Curriculum Vitae

Christopher A. Jolly, Ph.D.

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Education

Ph.D. (1996) Texas A&M University, Nutrition
B.S. (1992) Texas A&M University, Nutritional Science
A.A. (1990) Blinn College, General Studies

Postdoctoral Training

3/96 – 8/97: Postdoctoral Research Associate, Texas A&M University
8/97 – 9/00: Sr Res Fellow, The Univ of Texas Hlth Sci Ctr at San Antonio, Department of Medicine, Division of Clinical Immunology

Positions Held

9/06 to present: Associate Professor with tenure, The University of Texas at Austin, Department of Human Ecology, Division of Nutrition
9/00 to 8/06: Assistant Professor, tenure-track, The University of Texas at Austin, Department of Human Ecology, Division of Nutrition

Administrative Appointments

9/08 to 2/10: Associate Director of Research and Facilities, School of Human Ecology
9/06 to 8/08: Associate Chair, Dept of Human Ecology
9/07 to 12/07: Interim Chair, Dept of Human Ecology
9/05 to 8/06: Associate Division Head, The University of Texas at Austin, Department of Human Ecology, Division of Nutrition
10/06 to present: Executive Committee, The Barshop Institute for Longevity and Aging Studies in San Antonio, TX

Editorial Appointments (peer-reviewed journals)

10/06 to present: Associate Editor for *Lipids*.
03/07 to present: Associate Editor for *Current Gerontology and Geriatrics Research*
01/15 to present: Nature Publishing Group: *Review Editor for Frontiers in Nutrition Immunology*

Institute Memberships

1998 - Aging Research and Education Center, The Univ of Texas Hlth Sci Ctr at San Antonio
2000 - Institute for Cellular and Molecular Biology, The University of Texas at Austin
2000 - Institute of Gerontology, The University of Texas at Austin

Society Memberships

1996 to present - American Association of Immunologists (AAI)
1999 to present - American Society for Nutritional Sciences (ASNS)

Research Awards (State)

1994, 1995, 1996 – Faculty of Nutrition Student Travel Award [Texas A&M University]

Research Awards (National)

1995 – Graduate Student Research Award Abstract Competition Winner and Oral Competition Winner with $500 travel award (sponsored by the American Institute of Nutrition and Procter & Gamble; presented at Experimental Biology '95 in Atlanta, Georgia)

1996 – Graduate Student Research Award Abstract Competition Winner with $500 travel award (sponsored by the American Institute of Nutrition and Proctor & Gamble; presented at Experimental Biology '96 in Washington, D.C.)

2004 – BioServ Award – given for meritorious research involving experimental animals sponsored by BioServ Inc. and the American Society for Nutritional Sciences

Research Honors (National)

2000 – Elected coWebmaster, Nutrition Immunology research interest group, ASNS

2003- 2005 – Elected to the Nutrition Immunology Research Interest Group Steering Committee, ASNS

2004 – A figure from my article in the Journal of Nutrition was selected for use on the cover of the journal and my picture appeared in the Journal as the winner of the BioServ Award.

2005-2006 – Chair-elect, Nutrition Immunology Research Interest Section, ASNS

2005 – my Journal of Nutrition article from 1997 was listed as one of the 50 most cited articles from the Journal of Nutrition

2006-07 – Chair, Nutrition Immunology Research Interest Section, ASN

Conferences/Workshops (State)

2005 – Participated in Central Texas Aging Retreat in New Braunfels, TX. Goal: Develop a plan to form a Central Texas Aging Research Center.

2005 – Participated in Nutritional Intervention and Complementary Medicine from the Laboratory to the Community: Cancer Prevention, Diagnosis and Treatment in San Antonio, TX Goal: Develop a Translational Research Center for Cancer Research and Nutritional Supplementation.

Conferences/Workshops (National)

1998 – Selected to attend the NIA/Brookdale Foundation Summer Institute on Aging Research held in Airlie, Virginia. Goal: Provide new researchers intensive exposure to issues and challenges in aging research

2000 – Selected to attend the Summer Training Course on Aging Research held in Berkeley, California. Goal: Provide intensive exposure to modern biogerontology for young scientists (sponsored by the NIA and Biological Sciences section of the Gerontological Society of America)

2004 – Aspen Cancer Conference Fellow, Fellows have their expenses paid by the Conference

2005 – invited to participate in a workshop on "Immunonutrition: Enhancing Tumoricidal Cell Activity" at the NIH/NCI at Bethesda, MD
2005 – invited to participate in a workshop on "Signaling Defects in the Aging Immune System" sponsored by the NIH/NIA in Potomac, MD

Teaching Honors and Awards

2003-04, 05-06 – Katherine Ross Richards Teaching Fellowship recipient
2003 – Outstanding faculty nominee, Omega and Gamma Sigma Alpha Honor Societies, nominated by a previous student for teaching dedication and making a significant impact on the student's life.
2003 – Teaching Excellence Award in Human Ecology
2003 – College of Natural Sciences Teaching Excellence Award
2011 – attended "Invite a Professor to dinner" sponsored by Kappa Delta sorority
2011 – College nominee for Dad's Association Centennial Teaching Fellowship
2013 – College of Natural Sciences Teaching Excellence Award

Grant Reviewer

1998, 2002, 2003 – Invited reviewer to the Center for Education and Rural Health (CERH) at Texas A&M University, College Station, Texas
2001 – Invited reviewer for the national Veteran's Administration grant program (external review)
2003 – Ad hoc reviewer for the United States Department of Agriculture intramural grants program
2005 – Ad hoc reviewer for the National Science and Engineering Research Canada Discovery grant program
2007 – Ad hoc reviewer for Aging Systems and Geriatrics Study Section, NIH
2007 – Ad hoc reviewer for the National Beef Cattlemen's Association
2008 – Ad hoc reviewer for the NIH/GMS study section (special emphasis panel)
2008 – Ad hoc reviewer for Western Human Nutrition Research Center (USDA)
2008 – Ad hoc reviewer for Nathan Shock Center Pilot Grants Program (UTHSCSA)
2009 – Member, Special Emphasis Panel Endocrinology, Metabolism, Nutrition and Reproductive Sciences Study Section, NIH
2010 - Ad hoc reviewer for the National Science and Engineering Research Canada Discovery grant program
2014 – Member, USDA Inflammation Panel, reviewed proposal from USDA Human Nutrition Research Centers

Manuscript Reviewer

Lipids, Journal of Nutrition, Journal of Immunology, Society for Experimental Biology and Medicine, Journal of Lipid Research, Physiological Genomics, International Journal of Radiation Oncology, Nephron, Toxicological Sciences, Molecular and Cellular Biochemistry, Journal of Nutritional Biochemistry, Mechanisms of Aging and Development, Journal of Neurochemistry, Clinica Chimica Acta, Journal of Pharmacy and Pharmacology, British Journal of Cancer, Scandinavian Journal of Rheumatology, Atherosclerosis, Nutrition and Cancer, British Cancer Journal, Journal of Autoimmunity

Book Reviewer
C.A. Jolly. 2000. Phospholipid Signaling Protocols. *Quarterly Review of Biology* 75(1):46.

Grants in preparation:
RO1 NIAID Jolly (PI) (June submission)
GPAT-1 as a novel lipid metabolic target to modulate CD4 T cells
The overall objective is to establish the phospholipid biosynthetic enzyme GPAT-1 as a novel mechanism to control the disease promoting Th17 and Treg phenotype in the CD4 T cell.
Role: PI

R21 CA158490-01A1 Jolly (PI) (resubmit July)
Omega-3 fatty acids, Prostate Cancer Progression and the Aging Immune System
The overall objective is to determine if the anti-inflammatory effects of omega-3 PUFAs can prevent the development of prostate cancer in our novel mouse model of an aged T cell phenotype.
Role: PI
*This grant was initially submitted a few years ago. Initially it got a decent score but on resubmission was sent to a different study section and the score got worse (38 percentile). Now with the no limits on resubmission, I will revise it again.

R21 NIAID Jolly (PI) (October submission)
Using resveratrol to prevent loss of T cell production in obesity
The overall goal is to determine if resveratrol supplementation can prevent the obesity associated decline of functional T cells using young mice as a model of human adolescence.
Role: PI

Grants submitted:
R21 AI119605-01 Jolly(PI) (pending resubmission/unscored initially)
Macronutrient Manipulation of the Immune System
The overall objective of this study is to determine if the presence of elevated glucose and palmitate, as seen in diabetes and obesity respectively, can induce a proinflammatory T cell phenotype.
Role: PI

Current funding:

RO3 CA159383-01A1 Jolly(PI) 09/01/12 to 08/31/15
Omega-3 Fatty Acid Effects on Pancreatitis and Adenocarcinoma Development
The overall objective of this study is to determine if dietary omega-3 fatty acids can suppress adaptive and/or innate immune driven inflammation in a novel pancreatitis model.
Role: PI

Previous funding:
R21 Cui (PI) 02/01/13 to 01/01/15

An innovative method to improve the adjuvant activity of aluminum-containing adjuvants.
Role: coI
The overall goal of this study is to develop methods using nanoparticles to improve immunization efficacy.

R03 CA156404-01A1 deGraffenried (PI) 03/01/11 to 02/28/13
Aging and Prostate Cancer Risk: The Role of T-cell Dysfunction
The goal of this study is to develop a new model of aged T cell dysfunction in a targeted PTEN inducible prostate cancer model to examine aged immune function in prostate cancer development.
Role: coI

2008 – UT Austin P.I. Christopher Jolly
Title: Role of Lipid Metabolism in Immunity to Cancer
Dates 11/01/08 – 05/01/09 $6,000
Type Research

2008 – American Dairy Council coPI. Christopher Jolly 5% Effort
Title: The Effect of Chocolate Milk (CM) on exercise recovery and training adaptation
Dates: 01/01/08 to 12/31/09 $129,359
Type: Research

2002 – NIA PHS 398 RO1 AG/AR20651-01A1 P.I. Christopher Jolly 35% Effort
Title: Lipid Metabolism in the Aging Immune System
Dates: 9/15/02 to 9/14/07 $800,000
Type: Research

2004 – NIH Minority Biomedical Research P.I. Jamie Laurenz, Ph.D.
Title: Maternal reprogramming of the stress response: Implications for immune function in the offspring
Dates: 9/1/04 to 12/31/06 $330,000
Role on Project: External Advisor

2002 – NIH PHS 398 COBRE P20 RR017699 coP.I. Christopher Jolly 10% Effort
P.I. Eric Murphy at the University of North Dakota
Title: Role of Alpha-Synuclein in Brain Lipid Metabolism
Dates: 9/11/02 to 9/10/07 $7,880,000
CAJ's portion $25,000
Type: Center of Biomedical Research Excellence

2001 – NIA PHS 398 RO3 AG19990-01 P.I. Christopher Jolly 25% Effort
Title: Aging and Lipid Metabolism
Dates: 8/1/01 to 7/31/03 $ 50,000
Type: Pilot Project

2002 – Dept of Human Ecology P.I. Christopher Jolly 10% Effort

Title: Affects of N-3 Fatty Acids on Acyl-CoA Binding Protein and Immune Function
Dates: 6/1/02 to 8/31/02 $ 6,000
Type: Departmental

2001 – Summer Research Assignment, UT Austin P.I. Christopher Jolly 17% Effort
Title: Membrane Structure and Function in the Aging Immune System
Dates: June – July 2001 $ 17,000

1998 – NIA PHS 416 F32 AG05826-01 P.I. Christopher Jolly 100% Effort
Title: Effect of Diet and Aging on T-cell Function
Dates: 8/1/98 to 8/31/00 $108,564
Type: Individual National Research Service Award [NRSA]

1998 – NIA PHS 416 T32 AG00205 P.I. Christopher Jolly 100% Effort
Title: Lipid Modulation of the Aging Immune System
Dates: 3/1/98 to 7/30/98 $ 13,800
Type: Institutional National Research Service Award [NRSA]
in Nutritional and Gerontological Intervention

Invited Talks

1995 – Modulation of T-lymphocyte proliferation, IL-2 production and second messengers by dietary n-3 fatty acids (sponsored by The Institute for Molecular Pathogenesis and Therapeutics and The Department of Medical Microbiology and Immunology, College of Medicine, Texas A&M University)

1996 – Effect of dietary n-3 fatty acids on lymphocyte proliferation, signal transduction and gene expression (sponsored by The Institute for Molecular Pathogenesis and Therapeutics and The Department of Medical Microbiology and Immunology, College of Medicine, Texas A&M University)

1996 – Effect of dietary n-3 fatty acids on murine lymphocyte function, signal transduction and gene expression (sponsored by Faculty of Nutrition, College of Agriculture and Life Sciences, Texas A&M University)

1998 – Effect of diet and aging on Th-1 and Th-2 cytokine production in autoimmune prone mice (sponsored by the Department of Animal Science, Texas A&M University at Kingsville)

1999 – Normalizing age-dependent changes in T-cells from autoimmune prone mice using calorie restriction and n-3 fatty acids (invited by Dr. Eric Murphy, Laboratory of Neurosciences, National Institute on Aging, NIH, Bethesda, MD)

1999 – Calorie restriction and n-3 fatty acids maintain a naïve T-cell phenotype in aged autoimmune prone mice (invited by the Nutrition Division, Dept. of Human Ecology, The University of Texas at Austin)

2002 – Aging, Phospholipid Metabolism and T-lymphocyte Function (invited by Dr. Eric Murphy, Dept. of Pharmacology, Toxicology, and Therapeutics, University of North Dakota Medical School)
2002 – Phosphatidic Acid Biosynthesis in Aged T-lymphocytes. (invited by Dr. G. Wu, Dept. of Animal Science, Graduate Faculty of Nutrition, Texas A&M University)
2003 – Phospholipid Metabolism and Signalling in Aging T-cells. FASEB Summer Research Conference entitled 'The Impact of Nutritional Status on Immune Function and Health' (Saxton, VT)
2004 – Signal Transduction and Phosphatidic Acid Biosynthesis in Old T-lymphocytes. (invited by Dr. D. Haldar, St. John's University, New York, NY)
2005 – Inhibitory Signalling and Phospholipid Metabolism in Old T-cells. (presented at a Workshop entitled "Signaling Defects in the Aging Immune System" sponsored by the NIA in Potomac, MD)
2007 – "Mitochondrial Glycerol-3-Phosphate Acyltranferase: A Novel Mechanism for Regulating T-lymphocyte Function" (invited by Dr. Kevin Dalby, Medicinal Chemistry, College of Pharmacy, UT Austin).
2007 – "Mechanisms of Nutrient Regulation of Immune Cell Function" (presented in a Minisymposium at Experimental Biology 2007, Washington, DC)
2007 - "Mechanisms of Omega-3 Fatty Acid Suppression of T-lymphocyte Function" (presented at the FASEB Summer Research Conference, Tuscon, AZ)
2011 – "Omega-3 Fatty Acids and T cell Function" (presented at FASEB Summer Research Conference, Carefree, AZ)

Peer-Reviewed Publications

1. A. deAngulo, R. Faris, **C.A. Jolly**, B. Daniels and L.A. deGrafenried. 2014. Age-related Increase in IL-17 Activates Pro-inflammatory Signaling in Prostate Cells. Prostate. (in press).
2. R. Faris, Y.Y. Fan, A. deAngulo, L.A. deGraffenried, R.S. Chapkin and **C.A. Jolly**. 2014. Mitochondrial Glycerol-3-Phosphate Acyltransferase-1 Is Essential for Necessary for Murine $CD4^+$ T cell Metabolic Activation. Biochem. Biophys. Acta. Mol. Cell. Biol. Lipids. 1842(10):1475-82.
3. L. W. Bowers, I. X.F. Maximo, A. J. Brenner, M. Beeram, S. D. Hursting, R. S. Price, R. R. Tekmal, **C. A. Jolly**, and L. A. deGraffenried. 2014. NSAID use reduces breast cancer recurrence in overweight and obese women: Role of prostaglandin-aromatase interactions. *Cancer Res*. 74(16):4446-57.
4. A. Gulvady, R. Cabrera, H.P. Ciolino and **C.A. Jolly**. 2013. Resveratrol inhibits the deleterious effects of diet induced obesity on thymic function. *J. Nutr. Biochem*. 24(9):1625-33.
5. A. De Angulo, D. Cavazos, R. Faris, **C.A. Jolly**, B. Daniel and L.A. deGraffenried. 2013. Age related alterations in T lymphocytes modulates key pathways in prostate tumorigenesis. *Prostate.* 73(8):855-64.
6. A.A. Gulvady, Murphy, E.J., Ciolino, H.P., Cabrera, R.M. and **Jolly, C.A**. 2013. Glycerol-3-phosphate acyltransferase-1 gene ablation results in altered thymocyte lipid content and reduces thymic T cell production in mice. *Lipids* 48:3-12.

7. M.A. Steinhardt, Mamerow, M.M, Brown, S.A. and **Jolly, C.A**. 2009. A Resilience Intervention in African American Adults with Type 2 Diabetes: A Pilot Study of Efficacy. 35(2):274-284.
8. L.W. Collison, E.J. Murphy and **Jolly, C.A**. 2008. Glycerol-3-phosphate Acyltransferase-1 Regulates Murine T-lymphocyte Proliferation and Cytokine Production *Amer. J. Phys.: Cell Phys*. 295:1543-1549.
9. L.W. Collison and **Jolly, C.A**. 2006. Aging Alters Phosphorylation Dependent Increases in Mitochondrial Glyerol-3-phosphate Acyltransferase 1 Activity in T-lymphocytes. *Biochim. Biophys. Acta* 1761:129-139..
10. G. Barcelo-Coblijn, Collison, L.W., Cinnamon, M., **Jolly, C.A**. and Murphy, E.J. 2005. Dietary Alpha-Linolenic Acid Increases Brain but not Heart and Liver Docosahexaenoic Acid Levels. *Lipids* 40(8):787-798.
11. L.W. Collison, George, C., Murphy, E.J. and **Jolly, C.A**. 2005. Dietary Flaxseed and Fish Oils Increase T-lymphocyte Acyl-CoA Binding Protein Expression and Phospholipid Mass. *Lipids* 40(1):81-87.
12. L.W. Collison, Kannan, L., Oronato, T., Knudsen, J., Haldar, D., Knudsen, J. and **Jolly, C.A.** 2005. Aging reduces glycerol-3-phosphate acyltransferase activity in activated T-lymphocytes. *Biochim. Biophys. Acta*. 1687(1-3):164-172.
13. Z. Xu, George, C. and **Jolly, C.A.** 2004. CD28 activation does not down regulate cbl-b expression in aged rat T-lymphocytes. *Mech. Ag. Develop*. 125(9):595-602.
14. **C.A. Jolly**. 2004. Dietary restriction and immune function. *J. Ntr*. 134(8):1853-1856.
15. L. Kannan, Knudsen, J. and **Jolly, C.A.** 2003. Aging and acyl-CoA binding protein alters mitochondrial glycerol-3-phosphate acyltransferase activity. *Biochim. Biophys. Acta*. 1631(1):12-16.
16. **C.A. Jolly** and Kannan, L. 2002. Lysophosphatidic acid acyltransferase activity is enhanced by albumin in T-lymphocyte membranes. *Lipids*. 37(5):475-480.
17. **C.A. Jolly**, Muthukumar, A., Reddy, C.P., Zaman, K. and Fernandes, G. 2001. Maintenance of NF-κB activation in T-lymphocytes and a naïve T-cell population in auto-immune prone (NZB/NZW)F1 mice by feeding a food restricted diet enriched with n-3 fatty acids. *Cell. Immunol.* 213:122-133.
18. **C.A. Jolly**, Muthukumar, A., Avula, C.P.R., Troyer D.A. and Fernandes G. 2001. Life Span is Prolonged in Food-Restricted Autoimmune-Prone (NZB x NZW)F(1) Mice Fed a Diet Enriched with (n-3) Fatty Acids. *J. Nutr.* 131:2753-2760.
19. O. Starodub, **Jolly, C.A.**, Atshaves, B.P., Roths, J.B., Murphy, E.J., Schoer, J., Kier, A.B. and Schroeder, F. 2000. Sterol carrier protein-2 localization in endoplasmic reticulum and role in phospholipid formation. *Amer. J. Physiol.* 279(4):1259.
20. A. Muthukumar, Fernandez, R., **Jolly, C.A.**, and Fernandes, G. 2000. Influence of calorie restriction and n-3 fatty acids on immunoglobin secretion and cytokine expression in lupus-prone mice. *J. Clin. Immunol.* 20(5):354-361.
21. B.O. Lim, **Jolly, C.A.** and Fernandes, G. 2000. Dietary (n-6) and (n-3) fatty acids and energy restriction modulate mesenteric lymph node lymphocyte function in autoimmune-prone (NZB xNZW)F1 mice. *J. Nutr.* 130(7):1657-1664.
22. **C.A. Jolly**, Chao, H., Kier, A.B., Bilheimer, J.T. and Schroeder, F. 2000. Sterol carrier protein 2 suppresses microsomal acyl-CoA hydrolysis. *Mol. Cell. Biochem.* 205(1/2):83-90.

23. A. Mittal, Muthukumar, A., **Jolly, C.A.** and Fernandes, G. 2000. Reduced food consumption increases water intake and modulates renal aquaporin-1 and –2 expression in autoimmune prone mice. *Life Sci.* 66(16):1471-1479.
24. **C.A. Jolly**, Wilton, D.C. and Schroeder F. 2000. Microsomal fatty acyl CoA transacylation and hydrolysis: Fatty acyl-CoA species dependent modulation by liver fatty acid binding proteins. *Biochim. Biophys. Acta* 1483:185-197.
25. **C.A. Jolly**, Fernandez, R., Muthukumar, A. and Fernandes, G. 1999. Calorie restriction modulates Th-1 and Th-2 cytokine-induced immunoglobulin secretion in young and old C57BL/6 cultured submandibular glands. *Aging: Clin. Exp. Res.* 11(6):383-389.
26. G. Wu, Flynn, N.E., Flynn, S.P. and **Jolly, C.A.** 1999. Dietary protein or arginine deficiency impairs constitutive and inducible nitric oxide synthesis in young rats. *J. Nutr.* 129:1347-1354.
27. **C.A. Jolly** and Fernandes, G. 1999. Diet and aging modulate Th-1/Th-2 cytokine production in the peripheral blood of lupus prone mice. *J. Clin. Immunol.* 19(3):171-178.
28. **C. A. Jolly**, McMurray, D.N. and Chapkin, R.S. 1998. Effect of dietary n-3 fatty acids on interleukin-2 and interleukin-2 receptor alpha expression in activated murine lymphocytes. *Prost. Leuk. Essen. Fatty Acids* 58(4):289-293.
29. **C.A. Jolly**, Murphy, E.J. and Schroeder, F. 1998. Differential influence of rat liver fatty acid binding protein isoforms on phospholipid fatty acid composition: Effects on phosphatidic acid biosynthesis and phospholipid fatty acid remodeling. *Biochim. Biophys. Acta* 1390(3):258-268.
30. R.E. Gossett, Edmondson, R.D., **Jolly, C.A.**, Cho, T.H., Russell, D.H., Knudsen, J., Kier, A.B. and Schroeder, F. 1998. Structure and function of normal and transformed murine acyl-CoA binding proteins. *Arch. Biochem. Biophys.* 350(2):201-213.
31. **C.A. Jolly**, Hubbell, T., Behnke, W.D. and Schroeder F. 1997. Fatty acid binding protein: Stimulation of microsomal phosphatidic acid formation. *Arch. Biochem. Biophys.* 341(1):112-121.
32. N.J. Stolowich, Frolov, A., Atshaves, B., Murphy, E.J., **Jolly, C.A.**, Billheimer, J.T., Scott, A.I. and Schroeder, F. 1997. The sterol carrier protein-2 fatty acid binding site: An NMR, circular dichroic, and fluorescence determination. *Biochemistry* 36:1719-1729.
33. **C.A. Jolly**, Chapkin, R.S. and McMurray, D.N. 1997. Dietary (n-3) polyunsaturated acids suppress murine lymphoproliferation, interleukin-2 secretion, and the formation of diacylglycerol and ceramide. *J. Nutr.* 127:37-43.
34. **C.A. Jolly**, Laurenz, J.C., McMurray, D.N. and Chapkin, R.S. 1996. Diacylglycerol and ceramide kinetics in primary cultures of activated T-lymphocytes. *Immunol. Lett.* 49:43-48.
35. Y.H. Jiang, Lupton, J.R., Chang, W.L., **Jolly, C.A.**, Aukema, H.M. and Chapkin, R.S. 1996. Dietary fat and fiber differentially alter intracellular second messengers during tumor development in rat colon. *Carcinogenesis.* 17:1227-1233.
36. J.C. Laurenz, Gunn, J.M., **Jolly, C.A.** and Chapkin, R.S. 1996. Alteration of glycerolipid and sphingolipid-derived second messenger kinetics in ras transformed 3T3 cells. *Biochim. Biophys. Acta* 1299:146-154.
37. D.C. Gaudette, Aukema, H.M., **Jolly, C.A.**, Chapkin, R.S. and Holub, B.J. 1993. Mass and fatty acid composition of the3-phosphorylated phosphatidylinositol bisphosphate isomer in stimulated human platelets. *J. Biol. Chem.* 268:13773-13776.

Invited Reviews

1. F. Schroeder, **Jolly, C.A.**, Cho, T. and Frolov, A. 1998. Fatty acid binding protein isoforms: Structure and function. *Chem. Phys. Lipids* 92:1-25.
2. G. Fernandes and **Jolly, C.A.** 1998. Nutrition and autoimmune disease. *Nutr. Rev.* 56:S161-S169.
3. G. Fernandes and **Jolly, C.A.** 1998. The effects of dietary lipids on gene expression and apoptosis. *Proc. Nutr. Soc.* 57:543-550.
4. D.N. McMurray, **Jolly, C.A.** and Chapkin, R.S. 2000. Effects of dietary n-3 fatty acids on T cell activation and T cell receptor (TcR)-mediated signaling in a murine model. *J. Infect. Dis.* 182 suppl 1:S103-7.
5. **C. A. Jolly**. 2005. Diet Manipulation and Prevention in Aging, Cancer and Autoimmune Disease. *Curr. Opin. Clin. Ntr. Met. Care*. 8(4):382-387.
6. **C. A. Jolly.** 2007. Is Dietary Restriction Beneficial for Human Health, such as for Immune Function? *Curr. Opin. Lipidol*. 18:53-57.
7. S.R. Shaikh, Chapkin, R.S. and **Jolly, C.A**. 2012. n-3 Polyunsaturated fatty acids exert immunomodulatory effects on lymphocytes by targeting plasma membrane molecular organization. *Mol. Asp. Med*. 33(1):46-54.

Book Chapters

1. R.S. Chapkin, McMurray, D.N. and **Jolly, C.A.** 1999. Dietary n-3 polyunsaturated fatty acids modulate T-lymphocyte activation: Clinical relevance in treating diseases of chronic inflammation. In *Handbook of Nutrition and Immunology*, B. German, M.E. Gershwin and C. Keens, eds. The Humana Press, Totowa, NJ, p. 121-134.
2. G. Fernandes and **Jolly, C.A.** 1999. Protein energy malnutrition and infectious disease: Synergistic interactions. In *Handbook of Nutrition and Immunology*, B. German, M.E. Gershwin and C. Keen, eds. The Humana Press, Totowa, NJ, p. 195-201.
3. **C.A. Jolly** and Fernandes, G. 2000. Dietary n-3 fatty acids and calorie restriction in autoimmune disease: Effects in different immune compartments. In *Current Organic Chemistry*, L.J. Jenski, ed. 4:1091-1109.
4. Avula, C.P.R., Lawrence, R.A., **Jolly, C.A.** and Fernandes, G. 2000. Role of n-3 polyunsaturated fatty acids (PUFA) in autoimmunity, inflammation, carcinogenesis, and apoptosis. (in press).
5. **C.A. Jolly** and Kannan, L. 2002. Phosphatidic acid metabolism in mammals. In *LIPIDS: Glycerolipid Metabolizing Enzymes*, D. Haldar and S. K. Das, eds. Research Signpost, Kerala, India, p 29-41.
6. **C.A. Jolly** and Murphy, E.J. 2003. Role of FABP in Cellular Phospholipid Metabolism. In *Mammalian Fatty Acid Binding Proteins: Structure and Roles in Cell Homeostasis*, A.K. Duttaroy and D.R. Spener, eds. P. 327-342.
7. G. Fernandes, Lawrence, R.A. and **Jolly, C.A**. 2005. Nutrition and the Immune System. In *Modern Nutrition in Health and Disease*, Tenth edition, Shils, Olson, Shike and Ross, eds, p 670-684.
8. **C.A. Jolly** and Xu, Z. 2006. Models of Immune Function in Aging. In *Handbook of Models for Human Aging*, P.M. Conn, ed. p 771-780.

9. **C. A. Jolly**. 2008. Omega-3 PUFA and Immunosenescence. In Handbook on *Immunosenescence: Basic Understanding and Clinical Applications*. Fulop, Hirokawa, Pawelec and Franceshi, eds. P 1423-1436.

Editorships

1. S.S. Percival, Nelson, SA, and Milner, J.A. 2005. Immunonutrition: Enhancing Tumoricidal Activity. *J. Nutr*. 135:2898S-2907S. (Guest Editor: **C.A. Jolly**)

Manuscripts Submitted

Manuscripts In Preparation

1. A. Gulvady, X. Zhu, L. Lashinger, S. Hursting and **C.A. Jolly**. 2014. Cbl-b regulates T cell function, inflammatory markers and pancreatic cancer survival in aged mice. (in preparation)
2. Z. Xu, S. Hursting and **C.A. Jolly**. 2014. Cbl-b knockout alters MC38 colon cancer cell growth in mice. (in preparation).
3. R. Faris, D. Cavazos, L.A. deGraffenried and **C.A. Jolly**. 2014. Mitochondrial glycerol-3-phosphate acyltransferase regulates IL-2 production, phospholipid mass and apoptosis in Jurkat T cells. (in preparation).

Abstracts

1. De Angulo A, Faris R, **Jolly C** and deGraffenried L. The Modulation of Pro-inflammatory Signaling Pathways by Aging T-lymphocytes Contributes to a More Malignant Phenotype in Prostate Epithelial Cells. AACR 103rd Annual Meeting, Chicago , Illinois, 2012
2. De Angulo A, Faris R, Cavazos DA, **Jolly C** and deGraffenried LA. 2011. The role of age-related enhancements of IL-17 in prostate cancer initiation. (presented at the AACR 102nd Annual Meeting, Orlando , FL).
3. De Angulo A, Faris R, Cavazos DA, **Jolly C** and deGraffenried LA. 2010. The Role of Aging T-Cells in Prostate Cancer Development. (presented at the AACR 101st Annual Meeting, Washington, D.C.).
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