department Seminar Series. September, 2013
- Session Co-Chair of "Publishing in STEM" session at Ford Foundation Conference , Washington DC, September 2013
- Invited Speaker, City College of New York, Biological Sciences Department Seminar Series. September, 2013
- Session Co-Chair of a SACNAS Conference Session on Preparing a Scientific Resume, October 2013
- Session Chair and Organizer of a SACNAS Conference Scientific Session entitled "HIV Pathogenesis and Vaccine Development", October 2013
- Invited Speaker, Chemical Biology and Drug Development Symposium, Department of Biology, UTEP, El Paso, Tx, "Characterization of novel anti-cancer drugs", October 10, 2014.
- Invited Speaker, Department of Biology, UT Arlington, Arlington, Tx, "From the Study of DNases to Cancer Research; An Unexpected Scientific Journey", September 14, 2014.
- Keynote "Mentoring" Speaker, American Society for Cell Biology, December 2014.
- Speaker and Participant in the ASCB Junior Faculty and Postdoctoral Career Development Workshop, S'2014-2017.
- Invited Speaker Memorial Symposium to Honor Roberto Sanchez-Delgado's Scientific Career, Brooklyn College, NY, F'2016
- Invited Speaker, University of New Mexico, Department of Cell and Molecular Biology, January 2018.
- Session Panelist on "Predoctoral – Life and Physical Sciences, Math and Engineering" session at Ford Foundation Conference, San Juan, Puerto Rico, September 2017.
- Invited Speaker, University of New Mexico, Department of Cell and Molecular Biology, January 2018.
- Session Panelist on "Predoctoral – Life and Physical Sciences, Math and Engineering" session at Ford Foundation Conference, Washington DC, May 2018.
- Session Panelist and Moderator on "Demystifying the Tenure Process in STEM" session for the Ford Foundation Conference, Virtual Session, October 9, 2020.
- Organizer and Speaker of the ASCB Faculty Research and Education Development Workshop, S'2014-2022.
- Keynote Speaker at the 1<sup>st</sup> annual Vanderbilt Hispanic and Latino/a/x Heritage Month Conference and Workshop, Vanderbilt University, October 12, 2022
- EE Just Lecture at the 2022 American Society for Cell Biology annual meeting, Washington, DC, December 2022.

### **Professional Societies:**

- American Association for the Advancement of Science
- American Society for Microbiology
- American Society for Cell Biology

- Society for the Advancement of Chicanos and Native Americans in Science

### **Notable University, State, and National Service:**

- National Science Foundation Pre-Doctoral Fellowship Review Committee (1991, 1993)
- National Science Foundation Post-Doctoral Fellowship Review Committee (1991, 1995)
- UCLA, Member of the Provost' Committee on Chicano Studies (1991)
- University of California President's Post-Doctoral Fellowship Review Committee (1992)
- National Science Foundation, AdHoc Grant Reviewer (1992-94, 2005-2007)
- UCLA, Dissertation Fellowship Reviewer (1992)
- UCLA, Member of Advisory Board for the Center for Academic and Research Excellence (1992-2002)
- UCLA, Leadership Committee, Jonsson Comprehensive Cancer Center (1992-2002)
- UCLA, Department of Biology, Qualifying Exams Committee (1992-2002)
- UCLA, Seed Grant Reviewer for the American Cancer Society Institutional Grants (1992-94)
- UCLA, MD/Ph.D. Medical Scientist Training Program Admissions Committee (1993-96)
- UCLA, Discussion Leader on Workshop for National Fellowship Applications (1994)
- UCLA, Member of Advisory Board for the Chicano Studies Research Center (1994-96)
- American Society for Microbiology, Member of Minority Task Force (1994-1995)
- American Association for the Advancement of Science, Committee on Societal Impacts of Science and Engineering (1994-97)
- Board of Directors, SACNAS, Society for the Advancement of Chicanos and Native Americans in Science (1994-97)
- National Institute of General Medical Sciences, Member of Advisory Committee for the Minority Opportunities in Research Programs (MORE, 1994)
- Participant/Speaker at the "National Graduate School Application Process Workshop for Minority Students". Established and sponsored by SACNAS (1995)
- Co-Chair of the Local Arrangements and Planning Committee for the Los Angeles National SACNAS meeting (1996)
- Council member (Ad-hoc) of National Institutes of General and Medical Sciences (1999)
- Chair Admission Committee, Molecular Cell and Dev. Biology Dept. (1998-2002).
- Participated in "A Longitudinal Study of Minority Ph.Ds from 1980-90" run by Center for Studies in Higher Education, UC Berkeley (2000)
- Member of the National Science Foundation Genetics Study Section (2001-2002)
- Reviewer for Howard Hughes Medical Institutes Predoctoral Fellowships in the Biological Sciences (2001-2003)
- Reviewer for Ruth L. Kirschstein National Research Service Award (NRSA predoctoral fellowship applications-2003)
- American Association for Cell Biology, Minority Affairs Committee (2002-2009)
- Member of Board of Scientific Counselors of the National Institute of Environmental Health Sciences (2003-2008).
- Member of the National Science Foundation Committee of Visitors (2005, 2007). Review of Molecular and Cellular Biology Division.
- Member of the University of Puerto Rico MBRS-RISE External Advisory Committee (2008-)
- Grant Proposal Reviewer of the San Diego State Univ./UC San Diego Cancer Center Partnership (2007-present)
- University of Texas, El Paso, Centennial Commission (2004-2005)
- Chair of Search Committee for Biology Department Chair position (2005)
- Abstract Selection Committee for the Society for the Advancement of Chicanos and Native Americans in Science (2005)
- Travel Award Selection Committee for American Society of Cell Biology (2005-2011)

- Minority Affairs Committee (MAC). Poster Presentation Chair –in charge of judge selection and tabulation of results. American Society of Cell Biology National Conference (2005-2011).
- Summer Junior Faculty/Postdoctoral Fellow Survival Skills Workshops at the Marine Biology Laboratory at Woods Hole, MA (2005-2007) and Washington DC (2008)
- Member of organizing committee of the 2nd Annual Conference on Understanding Interventions That Encourage Minorities to Pursue Research Careers (2008).
- Speaker at workshop sponsored by the ASCB and the AAAS for new faculty and postdoctoral fellows seeking academic positions (2008-11)
- Biomedical Research Steering Committee, Texas Tech School of Medicine, El Paso, Texas (S'2008)
- Abstract Selection Committee for the 11<sup>th</sup> RCMI International Symposium on Health Disparities (S'2008; F'2010)
- Reviewer of NIH Pioneer Awards for 2009 -2011.
- Member of the NSF Committee of Visitors that reviewed the Molecular and Cell Biology Division. (2005, 2007, 2011).
- Co-Chair of the NSF Committee of Visitors that reviewed the Molecular and Cell Biology Division. (2011).
- Member of the UTEP College of Science Tenure and Promotion Committee (2009-2012)
- Chair of the Advisory Committee of College Office of Undergraduate Research Initiatives (2010-2012)
- Member of the Provost STEM Advisory Committee (2010-2012)
- Reviewer of NIH New Innovator Awards for 2012.
- Reviewer of NIH Pioneer Awards for 2011 and 2013
- Ruth L. Kirschstein National Research Service Awards (NRSA) Pre- and Postdoctoral Fellowship Review Panel (2013)
- Ad-hoc Reviewer to grants submitted to NSF (August 2013)
- Member of the conference and scientific planning committees of the 2014 International Symposium on Minority Health and Health Disparities (June 2013 to December 2014)
- Member of the ASM Selection Committee for the William A. Hinton Research Training Award (2011-2016)
- Member of the Brooklyn College SCORE External Grant Selection Advisory Committee (2007-2018)
- Advisory Board Member of the American Association for the Advancement of Science Vision and Change in Undergraduate Biology Education: Chronicling the Changes (2012-2018). See <http://visionandchange.org/>
- Ford Foundation Pre- and Postdoctoral Fellowship Review Panel (2005, 2007, 2009-2021)
- Member of the ASCB Selection Committee for the Bruce Alberts Award for Excellence in Science Education (2009-2016)
- Chair of Minority Affairs Committee (MAC) of the American Society of Cell Biology (2011-2016)
- Alternate Biological Sciences Representative to the UTEP Faculty Senate (2015-2018)
- Member of UTEP's Organized Research Units Council (2012-2020)
- Member of the External Review Committee of the RISE Program at Universidad Central del Caribe, Puerto Rico (2014-2020).
- Member of the External Review Committee of the NSF HSU grant for the Improvement of Undergraduate STEM Education at Adams State, Alamosa, CO (2019-present).
- Reviewer for the Alfred P. Sloan Foundation for the Social Science Research Council awards (S' 2019).
- Member of the Advisory Committee of Project ACE:Action for Equity funded by an NIH Science Education Partnership Award at UTEP (2020-present).
- Panelist in the multi-institutional Intersections Science Fellows Symposium that showcases outstanding research contributions of postdocs in the biological sciences, including those from backgrounds historically underrepresented in academia (S'2021).
- Member of the Review Committee of the California Institute for Regenerative Medicine for the Bridges to Stem Cell Research and Therapy program that trains community college students to become stem cell researchers (2020-present).
- Member of the Minority Affairs Committee (MAC) of the American Society of Cell Biology (2023-present)

- Chair of ASCB MAC awards Committee of that selects EE Just and Mentoring Keynote Lectures (2023-present)
- Member of the NIH Advisory Committee to the Director's Working Group on Diversity (ACD WGD; 2023-2026)
- College of Science Tenure and Promotion Committee (2024-present)

#### **Current Funded Projects (PI/PD of the following grants):**

**NIH/NIGMS R16 SuRE** (PI: R. Aguilera) 4/01/23-3/30/27 (start and end dates not yet finalized)  
\$400,000 total direct costs

Title: Characterization of novel pyrazole compounds with potent anti-cancer activity  
Role: Principle Investigator

**NIGMS-MBRS G-RISE** (PI: Aguilera) 5/01/22-4/30/27  
**T32GM144919** \$2,599,700 total award

Title: Graduate RISE Program at UTEP  
The G-RISE training grant is intended for graduate student training. Provides funding for full support of 12 Ph.D. minority graduate students

**NIGMS-MBRS U-RISE** (PI: Aguilera) 4/01/22-3/30/27  
**T34GM145529** \$3,840,640 total award

Title: Undergraduate RISE Program at UTEP  
The U-RISE training grant is intended for undergraduate student training. Provides funding for support of 25 minority undergraduate students.

**NSF** (PI: Edwards; Co-PIs: Aguilera, Hammons-Odie, and Riggs)  
**MCB 2110604** 9/01/21-8/30/27  
\$1,534,605 total award

Title: Faculty Research and Education Development Program II  
Training program to assist junior faculty in the process of grant writing.

**Beckman Gift Account** (PI: R. Aguilera) 9/01/19-12/30/27  
Award for Supplies and Equipment \$120,000 direct costs  
Role: Principle Investigator

**NIMHD RCMI** (PI: Kirken) 7/01/19-6/30/24  
**U54MD007592-1** \$19,000,000 total cotsts

Title: Border Biomedical Research Center  
Role: Deputy Research Director and Director of the Research Infrastructure Core

#### **Completed Funded Major Projects (PI/PD of the following grants):**

**NIGMS-MBRS RISE** (PI: Aguilera) 3/01/17-4/30/23 (Fourth Renewal Funded since 2004)  
**1R25 GM069621-16** \$4,250,000 total award

Title: RISE Scholars Program at UTEP  
The RISE training grant is intended for undergraduate and graduate student training. Provides funding for 25 undergraduates and fully support 12 Ph.D. minority graduate students

**NSF** (PI: Cleveland; Co-PIs: Aguilera, Leibowitz, and Hammons-Odie)  
**MCB 1340395** 12/15/13-12/30/21  
\$150,000 last year (no cost-extension)

Title: Faculty Research and Education Development (FRED) Program  
Training program to assist junior faculty in the process of grant writing.

**NIMHD RCMI** (Pilot Grant PI: Phyliposvskiy co-PI: Aguilera) 7/01/20-6/30/21  
**U54MD007592-1** \$40,000 total cotsts

Title: Evaluation of mutation and gene expression profiles in breast cancers derived from Hispanic women

Role: Collaborator on ongoing project

**National Institutes of General Medical Sciences.** Support for Continuous Research Excellence (SCORE) subproject entitled "Characterization of novel compounds with anti-lymphoma activity". Total direct costs \$500,000 (2013-2017).

**National Science Foundation.** "Student Mentoring to Achieve Retention: Triads in Science (SMARTS). DUE-STEM program. Total direct costs \$578,162 (2012-2016)

**National Institutes of Health Common Fund.** Building Scholars Program U54M0009476; UL1MD009598, TL\$MD009630-1; R15MD009592-1). Total annual direct costs \$22,633,493 (9/26/2014-6/30/2019).

**National Institutes of Health Common Fund.** Building Scholars Program Planning Grant-P20MD008700. Total direct costs \$225,000 (9/25/2013-3/31/2014).

**National Institutes of General Medical Sciences.** Support for Continuous Research Excellence (SCORE; SC3)subproject entitled "Characterization of novel compounds with anti-lymphoma activity". Total direct costs \$450,000 (2013-2018)

**National Institutes of General Medical Sciences.** Support for Continuous Research Excellence (SCORE, SC2) subproject entitled "Characterization of Two Novel Drosophila Nucleases". Total direct costs \$335,500 (2009-2013).

**National Institutes of General Medical Sciences.** Support for Continuous Research Excellence (SCORE) NIGMS S06 GM8012. Total annual direct costs \$9,236,803 (2005-2011).

**National Science Foundation.** "Molecular Studies on Antigen Receptor Gene Recombination" (Renewed six times) Average per year ~\$100,000 (1990-2003) total >\$1,000,000 direct costs

**Migrant Border Health Initiative.** "HIV detection in the local migrant farm worker population and implementation of strategies for intervention and vaccination"- pilot project. Total direct costs \$70,000 (2002-2004).

**National Institutes of General Medical Sciences.** Support for Continuous Research Excellence (SCORE) subproject entitled "Molecular studies on engulfment mediated DNA degradation". Total direct costs \$553,000 (2003-2006).

**UT System, STARS Grant.** Establishment of a Vaccine and Protein Characterization Center Equipment request for a FACS Sorter and a capillary HPLC system. Total direct costs \$480,000 (2005-2006).

**UT System, Leer Funds.** Equipment grant for High Throughput Drug Screening. August 1, 2006 –December 30, 2006. ~\$300,000 direct. Funds were used to purchase an Imaging Cytometer (BD Pathways 800 series cytometer and a Caliper Robotic system for high throughput compound screening).

**UTEP Seed Grant.** Total direct costs \$30,000 (2005). Development of novel approaches to efficient DNA Vaccines. Co-PI with Dr. Juan Noveron.

**UT System, Leer Funds.** Equipment grant for High Throughput Drug Screening. October 1, 2011 –February 30, 2014. \$600,000 direct. Funds were used to purchase a Bioimager (InCell 2000), a 10 color flow cytometer (BD Gallios) and upgrade a confocal microscope with an additional laser and motorized stage.

**National Institutes of General Medical Sciences.** Minority Access to Research Careers (MARC U\*STAR); T34GM008563. Total costs: \$761,772 (1996-04). Funds awarded for research training of minority students interested in scientific careers. Project transfers to another PD at UCLA.

## Thesis:

- 1) **Aguilera, R.J. (1982).** A rapid and simple hemolytic assay for venom phospholipase A<sub>2</sub>. Master's Thesis, University of Texas at El Paso. Mentor Eppie D. Rael

- 2) **Aguilera, R.J.** (1987). Studies on antibody gene rearrangements and the nuclear factors involved in the rearrangement process. Ph.D. Thesis, University of California at Berkeley. Mentor Hitoshi Sakano.

## **Publications:**

- 1) Aguilera, R.J., Hope, T.J., Sakano, H. (1985). Characterization of immunoglobulin enhancer deletions in murine plasmacytomas. *EMBO Journal* 4, 3689-3693
- 2) Hope, T.J., Aguilera, R.J., Minie, M., Sakano, H. (1986). Endonucleolytic activity that cleaves immunoglobulin recombination sequences. *Science* 231, 1141-1145.
- 3) Aguilera, R.J., Hope, T.J., Sakano, H. (1987). Immunoglobulin enhancer deletions in murine plasmacytomas: in "Transcriptional Control Mechanisms" (Alan R. Liss Inc., New York, NY) pp. 71-81.
- 4) Aguilera, R.J., Akira, S., Okazaki, K., and Sakano, H. (1987). A pre-B nuclear protein which specifically interacts with the immunoglobulin V-J recombination sequences. *Cell* 51, 909-917.
- 5) Aguilera, R.J., Akira, S., Davis, D., Okazaki, K., and Sakano, H. (1989). Molecular mechanisms of somatic DNA recombination in antigen receptor genes: in "B Cell Development" (Alan R. Liss Inc., New York, NY) pp. 33-50.
- 6) Casillas, A., Thompson, A., Cheshier, S., Fernandez, S. and Aguilera, R.J. (1995). RAG-1 and RAG-2 gene expression and V(D)J recombinase activity are enhanced by protein phosphatase 1 and 2a inhibition in lymphocyte cell lines. *Molecular Immunology*, 32, 167-175.
- 7) Miranda, G. A., Chokler, I, and Aguilera, R.J. (1995). The murine nucleolin protein is an inducible DNA and ATP binding which is readily detected in nuclear extracts of lipopolysaccharide treated splenocytes. *Exp. Cell Res.* 217, 294-308.
- 8) Lyon, C., Miranda, G.A., Piao, J. S. and Aguilera, R.J. (1996). Characterization of an endonuclease activity which preferentially cleaves the G-rich immunoglobulin switch repeat sequences. *Molecular Immunology* 33:2:157-169.
- 9) De la Pompa, J.L., Wakeman, A., Correia, K.M., Samper, E., Brown, S., Aguilera, R.J., Nakano, T., Honjo, T., Mak, T., Rossant, J., and Conlon, R.A. (1997). Conservation of the Notch signaling pathway in mammalian neurogenesis. *Development*, 124:1139-1148
- 10) Lyon, C. and Aguilera, R.J. (1997). Purification and characterization of the immunoglobulin switch sequence-specific endonuclease (Endo-SR) from bovine spleen. *Molecular Immunology* 34: 209-219.
- 11) Brown, S. T., Miranda, G., Galic, Z., Hartman, I.Z. Lyon, C. and Aguilera, R.J. (1997). Regulation of the RAG-1 promoter by the NF-Y transcription factor. *J. Immunology* 158: 5071-5074.
- 12) Galic, Z., Alva, J., Lin, A., Lyon, C. J. and Aguilera, R.J. (1998). Characterization of a novel DNA binding domain within the amino-terminal region of the RAG-1 protein. *Biochem. Mol. Biol. Int.* 45:535-544.
- 13) Lyon, C.J., Evans, C.J., Bill, B.R., Otsuka, A.J. and Aguilera, R.J. (2000). The C. elegans apoptotic nuclease Nuc-1 is related in sequence and activity to mammalian DNase II. *Gene* 252:147-154.
- 14) Solorzano-Vargas, R.S., Wang, J., Jiang, L. Tsai, H.V., Ontiveros, L.O., Vasir, M., Aguilera, R.J. and Martin, M.G. (2002). Multiple transcription factors in the 5'-flanking region of the human polymeric Ig receptor controls its basal expression. *Am. J. Physiol. Gastrointest. Liver Physiol.*, 283:G415-G425.
- 15) Miranda, G. A., Villalvazo, M., Galic, Z., Alva, J., Abrines, R., Yates, Y., Evans, C.J. and Aguilera, R.J. (2002). Combinatorial regulation of the murine RAG-2 Promoter by Sp1 and distinct lymphocyte-specific transcription factors. *Molecular Immunology* 38:1151-1159.
- 16) Evans, C.J., Merriam, J.R. and Aguilera, R.J. (2002). Drosophila acid DNase is a homolog of mammalian DNase II. *Gene* 295:61-70
- 17) Bergara, F., Ibarra, C., Iwamasa, J., Patarroyo, J.C., Aguilera, R. J. and Márquez-Magaña, L.M. (2003). CodY is a nutritional repressor of flagellar gene expression in *Bacillus subtilis*. *J. Bacteriol.* 185:3118-3126.
- 18) Evans, C.J. and Aguilera, R.J. (2003). DNase II: Genes, Enzymes and Function. *Gene* 322:1-15.
- 19) Montoya, J., Varela-Ramirez, A., Estrada, A., Martinez, L.E., Garza, K., and Aguilera R. J. (2004). A fluorescence-based rapid screening assay for cytotoxic compounds. *Biochem. Biophys. Res. Comm.* 325:1517-1523.
- 20) Rajabi, L., Courreges, C., Montoya, J., Aguilera, R.J., and Primm, T. P. (2005). Acetophenones with Selective Antimycobacterial Activity. *Letters in Applied Microbiology*, 40:212-217.
- 21) Varela-Ramirez, A., Mejia, A., Garcia, D., Bader., J, Aguilera, R.J. (2005). HIV Infection and Risk Behavior of Hispanic Farm Workers in the West Texas-Mexico Border Region. *Journal of Ethnicity and Disease* 15(4)S5:92-96.
- 22) Montoya, J., Varela-Ramirez, A., Shanmugasundram, M., Martinez, L.E., Primm, T.P. and Aguilera R. J. (2005). Tandem screening of toxic compounds on GFP-labeled bacteria and cancer cells in microtiter plates. *Biochem. Biophys. Res. Comm* 335:367-372.



- 23) Aguilera R. J., Montoya, J., L.E., Primm, T.P., and Varela-Ramirez, A. (2006). Green Fluorescent Protein as a Biosensor for Toxic Compounds, in: *Reviews in Fluorescence* 3:463-474
- 24) Seong, C., Varela-Ramirez, A., and Aguilera, R.J. (2006). Dnase II deficiency impairs innate immune function in *Drosophila*. *Cellular Immunology*, 240:5-13
- 25) Maldonado, J.E., Leonard J., Miranda, G.A., Ortega, J., Wayne, R.K., and Aguilera R. J., 2006. Ten polymorphic microsatellite loci for the endangered Buena Vista Lake shrew (*Sorex ornatus relictus*). *Mol. Ecol. Resources*, 6(2): 349-352.
- 26) Cruz-Campa, I, Arzola, A., Santiago, L., Parsons J.G., Varela-Ramirez, A., Aguilera, R.J. and Noveron, J. (2007). A novel class of metal-directed supramolecular DNA-delivery systems. *Chem. Commun.* 2944-2946.
- 27) Shpak, M., Kugelman, J.R., Varela-Ramirez, A. and Aguilera R. J. (2008). The Phylogeny and Evolution of Deoxyribonuclease II: an Enzyme Essential for Lysosomal DNA Degradation. *Molecular Phylogenetics and Evolution*. 47:841-854.
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**Underlined names correspond to undergraduate and graduate students or students that performed summer research.**

**Patents:**

**Patent:** Lyon, C.J. and Aguilera, R.J. Endonuclease Compositions and Methods of Use. US Patent # 6,455,250 issued September 24, 2002. Priority date 12/11/97. Patent on the DNase II gene/protein-for additional information see <http://patron.ucop.edu/ncd/docs/ott.1998-539-0.00.html>

**Patent:** Aguilera, R.J. Bifunctional compositions for the treatment of cancer. European Patent Australian Patent EP3793544 awarded 9/20/23, Australian Patent 2018902181 issued 9/3/2020. US patent US-12,201,626 B2 1/21/25. Additional patents awarded or pending in several nations. Licenced to Armaceutica Inc.

**Patent:** Aguilera, R. J., Penichet, M. and Karki, S. "PYRAZOLE DERIVATIVES WITH ANTICANCER ACTIVITY" submitted 10/2022. Date of award, 5/14/2024. US-11981662-B2

**Patent submitted:** Edgar Borrego and Aguilera, R. J. "Discovery of a novel Tubulin polymerization inhibitor as an anticancer agent" submitted by UTEP 10/2023