Gabriela Gorelik, Ph.D.
Assistant Professor
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Ph.D. Biochemistry - School of Pharmacy and Biochemistry. University of Buenos Aires, Argentina

MS Biochemistry - School of Pharmacy and Biochemistry. University of Buenos Aires, Argentina

Training

2007-2008	Senior Research Fellow, Rheumatology, University of Michigan
2003-2007	Research Fellow, Rheumatology, University of Michigan
1995-1997	Fellowship, Hypertension and Vascular Division, Henry Ford Health System, Detroit, MI.
1987-1992	Pre Doctoral Fellowship, National Research Council of Argentina (CONICET)

Academic and Teaching Appointments

2017 -	Assistant Professor, Department of Biomedical Sciences. University of South Alabama
2017-	Adjunct Research Assistant Professor. Internal Medicine. University of Michigan
2012-2016	Research Assistant Professor, Internal Medicine, University of Michigan
2008-2012	Research Investigator, Internal Medicine, Rheumatology, University of Michigan.
1999-2004	Associate Investigator. National Research Council of Argentina (CONICET)
1999-2001	Assistant Professor, General Pharmacology for pharmacology Instructors. School of Dentistry, University of Buenos Aires, Argentina.
1998-1999	Adjunct, Immunopharmacology and Immunotherapy, School of Dentistry, University of Buenos Aires, Argentina.
1997-2001	Adjunct, Department of Pharmacology, School of Dentistry, University of Buenos Aires, Argentina
1995-2000	Adjunct, Annual Course of Pharmacology, School of Medicine, University of Buenos Aires, Argentina
1994-1995	Instructor, Annual Course of Human Physiology, School of Medicine, University of Buenos Aires – CEMIC, Buenos Aires, Argentina
1993-2004	Staff Investigator, Division of Immunopharmacology, Center of Pharmacological and Botanical Studies (CEFYBO) – CONICET
1993-1999	Assistant Investigator. National Research Council of Argentina (CONICET)
1986-1987	Assistant Professor, Biological Chemistry, University of Buenos Aires, Argentina
1985-1986	Instructor and Researcher, Department of Organic Chemistry, School of Pharmacy and Biochemistry, University of Buenos Aires, Argentina

Funding

Current

NIH-NIAMS R03-AR067518 Principal Investigator 7/2015-6/2018
T cell histone GlcNAcylation participates in the epigenetics of lupus

Pending

USA- Faculty Development Council Principal Investigator 6/2017- 5/2018
Protein glycosylation alters cell cycle

Completed

NIH-NIAMS 3RO1-AR42525 Co-Investigator 2009-2014
Role of T cells in the induction of lupus
PI: Bruce Richardson

MICHR UL1R024986 Principal Investigator 7/2011-12/2012
Increased protein glycosylation impairs T cell signaling in female lupus

RDCC Subproject P30-AR048310 Principal Investigator 7/2009-8/2011
T cell PKCδ response to oxidative stress and its role in human lupus.

PEI - CONICET 6058/01- Principal Investigator 2002
Regulation of normal and tumoral lymphocyte activity by adenosine. Role of PKC and nitric oxide synthase.

Ministry of Health of Argentina Co-P Investigator 2000-2002
Effect of thyroid hormones on PKC expression in hyperproliferative lymphocytes. Role in tumoral ethiopathology

CONICET 0202/97 Principal Investigator 5/1998-6/1999
Modulatory effects of chagasic antibodies on cardiac activity. Participation of adenosine receptors.

Honors and Awards

2011, 2015 Invited speaker, Epigenetics Program Seminar, SPH, University of Michigan
2000 Scientific Committee of Argentine Society of Clinical Investigation (SAIC), Argentina
1999, 2000 Excellence in Teaching. Ministry of Education, Argentina
1999 Best presentation. XVIII National Congress of Cardiology and VI Meeting of the International Society for Heart Research; Latinoamerican Section; Buenos Aires, Argentina
1997 Best Work in Cardiovascular Research. XLIII Annual Meeting of Argentine Society of Clinical Investigation, Mar del Plata, Argentina
1996 Member of the Scientific Committee of the XXVI Annual Meeting of Argentine Society of Experimental Pharmacology, Buenos Aires, Argentina

Editorial Positions, Boards, and Peer-Review Service

Editorial Board Member

2015- SRL Immunology & Immunotherapy
2014- Lupus: Open access
2012- Scientifica

Ad-hoc Reviewer

2007**-** **Journals**, Clinical and Experimental Immunology, Journal of Cellular Physiology, Journal of Virology, Journal of Endocrinology, Biochimica et Biophysica Acta, PLOS ONE.
2003**-** **Sponsors** Congressionally Directed Medical Research Program (CDMRP- DoD), Lupus Section; Foundation for Science and Technology (FONCYT), Argentina; Portuguese Foundation for Science and Technology (FCT), Brazil; CONICET and University of Buenos Aires, Argentina, Agence Nationale de la Recherche (ANR) France.

Professional Associations and Activities

Full-Member

2014- American College of Rheumatology
1994- Scientific Committee of Argentine Society of Clinical Investigation
1989- Argentine Association of Experimental Pharmacology (SAFE)

Patent of invention

2013 **Title**: Diagnosing lupus, assessing a subject's risk of developing lupus, or determining lupus disease activity in a subject involves detecting, at least, one epigenetic marker of lupus

Patent Number(s)**:** WO2013148267-A2; US2013283404-A1; WO2013148267-A3

Patent Assignee Name(s) and Code(s): Univ. Michigan, Richardson B; Hewagama A; **Gorelik G.**
Derwent Primary Accession Number: 2013-Q06428 [04]

Mentorship

2012-2013 Senior Project at Kalamazoo College
2011-2012 Undergraduate Research Opportunity Program (UROP)
2002-2004 Thesis title: Pharmacological characterization of adenosine on murine normal and tumoral lymphocyte proliferation. Degree: Licensed in Biological Sciences, University of Buenos Aires, Buenos Aires, Argentina.

Extramural invited presentations

03-2015 Signaling and gene expression in lupus. CONICET–University of Buenos Aires, Argentina
10-2013 Experimental Lupus model. CONICET – UCA- University of Buenos Aires, Argentina
11-2012 T cell signal transduction in lupus epigenetics. Invited Speaker at CONICET-University of Buenos Aires, Argentina

02-2011 PKCδ and autoimmunity. Invited speaker at CEFYBO-CONICET-University of Buenos Aires, Buenos Aires, Argentina.

11-2009 Role of ERK pathway in lupus pathogenesis. Invited speaker at University of Buenos Aires, Buenos Aires, Argentina.

Bibliography

Selected Peer-Reviewed Publications (out of 41)

1 Patel D, **Gorelik G**, Richardson B**.** Protein Phosphatase 5 Contributes to the overexpression of epigenetically regulated T-lymphocyte genes in patients with lupus. Lupus 1:120, 2016.

2 **Gorelik G**, Sawalha A, Patel D, Johnson K, Richardson B. T cell PKCδ kinase inactivation induces lupus-like autoimmunity in mice. Clinical Immunology 158:193-203, 2015.

3 Richardson B, Strickland F, Sawalha A, **Gorelik G**. Protein kinase C δ mutations may contribute to lupus through effects on T cells: comments on the article by Belot et al. Arthritis & Rehumatism 66:228-9, 2014. PMCID: PMID 24449588.

4 Li Y, **Gorelik G**, Strickland F, Richardson B. Oxidative stress, T cell DNA methylation and lupus. Arth & Rheum 66: 1574-82, 2014.

5 Hewagama A, **Gorelik G**, Patel D, et al. Overexpression of X-Linked genes in T cells from women with Lupus. J Autoimmun 41:60-71, 2013. PMCID: PMC3622754.

6 **Gorelik G**, Yarlagadda S, Richardson B. PKCδ oxidation contributes to ERK inactivation in lupus T cells. Arth & Rheum 64: 2964-74, 2012.

7 **Gorelik G** and Richardson B. Key role of ERK pathway signaling in lupus. Autoimmunity 43:17-22, 2010.

8 Chen Y, **Gorelik G**, Strickland F and Richardson B. Decreased ERK and JNK signaling contribute to gene overexpression in "senescent" CD4+CD28- T Cells through epigenetic mechanisms. J.Leuk.Biol. 87:137-145, 2009.

9 Basu D, Liu Y, Wu A…**Gorelik G** … and Richardson B. Stimulatory and inhibitory killer Ig-like receptor molecules are expressed and functional on lupus T cells. J.Immunology 185:3481-7, 2009.

10 **Gorelik G** and Richardson B. Aberrant T cell ERK pathway signaling and chromatin structure in lupus. Autoimmunity Reviews 8:196-198, 2009.

11 Sawalha AH, Jeffries M, Webb R, Lu Q, **Gorelik G**, et al. Defective T-cell ERK signaling induces interferon-regulated gene expression and overexpression of methylation-sensitive genes similar to lupus patients. Genes and immunity 9:368-378, 2008.

12 **Gorelik G**, Fang J, Wu A, Richardson B. Impaired T cell PKCδ activation decreases ERK pathway signaling in idiopathic and hydralazine induced lupus. J Immunol. 179(8):5553-63, 2007.

13 Barreiro Arcos ML, **Gorelik G**, Genaro AM, Cremaschi GA. Thyroid hormones increase inducible nitric oxide synthase gene expression downstream from PKC-zeta in murine tumor T lymphocytes. Am J Physiol Cell Physiol. 291(2):C327-36, 2006.

14 **Gorelik G**, Barreiro Arcos ML, Klecha A, Cremaschi GA. Differential expression of PKC isoenzymes related to high nitric oxide syntheses acrivity in a T lymphoma cell line. Biochim.Biophys.Acta, 1588: 179-188, 2002.

Complete list of Publications:

http://www.ncbi.nlm.nih.gov/sites/myncbi/1VqGtRrjtfxAs/bibliography/41904363/public/?sort=date&direction=descending

Selected Abstracts (out of 60)

1. Strickland F, **Gorelik G**, Ray D, Richardson B. 11th International Congress on Lupus. Vienna, Austria, 2015
2. Patel D, **Gorelik G**, Richardson B. Protein Phosphatase 5 (PP5) Regulates Methylation Sensitive Gene Expression in CD4+ T cells. ACR Annual Meeting, Boston, 2014.
3. **Gorelik G** and Richardson B. Female Specific Increase in T Cell Glycosylation in Lupus. ACR Annual Meeting, Boston, 2014.
4. Patel DR, **Gorelik G** and Richardson BC. Protein Phosphatase 5 (PP5) Regulates Methylation Sensitive Gene Expression in CD4+ T Cells. ACR Annual Meeting, San Diego, 2013
5. Patel DR, **Gorelik G** and Richardson **BC.** Protein Phosphatase 5 (PP5) Regulates Methylation Sensitive Gene Expression in CD4+ T Cells. ACR Annual Scientific Meeting, Washington, DC, 2012.
6. **Gorelik G**, Richardson B. Oxidation impairs PKCδ signaling in lupus. 20th Annual Research Symposium. Department of Internal Medicine. University of Michigan, 2012.
7. Patel DR, Hewagama A, **Gorelik G**, Yarlagadda S, Strickland F, Richardson B. DNA methylation regulates gene expression in CD4+CD28+ T cells through miRNA. ACR Annual Scientific Meeting, Chicago, IL, 2011.
8. **Gorelik G** and Richardson B. Oxidation impairs PKCδ signaling in lupus. ACR Annual Scientific Meeting, Chicago, 2011.
9. **Gorelik G,** Sawalha A, Richardson B. Lack of PKC δ kinase activity in T cells induces a lupus-like disease. Symposium in Epigenetic Mechanisms in Transcription and Disease, University of Michigan, 2010.
10. **Gorelik G**, Sawalha A, Richardson B. Lack of PKC δ kinase activity in T cells induces a lupus-like disease. 9th International Congress on Systemic Lupus Erythematosus, Vancouver, Canada, 2010. Lupus 19:7, 2010.
11. Chen Y, Wu A, **Gorelik G**, Hinderer R, Strickland F, Richardson B. Effects of decreased T cell ERK/JNK pathway signaling on DNA methylation and gene expression; implications for rheumatoid arthritis and aging. ACR Annual Scientific Meeting, San Francisco, 2008.
12. Sawalha AH, Jeffries M, Webb R, Lu Q, **Gorelik G**, et al. Defective T-cell ERK signaling induces interferon-regulated gene expression and overexpression of methylation sensitive genes similar to lupus patients. ACR Annual Scientific Meeting, San Francisco, 2008.
13. **Gorelik G**, Sawalha AH, Wu Ailing, Richardson B. Oxidative damage of PKCδ impairs ERK pathway signaling in lupus T cells. ACR Annual Scientific Meeting, Boston, 2007.
14. Basu D, **Gorelik G,** Hewagama A, Strickland F, Richardson B. Aberrant KIR Expression Stimulates Interferon γ. Production by Lupus T cells. ACR Annual Scientific Meeting, Boston, 2007.
15. **Gorelik G**, Wu A, Richardson B. Nitrosylated PKCδ impairs ERK pathway signaling in lupus T cells. 94th Annual Meeting of American Association of Immunologists, Miami, 2007.
16. **Gorelik G**, Fang J, Richardson B. Impaired T cell PKCδ Activation Explains Decreased ERK Pathway Signaling in Idiopathic and Hydralazine-Induced Lupus. 14th Annual Department of Internal Medicine Research Symposium, University of Michigan.
17. **Gorelik G**, Fang J, Richardson B. Impaired T cell PKCδ Activation Explains Decreased ERK Pathway Signaling in Idiopathic and Hydralazine-Induced Lupus. ACR Annual Scientific Meeting, San Diego, 2005.
18. Duffy T, Barreiro Arcos ML, Giordano M, **Gorelik G**. Dual effect of adenosine and its analogue, 2-Clorodeoxiadenosine in the regulation of a murine T lymphoma proliferation. XLVIII Annual Meeting of the Argentine Society of Clinical Investigation (SAIC). Mar del Plata, Argentina, Nov. 2003. Published in Medicina 63:543, 2003.