

Curriculum Vitae

Name: Gary W. Litman
Nationality: U.S. Citizen
Education: 1967 B.A. University of Minnesota, Microbiology
1972 Ph.D. Graduate School, University of Minnesota, Microbiology

Positions and Appointments:

1967-1968 Research Assistant, Department of Microbiology, University of Minnesota
1968-1970 Teaching Specialist, Department of Pediatrics, University of Minnesota
1969-1971 Director, Clinical Laboratory of Immunochemistry, Department of Pediatrics, University of Minnesota
1970-1972 Instructor, Department of Pediatrics and Pathology, University of Minnesota
1971-1972 Director, Clinical Laboratory of Immunochemistry, Department of Pathology, University of Minnesota
1972 Assistant Professor, Department of Pathology, University of Minnesota
1972-1985 Associate Member, Head, Macromolecular Biochemistry Section, Sloan-Kettering Institute
1973-1980 Associate Professor of Biology, Sloan-Kettering Division, Cornell University Graduate School of Medical Sciences
1975-1985 Director, Special Clinical Immunochemistry Laboratory, Memorial Sloan-Kettering Cancer Center
1976-1985 Associate Professor of Genetics, Sloan-Kettering Division, Cornell University Graduate School of Medical Sciences
1978-1980 Chairman of the Biology Unit, Sloan-Kettering Division, Cornell University Graduate School of Medical Sciences
1980-1985 Associate Professor of Immunology, Sloan-Kettering Division, Cornell University Graduate School of Medical Sciences
1985-1990 Senior Member and Chairman, Department of Molecular Genetics, Tampa Bay Research Institute (formerly Showa University Research Institute)
1986-pres Professor, Medical Microbiology and Immunology, University of South Florida
1987-1988 Instructor, Physiology: Cell/ Molecular Biology Course, Marine Biological Laboratory
1988-1991 Professor, Department of Biology, University of South Florida
1990-pres Hines Professor, Department of Pediatrics, University of South Florida/All Children's Hospital
1990-pres Professor, Department of Biochemistry and Molecular Biology, University of South Florida
1990-pres Courtesy Professor, Department of Marine Science, University of South Florida College of Arts and Sciences
1990-pres Director, Laboratory of Molecular Genetics, All Children's Hospital
1995-pres Senior Member, H. Lee Moffitt Cancer Center & Research Institute
1995-pres Adjunct Scientist, Biomedical Program, Mote Marine Laboratory
2004-pres Distinguished University Professor, University of South Florida College of Medicine
2005-pres Vice Chairman for Basic Sciences, University of South Florida College of Medicine, Department of Pediatrics
2005-pres Director, University of South Florida College of Medicine, Children's Research Institute

Patents:

2001 US 6,284,496 BI: DNA vector for determining the presence of out-of-reading-frame mutations
2006 US 10,417,476: BIVM (basic, immunoglobulin-like variable motif-containing) genes, transcriptional products, and uses thereof
2006 US 7,112,434: Vector system for selection of genes encoding secreted proteins and membrane-bound proteins
2007 US 11/655,668: Methods for profile transcriptomes

Honors:

1995 NIH MERIT award
2001 The Henry Kunkel Society
2002 USF Outstanding Faculty Research Achievement Award

2004 Distinguished University Professor

Scientific Societies:

1973-pres American Association of Immunologists
1975-pres International Society for Developmental and Comparative Immunology
1979-pres American Society for Biochemistry and Molecular Biology
1990-pres American Society of Human Genetics
2001-pres The Henry Kunkel Society

Other Activities:

1974-1978 Editorial Advisory Board, Molecular Immunology
1978-1993 Editorial Board, Developmental and Comparative Immunology
1980-1984; Member, American Cancer Society Advisory Committee
1986-1988 President, American Society of Zoologists, Division of Comparative Immunology
1988-1990 President, Research Consortium of St. Petersburg
1989-pres Editorial Board, Developmental Immunology
1989-1993 Member, Physiological Chemistry Study Section, National Institutes of Health
1989-1993 Member, Advisory Committee on Institutional Research Grants, American Cancer Society
1990-1991 Vice-Chairman, Advisory Committee on Institutional Research Grants, American Cancer Society
1991-1992 Chairman, Advisory Committee on Institutional Research Grants, American Cancer Society
1991-1994 Division Editor, Immunology and Parasitology, Journal of Experimental Zoology
1995-pres Editorial Board Member, Cancer Control: Journal of the Moffitt Cancer Center
1996-pres Editorial Board Member, Immunogenetics
2002 Member, NIH Immunology Study Sections Boundaries Team
2003-pres Chairman, NIH Zebrafish Review Group 1 Study Section
2009-pres Editorial Board Member, International Immunology
2009-pres Member, Board of Directors (parent board), H. Lee Moffitt Cancer Center and Research Institute

Institutional Committees:

1991-1994 University of South Florida Standing Committee for Research Misconduct
1991-pres All Children's Hospital Research Committee
1990-1999 All Children's Hospital Medical Education and Library Committee
1994 University of South Florida Division of Comparative Biomedicine Search Committee
1994-pres Moffitt Cancer Center Scientific Leadership Council
1996-2000 University of South Florida Pediatric Research Building Committee
1997-1998 University of South Florida Robert A. Silver Chair for Research in Child Psychiatry Search Committee
1998-1999 University of South Florida LCME Self-Study Committee X (Research)
1998-1999 University of South Florida HHMI Biomedical Research Support Program for Medical Schools Grant Application Committee
1998 University of South Florida Intellectual Property Advisory Committee
1999 University of South Florida Associate Dean of Research Search Committee
2002-2007 ACH/USF Pediatric Clinical Research Center Advisory Committee
2003-pres Chairman, Intramural Grant Review Committee All Children's Hospital Foundation
2005-2008 University of South Florida Grants Assistance Committee
2005-2008 University of South Florida College of Medicine Space Committee

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Grant Support:

1. National Institutes of Health R01 AI23338-21 (MERIT Award 1995-2005)
EARLY EVOLUTIONARY ORIGINS OF IMMUNE-TYPE GENES, 5/1/04-4/30/09, \$1,250,000 TDC
2. National Institutes of Health R01 AI57559-01
NOVEL INNATE IMMUNE RECEPTORS IN ZEBRAFISH, 12/15/04-11/30/09, \$1,250,000 TDC
3. Valerie Foundation
ANALYSIS OF RARE AND/OR ATYPICAL GENE TRANSCRIPTS, 1996-2008, \$765,000 TDC

BIBLIOGRAPHY

Original Reports

1. Wong ET, Litman G. Interaction of purified long-acting thyroid stimulator (LATS) and thyroid microsomes *in vitro*. J Clin Endocrinol Metab 1969; 29:72-78.
2. Frommel D, Litman GW, Terry WD, Good RA, Rosenberg A. Conformational differences of immunoglobulin G subclasses. Biochem Biophys Acta 1970; 221:399-402.
3. Frommel D, Dupuy JM, Litman GW, Good RA. Use of the immunoadsorption techniques in the preparation of chemical agammaglobulinemia. J Immunol 1970; 105:1292-1293.
4. Pollara B, Litman GW, Finstad J, Howell J, Good RA. The evolution of the immune response. VII. Antibody to human "O" cells and properties of the immunoglobulin in lamprey. J Immunol 1970; 105:738-745.
5. Litman GW, Frommel D, Finstad J, Howell J, Pollara BW, Good RA. The evolution of the immune response. VIII. Structural studies of the lamprey immunoglobulin. J Immunol 1970; 105:1278-1285.
6. Litman GW, Good RA, Frommel D, Rosenberg A. Conformational significance of the intrachain disulfide linkages in immunoglobulins. Proc Natl Acad Sci 1970; 67:1085-1092.
7. Litman GW, Frommel D, Chartrand S, Finstad J, Good RA. Significance of heavy chain mass and antigenic relationships in immunoglobulin evolution. Immunochemistry 1971; 8:345-349.
8. Litman GW, Rosenberg A, Frommel D, Pollara G, Finstad J, Good RA. Biophysical studies of the immunoglobulins: The circular dichroic spectra of the immunoglobulins: A phylogenetic comparison. Int Arch Allerg 1971; 40:551-575.
9. Litman GW, Frommel D, Finstad J, Good RA. Evolution of the immune response. IX. Immunoglobulins of the bowfin: Purification and characterization. J Immunol 1971; 106:747-754.
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11. Frommel D, Litman GW, Chartrand S, Seal US, Good RA. Carbohydrate composition in the evolution of immunoglobulins. Immunochemistry 1971; 8:573-577.

12. Frommel D, Litman GW, Finstad J, Good RA. Evolution of the immune response. XI. Immunoglobulins of the horned shark: Purification, characterization, and biological properties. *J Immunol* 1971; 106:1234-1243.
13. Litman GW, Frommel D, Rosenberg A, Good RA. Circular dichroic analysis of immunoglobulins in phylogenetic perspective. *Biochem Biophys Acta* 1971; 36:647-654.
14. Chartrand SL, Litman GW, Lapointe N, Good RA, Frommel D. The evolution of the immune response. XII. The immunoglobulins of the turtle. Molecular requirements for biological activity of the 5.7S immunoglobulin. *J Immunol* 1971; 107:1-11.
15. Litman GW, Wang AC, Fudenberg HH, Good RA. N-terminal amino acid sequence of African lungfish immunoglobulin light chain. *Proc Natl Acad Sci* 1971; 68:2321-2324.
16. Finstad CL, Litman GW, Finstad J, Good RA. Evolution of the immune response. XIII. Agglutinators of *Limulus polyphemus* and *Asterias forbesi*: Purification and characterization. *J Immunol* 1972; 108:1704-1711.
17. Litman GW, Good RA. Rapid purification of heterogenous IgA from normal serum. *Biochem Biophys Acta* 1972; 263:89-93.
18. Litman GW, Good RA. Extrinsic cotton effects associated with affinity labeled MOPC 315 protein. *Biochem Biophys Res Commun* 1972; 47:341-347.
19. Merz DC, Good RA, Litman GW. Segregation of membrane components using isoelectric focusing in polyacrylamide gels. *Biochem Biophys Res Commun* 1972; 49:84-91.
20. Litman GW, Chartrand S, Finstad C, Good RA. Active sites of turtle and duck antibody to 2'4'-dinitrophenol. *Immunochemistry* 1973; 10:323-329.
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22. Finstad CL, Good RA, Litman GW. The erythrocyte agglutinin from *Limulus polyphemus* hemolymph: Molecular structure and biologic function. *Ann NY Acad Sci* 1974; 234:170-182.
23. Litman GW, Litman RT. Interaction of chemical carcinogens with plasma membranes: The effect of dimethylaminoazobenzene of erythrocyte osmotic fragility. *Biochem Biophys Res Commun* 1974; 60:865-871.
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25. Merz DC, Finstad CL, Litman GW, Good RA. Aspects of vertebrate immunoglobulin evolution: Constancy in light chain electrophoretic behavior. *Immunochemistry* 1975; 12:499-504.
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29. Jahn CL, Litman GW. Distribution of covalently bound benzo(a)pyrene in chromatin. *Biochem Biophys Res Commun* 1976; 76:534-540.
30. Hurvitz AI, MacEwen EG, Middaugh CR, Litman GW. Monoclonal cryoglobulinemia with macroglobulinemia in a dog. *J Am Vet Med Assoc* 1977; 170:511-513.

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46. Litman GW, Scheffel CF, Mäkelä O. Immunoglobulin diversity in the phylogenetically primitive shark, *Heterodontus francisci*: Comparison of fine specificity in hapten binding by antibody to p-azobenzeneearsonate. *Immunol Lett* 1980; 1:213-215.
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54. Litman GW, Scheffel C, Gerber-Jenson B, Litman R, Middaugh CR. Molecular basis for the temperature-dependent insolubility of cryoglobulins: XII. Anomalous mobility of monoclonal cryoimmunoglobulin heavy chains accompanying polyacrylamide gel electrophoresis in sodium dodecyl sulfate. *Immunol Commun* 1981; 10:707-718.
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57. Litman GW, Stolen J, Sarvas HO, Mäkelä O. The range and fine specificity of the anti-hapten immune response: Phylogenetic studies. *J Immunogenetics* 1982; 9:465-474.
58. Jenson JC, Gerber-Jenson B, Litman GW. Lysines of histone 1 represent the principal target for covalent binding of microsomally activated benzo(a)pyrene. *Carcinogenesis* 1982; 3:999-1003.
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- Natl Acad Sci 1985; 82:7360-7363.
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 67. Middaugh CR, Litman GW. Atypical glycosylation of an IgG monoclonal cryoimmunoglobulin. *J Biol Chem* 1987; 262:3671-3673.
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 70. Kokubu F, Litman R, Shablott MJ, Hinds K, Litman GW. Diverse organization of immunoglobulin V_H gene loci in a primitive vertebrate. *EMBO J* 1988; 7:3413-3422.
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 77. Harding FA, Cohen N, Litman GW. Immunoglobulin heavy chain gene organization and complexity in the skate, *Raja erinacea*. *Nuc Acids Res* 1990; 18:1015-1020.
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 81. Litman GW, Rast JP, Shablott MJ, Haire RN, Hulst M, Roess W, Litman RT, Hinds-Frey KR, Zilch A, Amemiya CT. Phylogenetic diversification of immunoglobulin genes and the antibody repertoire. *Mol*

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83. Hinds-Frey KR, Nishikata H, Litman RT, Litman GW. Somatic variation precedes extensive diversification of germline sequences and combinatorial joining in the evolution of immunoglobulin heavy chain diversity. J Exp Med 1993; 178:815-824.
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 101. Kornfeld SJ, Haire RN, Strong SJ, Tang H, Sung S-SJ, Fu SM, Litman GW. A novel mutation (Cys¹⁴⁵Stop) in Bruton's tyrosine kinase is associated with newly diagnosed X-linked agammaglobulinemia in a 51 year old male. *Mol Med* 1996; 2:619-623.
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