

# Reto Asmis, Ph.D.

## CURRICULUM VITAE

May, 2010

### PERSONAL

Home: 3110 Elkwater  
San Antonio, TX 78258

Tel: (210) 408-0711  
Cell: (210) 489-0512

Office: UTHSCSA  
Office of the Dean  
7703 Floyd Curl Drive, MSC 6243  
San Antonio, TX 78229

Tel (210) 567-2720  
Fax: (210) 567-2709  
email: [asmis@uthscsa.edu](mailto:asmis@uthscsa.edu)

Date of Birth: June 1, 1962  
Nationality: Swiss

Place of Birth: Berlin, Germany  
Immigration Status: Permanent Resident

### EDUCATION

Diploma	Chemistry	1984	University of Fribourg, Switzerland
Ph.D.	Biochemistry	1989	University of Fribourg, Switzerland
Postdoctoral	Biochemistry	1989 – 1992	University of California, San Diego
Postdoctoral	Biochemistry	1992 – 1995	University of Berne, Switzerland

### PROFESSIONAL POSITIONS

#### University of Texas Health Science Center at San Antonio (UTHSCSA)

2009 – present	Professor	Departments of Clinical Laboratory Sciences & Biochemistry (tenured)
2007 – present	Director of Research Development Member	Office of the Dean Cancer Therapy & Research Center (UTHSCSA)
2006 – present	Member Member	Barshop Institute for Longevity & Aging Studies Nathan Shock Center (UTHSCSA)
2007 – 2009	Associate Professor	Office of the Dean, School of Allied Health Sciences & Department of Biochemistry
2005 – 2007	Associate Professor	Medical Service (STVHCS) Department of Medicine (UTHSCSA)

#### University of Kentucky

2003 – 2005	Director of Graduate Studies	Graduate Center for Nutritional Sciences
2003 – 2005	Associate Professor	Department of Medicine (tenured)
2003 – 2005	Associate Professor	Department of Physiology
2003 – 2005	Full Member	Graduate Center for Nutritional Sciences
2001 – 2003	Assistant Professor	Department of Physiology
2000 – 2003	Assistant Professor	Department of Medicine
2000 – 2003	Associate Member	Graduate Center for Nutritional Sciences

#### University of Basel, Switzerland

1995 – 2000	Group Leader	Institute of Biochemistry
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#### University of Berne, Switzerland

1992 – 1995	Postdoctoral Fellow	Institute of Biochemistry & Molecular Biology
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## University of California, San Diego

1989 – 1992 Postdoctoral Fellow

Department of Chemistry

## University of Fribourg, Switzerland

1985 – 1989 Research Associate

Institute of Biochemistry

## AWARDS

Postdoctoral Research Fellowship, Swiss Science Foundation	1989
Postdoctoral Research Fellowship, AHA, California Affiliate	1991
Advanced Researcher Fellowship, Swiss Science Foundation	1992
Wethington Research Award, University of Kentucky	2004
Publication Award, School of Health Professions, UTHSCSA	2010

## HONORS

Member of the Editorial Board, <i>Journal of Nutritional Biochemistry</i>	2005 – present
Associate Editor, <i>Atherosclerosis</i>	2006 – present
Member of the Editorial Advisory Board, <i>The Journal of Pharmacology and Experimental Therapeutics</i>	2009 – present
Member of the Unified Peer Review Steering Committee, American Heart Association	2009 – present

## PROFESSIONAL MEMBERSHIPS

American Diabetes Association	2005 – present
American Heart Association	1999 – present
European Atherosclerosis Society	2000 – present
European Macrophage Society	2000 – present
Society for Free Radical Biology and Medicine	2003 – present
Schweizerische Gesellschaft für Biochemie/FEBS	1985 – present

## GRANT REVIEW

Health Research Board, Ireland	Ad hoc reviewer	2003
British Vascular Foundation/Research into Aging	Ad hoc reviewer	2003
American Heart Association, Ohio Valley Affiliate, Study Group 2A	Member	2002 – 2005
American Heart Association, Western Consortium, Study Group 4A	Member	2005 – 2009
American Heart Association, Unified Review Panel, AAGI Bsc 1	Chair	2010 – present
UTSA MBRS SCORE External Scientific Advisory Committee	Member	2007, 2008
NIH, AICS Study Section	Ad hoc reviewer	2007 – 2010
NIH, AICS Study Section	Member	2010
Netherlands Organization for Scientific Research (NWO)	Ad hoc reviewer	2010

## PEER REVIEW

American Journal of Physiology; Atherosclerosis; Arteriosclerosis, Thrombosis and Vascular Biology; Biochemical Pharmacology; Circulation; Circulation Research; Free Radical Biology & Medicine; Journal of Nutritional Biochemistry; Journal of Pharmacology and Experimental Therapeutics; Molecular Pharmacology; Trends in Molecular Medicine

## CONSULTING ACTIVITIES

Chief Scientific Advisor

E-O<sub>2</sub> Concepts Inc., San Antonio, TX, USA

2007 – present

## TRAINING AND MENTORING

### Undergraduate Students

Mitchell Plummer	6/01 – 8/01	Summer Student/Medical Student (UK)
Marybeth Short	6/03 – 8/03	High School Research Apprentice Program (UK)
William Yarberry	6/07 – 8/07	Summer Student/B-SURE Program (UTHSCSA)
Brian Triana	3/08	High School Student
Ehrich Pakala	6/08 – 8/08	Summer Student/B-SURE Program (UTHSCSA)
Catharine Williams	10/08 – 6/09	High School Student, NSID Gifted & Talented Program

### Rotation Students

Harjinder Singh	8/06 – 10/06	Department of Biochemistry, UTHSCSA
Ying Ann Chiao	2/08 – 3/08	Integrated Multidisc. Grad. Program, UTHSCSA
Charles Lehnhoff	3/09 – 4/09	Integrated Multidisc. Grad. Program, UTHSCSA
Jason Plyler	9/09 – 12/09	Integrated Multidisc. Grad. Program, UTHSCSA
Manjula Mummadisetti	1/10 – 2/10	Integrated Multidisc. Grad. Program, UTHSCSA

### Graduate Students

Vicenta Llorente, Ph.D.	9/92 – 9/95	Supervised jointly with Dr. Fred K. Gey
Lin Wang, M.S.	8/01 – 7/02	Graduate Center for Nutritional Sciences
Yanmei Wang, M.S.	7/03 – 9/05	Graduate Center for Nutritional Sciences
Jill Cholewa	8/04 – 8/05	Graduate Center for Nutritional Sciences
Bin Liu	8/04 – 8/05	Graduate Center for Nutritional Sciences
Chi Fung Lee	8/07 – present	Department of Biochemistry, MMD Track, UTHSCSA
Sarah Lynn Ullevig	3/08 – present	Department of Biochemistry, MMD Track, UTHSCSA

### Postdoctoral Trainees

Eva S. Wintergerst, Ph.D.	7/96 – 7/00	Product Manager, Roche, Switzerland
Harald Heider, Ph.D.	11/98 – 7/00	Senior Scientist, University of Fribourg
Marta Kisgati, M.D.	2/04 – 5/05	Faculty, Clinical Pathology, Polyclinic Debrecen
Pranab Das, M.D.	4/04 – 2/05	Assistant Professor, University of Tennessee
Melanie Sulsitio, M.D.	8/05 – 4/07	Cardiology Fellow, UTHSCSA
Mu Qiao, M.D., Ph.D.	8/05 – 6/09	Residency, Internal Medicine, Huron Hospital, Cleveland
Qingwei Zhao, M.D., Ph.D.	10/07 – 1/10	Research Scientist, UTHSCSA
Debora Zamora	4/09 – present	Postdoctoral Fellow, UTHSCSA
Hong Seok Kim	7/09 – present	Postdoctoral Fellow, UTHSCSA

### Faculty

Yolanda Rangel, Ph.D.	3/08 – 6/10	Assistant Professor, UTHSCSA
Qingwei Zhao, M.D., Ph.D.	2/10 – present	Research Assistant Professor, UTHSCSA

## TEACHING

### University of Fribourg

Clinical Biochemistry 1985 – 1989  
Advanced Biochemistry 1986 – 1989

### Trade School Fribourg

Chemistry: Health and Safety 1989

### University of Berne

Clinical Biochemistry 1992 – 1995

### University of Basel

Clinical Biochemistry 1995 – 2000  
Nutritional Biochemistry 1995 – 2000

### University of Kentucky

NS 771, Seminars in Nutritional Sciences, Vitamin E and Atherosclerosis, (1 lecture) 2000  
PGY 604, Advanced Cardiovascular Physiology, Macrophages in Atherosclerosis (1) 2001  
NS 601, Macronutrient Metabolism, Carbohydrate Metabolism (6 lectures) 2004  
Dietetic Internship Program (1 lecture) 2004  
Cardiovascular Journal Club (2-4 lectures) 2001 – 2005

### University of Texas Health Science Center at San Antonio (UTHSCSA)

Nephrology Journal Club (1-2 lectures) 2005 – 2006  
Nephrology Research Seminars (1-2 lectures) 2005 – 2006  
BIOC 5013, Dental Biochemistry (4 lectures) 2007 – 2009  
BIOC 6015, Metabolic Disorders (2 lectures) 2008 – present  
Director, INTD 5008 Laboratory Rotations Program (Integrated Multi-disciplinary Graduate Program, IMGP, Graduate School for Biological Sciences) 2008 – present  
Director, INTD 5081, Topics in Cardiovascular Research 2009 – present

## COMMITTEES

### University of Basel

Advisory Committee, Institute of Biochemistry 1997 – 2000  
Advisory Committee, Department of Biomedical Sciences 1997 – 2000  
Research Committee, Department of Biomedical Sciences 1999 – 2000  
Member of the Board, Association of Research Assistants 1998 – 2000

### University of Kentucky

Gill Heart Seminar/Cardiovascular Research Day Committee, Medicine 2000 – 2005  
Thesis Committee, Liqin Du, Nutritional Sciences 2000 – 2004  
Thesis Committee, Ninetta Kosswig, University of Bonn, Germany 2002 – 2003  
Thesis Committee, Stuart Rice, Pharmacology 2002 – 2003  
Thesis Committee, Weifei Zhu, Nutritional Sciences 2002 – 2005  
Thesis Committee, Gentle Chikani, Nutritional Sciences 2003 – 2005  
Chair, Thesis Committee, Yanmei Wang, Nutritional Sciences 2003 – 2005  
Chair, Thesis Committee, Jill Cholewa, Nutritional Sciences 2004 – 2005

Chair, Thesis Committee, Bin Liu, Nutritional Sciences	2004 – 2005
Laboratory Documentation Requirements, Medicine	2002 – 2005
Executive Committee, Nutritional Sciences	2004
Chair, Graduate Program Committee, Graduate Center for Nutritional Sciences	2003 – 2005
Curriculum Committee, Graduate Center for Nutritional Sciences	2003 – 2005
Program Coordinator, Kentucky Young Scientist Summer Research Program/GCNS	2004 – 2005
MS Program Implementation Committee, Graduate School	2005

## **University of Texas Health Science Center at San Antonio (UTHSCSA)**

### **South Texas Veterans Health Care System**

VA Research and Development Committee	2006 – 2007
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### **Department/Track/Institute**

Advisory Committee, Barshop Institute for Longevity and Aging Studies	2006 – present
Graduate Studies Committee, Aging Track,	2006 – present
Public Relations Committee, Metabolism & Metabolic Disorder Track,	2006 – present
Thesis Committee, Jessica Ibarra, Cellular & Structural Biology	2007 – present
Qualifying Exam Committee, Pramod Gowda, Biochemistry	2008
Qualifying Exam Committee, Rugmani Padmanabhan, Biochemistry	2008
Committee on Graduate Studies, Department of Biochemistry	2008 – present
Chair, PR Committee, Metabolism & Metabolic Disorders Track	2008 – present
Dissertation Supervising Committee, Neha Garg	2008 – present
Qualifying Exam Committee, Maria Villarreal, Biochemistry	2009
Qualifying Exam Committee, Hongzhi Chen, Biochemistry	2009
Masters Dissertation Committee, Rajesha Rupaimoole, Biology, UTSA	2009
Faculty Search Committee, Dept. Clin. Lab. Sciences	2009

### **School**

Medical Student Stipend Review Committee, School of Medicine	2007 – present
Admissions and Distribution Committee for the IMGP, Graduate School	2007 – present
Vice-Chair, Admissions and Distribution Committee for the IMGP, Graduate School	2008 – present
XYZ Compensation Task Force, School of Allied Health Sciences	2008 – present

### **University**

University Research Council	2008 – present
University Core Research Facilities Committee	2008 – present
Stimulus Package Opportunities for Research (SPOR) Task Force	2009

## **OTHER SERVICES**

### **University of Basel**

Organizer, Seminar Series, Department of Biomedical Sciences	1998
Journal Club, Department of Biomedical Sciences	1997
Computer & Network Support, Institute of Biochemistry	1995 – 2000

### **University of Kentucky**

Thesis Examiner for Sonja Tang, Center for Biomedical Engineering	2004
Thesis Examiner for Mike Stenger, Center for Biomedical Engineering	2005
Thesis Examiner for Johann Sohn, Department of Biology	2005

## **COMMUNITY SERVICES**

### **American Heart Association**

Member of the Unified Peer Review Panel	2009 – present
Member of the Unified Peer Review Steering Committee	2009 – present
Member, Unified Peer Review, Research Application Exemption Committee	2009 – present

### **San Antonio Wave**

Member of the Board	2009 – 2010
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## FINANCIAL SUPPORT

### Current Support (Total Direct Costs)

Principal Investigator	NIH RO1 HL70963-8 (40%) 5/2007 – 4/2011 Glutaredoxin, Macrophage Death and Atherosclerosis	\$1,000,000
Principal Investigator	NIH R01 HL070963-07S1 (1%) 9/2008 – 4/2011 Research Supplement to Promote Diversity in Health-Related Research	\$243,751
Principal Investigator	AHA Grant-In-Aid 0855011F (15%) 7/2008 – 6/2010 Thiol Oxidative Stress, Monocyte Migration in Diabetes-Induced Accelerated Atherosclerosis. Approved at 2.6 <sup>th</sup> percentile.	\$127,272
Project Leader/PI	NIH RC2 AG036613-01 (Program-PI: A. Richardson) (17%) 10/2009 – 9/2011 Project 3: Effect of Rapa on Macrophage Recruitment and the Development and Progression of Atherosclerosis	\$216,641
Co-Investigator	VA Merit I01 BX000397-01 (8.3%, PI: Feldman, M. \$650,000) 4/2010 – 3/2014 Detection of Plaque-based Macrophages with Light.	\$44,000
Co-Investigator	NIH R01 HL075360-06 (4%, PI: Lindsey, M, \$1,250,000) 7/2010 – 6/2015 The Role of Macrophage-Derived MMPs in LV Remodeling	\$16,900
Training Faculty	NIH T32 HL04776-26 (PI: McManus, L.M., \$1,610,916) 9/2007 – 8/2012 Pathobiology of Occlusive Vascular Disease Supports D. Zamora, Postdoctoral Fellow	\$140,000

### Pending Support (Total Direct Costs)

Principal Investigator	NIH R01 HL097294-01A2 (33%) Thiol Oxidative Stress in Monocyte Recruitment and Diabetic Complications	\$1,250,000	2/2011 – 1/2016
Co-Principal Invest.	San Antonio Life Sciences Institute (17%) The Role of Betanectin in Diabetic Complications	\$250,000	8/2010 – 7/2011
Principal Investigator	Barshop Institute, Pilot Grant Program, (5%) New Mechanisms of Macrophage Dysfunction in Aging	\$50,000	7/2010 – 6/2011
Mentor	AHA Postdoctoral Fellowship (Kim, H.S.) Redox regulation of monocyte adhesion and migration	\$86,000	7/2010 – 6/2012
Mentor	AHA Predoctoral Fellowship (Lee, C.F.) Monocytic Nox4 in Macrophage Migration and Atherosclerosis	\$50,000	7/2010 – 6/2012

## Past Support (USA)

Principal Investigator	CTRRC Cancer Pilot Program \$50,000 Thiol Oxidative Stress and Macrophage Dysfunction in Lung Cancer	8/2008 – 7/2009
Mentor	AHA Postdoctoral Fellowship 0725275Y (Qiao, M.) \$84,000 Role of Grx in Protecting Against OxLDL-induced Macrophage Death and Atherosclerosis	7/2007 – 6/2009
Principal Investigator	E-O <sub>2</sub> Concepts Inc. (5%) \$31,746 Tissue oxygenation system for dermal wound healing: Pilot study in a mouse model of type 2 diabetes	6/2008 – 12/2008
Principal Investigator	UT System (<5%; Prg. PI: Slaga, T.J., \$350,000) \$20,000 Project 4: Thiol Oxidative Stress and Proinflammatory Monocytes in Diabetes	5/2007 – 4/2009
Co-Investigator	Kronkosky Foundation (<5%; PIs: LeBaron, \$74,980), \$3'900 Transforming Growth Factor-β1 as a Biomarker for Pediatric Diabetic Nephropathy	4/2008 – 3/2009
Principal Investigator	NIH P50 DK061597 (6%) \$45,000 George M. O'Brien Kidney Research Center (Center PI: Abboud, H.E.) Project 7: Thiol Oxidative Stress and Macrophage Dysfunction in Diabetic Compl.	7/2007 – 6/2008
Principal Investigator	AHA Grant-In-Aid 0455176B (14%) \$110,000 Oxidative Stress and Macrophage Dysfunction	7/2004 – 6/2006
Principal Investigator,	NIH/HLBI RO1 HL70963 (40%) \$800,000 Role of Glutathione Reductase in Macrophage Oncosis	8/2002 – 4/2007
Principal Investigator	AHA Grant-In-Aid 255023B (33%) \$110,000 Role of Glutathione Reductase in Macrophage Oncosis	7/2002 – 6/2004
Principal Investigator	ACI Institutional Grant \$19,000 Role of Glutathione Reductase in Anthracycline-Induced Macrophage Death	6/1/02 – 5/31/03

## Training Grants

Co-Director	USDA Training Grant (5%, PI: Linda Chen) \$207,000 Training Program in Nutrition and Chronic Diseases	9/2005 – 8/2008
Co-Director	NIH T-32 DK07778 (10%, PI: Daret St.Clair) \$753,771 Training Program in Oxidative Stress and Nutrition	8/2005 – 7/2010

## Past Support (Switzerland)

Principal Investigator	Swiss Science Foundation, CHF 150,000,	1995 –1999
Principal Investigator	Swiss Foundation for Nutrition Research, CHF 45,000,	1997–1998
Principal Investigator	ISFE, CHF 15,000,	1997–1998
Principal Investigator,	Henkel Corporation, \$40,000,	1996–1997
Co-Investigator	Henkel Corporation, \$120,000,	1993–1996
Co-Investigator	Sandoz Foundation, CHF 32,920,	1995
Principal Investigator	ISFE, CHF 21,000,	1993–1994
Principal Investigator	Swiss Foundation for Nutrition Research, CHF 25,000,	1993–1994



## PUBLICATIONS

### Manuscripts:

1. Qiao, M and **Asmis, R.** Role of lipid hydroperoxides in oxidized LDL-induced mitochondrial dysfunction and macrophage injury. In preparation for *Free Radic.Biol.Med.*
2. Ullevig, S., Zhao, Q., Zamora, D. and **Asmis, R.** Dietary supplementation with resveratrol and ursolic acid reduces atherosclerosis in diabetic LDL receptor-deficient mice by limiting macrophage recruitment. In preparation for *Atherosclerosis*
3. Zhao, Q., Ullevig, S. Kim, H.S. Lee, C.F. and **Asmis, R.** Increased monocyte responsiveness to chemoattractants induced by metabolic stress *in vitro* and *in vivo* is mediated by hydrogen peroxide and protein-S-glutathionylation. Submitted to *Circ.Res.*
4. Qiao, M., Zhao, Q. and **Asmis, R.** Low Flow Oxygenation of Full-Excisional Skin Wounds on Diabetic Mice Improves wound healing by accelerating wound closure and reepithelialization. *Internat.Wound J.* (2010) In press.
5. Thompson, J.S., Asmis, R., Tapp, A.A., Nelson, B., Chu, Y., Glass, J.A., Moneyhon, M. and Brown, S.A. Pyrrolidine dithiocarbamate (PDTc) blocks apoptosis and promotes ionizing radiation-induced necrosis of freshly isolated normal mouse spleen cells. *Apoptosis.* (2010) In press.
6. Lee, C.F., Qiao, M. Schroeder, K., Zhao, Q. and **Asmis, R.** Nox4 is a novel inducible source of reactive oxygen species in monocytes and macrophages and mediates oxidized low density lipoprotein-induced macrophage death. *Circ.Res.* 106, 1489-97(2010).
7. Ma, L. Cheruku, K., Paranjape, A.S., Feldman, M.D., Laeson, T.A., Tam, J., Ingram, D., **Asmis, R.**, Milner, T.E., Sokolov, K., Chandrasekar, B., Johnston, K.P. Small multifunctional nanoclusters (Nanoroses) for targeted cellular imaging and therapy. *ACS Nano.* 3: 2686-96 (2009).
8. Qiao, M., Zhao, Q., Lee, C.F., Tannock, L., Smart, E.J., LeBaron, R.G., Phelix, C.F., Rangel, Y. and **Asmis, R.** Thiol oxidative stress induced by metabolic disorders amplifies macrophage chemotactic responses and accelerates atherogenesis and kidney injury in LDL receptor-deficient mice. *Arterioscler.Thromb.Vasc.Biol.* 29, 1779-86 (2009).
9. Zamilpa, R., Rupaimoole, R., Phelix, C.F., Somaraki-Cormier, M., William Haskins, W., **Asmis, R.**, and LeBaron, R.G. C-terminal fragment of transforming growth factor beta-induced protein (TGFB1p) is required for apoptosis in human osteosarcoma cells. *Matrix Biology*, 28, 347-53 (2009).
10. Thompson, J.S., **Asmis, R.**, Chu, Y., Glass, J., Nelson, B. and Brown, S.A. Amifostine prior to lethal radiation prevents allogeneic bone marrow transplantation. *Bone Marrow Transplant* 41. 927-34 (2008).
11. Asmis, L.M., **Asmis, R.**, Sulzer, I., Furlan, M. and Lämmle, B. Contact system activation in human sepsis - 47kD HK, a marker predictive of sepsis severity? *Swiss Medical Weekly* 138, 142-9 (2008).
12. Rutkute, K., **Asmis, R.** and Nikolova-Karakashian, M.N. Regulation of neutral sphingomyelinase-2 by GSH: A new insight to the role of oxidative stress in aging-associated inflammation. *J .Lipid Res.* 48, 2443-52 (2007).
13. Qiao, M., Kisgati, M., Cholewa, J.M., Zhu, W., Smart, E.J., Sulistio, M. and **Asmis, R.** Increased expression of cytosolic and mitochondrial glutathione reductase in macrophages inhibits atherosclerotic lesion development in LDL receptor-deficient mice. *Arterioscler.Thromb.Vasc.Biol.* 27, 1375-82 (2007).
14. Kisgati, M. and **Asmis, R.** Generation of retroviruses for the overexpression of cytosolic and mitochondrial glutathione reductase in macrophages *in vivo*. *Cytotechnology.* 54, 5-14 (2007).

15. Wang, Y., Qiao, M., Mieyal, J.J., Asmis, L.M. and **Asmis, R.** Molecular mechanism of glutathione-mediated protection from oxidized LDL-induced cell injury in human macrophages: Role of glutathione reductase and glutaredoxin. *Free Radic.Biol.Med.* 41, 775-785 (2006).
16. **Asmis, R.**, Qiao, M. Rossi, R.R., Cholewa, J., Xu, L. and Asmis, L.M. Adriamycin promotes macrophage dysfunction in mice. *Free Radic.Biol.Med.* 41, 165-74 (2006).
17. Li, X., Guo, L., **Asmis, R.**, Nikolova-Karakashian, M. and Smart, E.J. Scavenger receptor BI prevents nitric oxide-induced cytotoxicity and endotoxin cytotoxicity. *Circ.Res.* 98, e60-5. (2006).
18. Fanti, P., **Asmis, R.** Stephenson, T.J., Sawaya, P.B. and Franke, A.A. Positive effects of dietary soy in ESRD patients with systemic inflammation: Correlation between blood levels of the soy isoflavones and the acute phase reactants. *Nephrol.Dial.Transplant.* 21, 2239-46 (2006).
19. Thompson, J.S., **Asmis, R.**, Glass, J., Liu, H., Wilson, C., Nelson, B., Brown, S.A. and Stromberg, A.J. p53 status influences regulation of HSPs and ribosomal proteins by PDTC and radiation. *Biochem.Biophys.Res.Comm.* 343, 435-42 (2006).
20. **Asmis, R.**, Stevens J.G., Begley, J., Grimes, B., Van Zant, G., Fanti, P. Genistein inhibits LPS-induced TNF- $\alpha$ , but not IL-6 expression in monocytes from hemodialysis patients. *Clinical Nephrology.* 65, 267-75 (2006).
21. **Asmis, R.** Wang, Y., Xu, L., Kisgati, M., Begley, J.G. and Mieyal, J.J. A novel thiol oxidation-Based mechanism for adriamycin-induced cell injury in human macrophages. *FASEB J.* 13, 1866-8 (2005).
22. Li, X., Guo, L., Dressman, J.L., **Asms, R.** and Smart, E.J. A novel ligand-independent apoptotic pathway induced by SR-BI and suppressed by eNOS and HDL. *J.Biol.Chem.* 280, 19087-19096 (2005).
23. **Asmis, R.**, Begley, J.G. and Everson, W.V. Aggregation-induced uptake of oxidized LDL protects human monocyte-derived macrophages from cell death. *J.Lipid Res.* 46, 1124-1132 (2005).
24. Zhenze, Z., de Beer, M.C., Lei, C. **Asmis, R.**, de Beer, F.C., de Villiers, W.J.S. and Van der Westhuyzen, D.R. Low density lipoprotein from apolipoprotein E-deficient mice induce macrophage lipid accumulation in a CD36- and SR-A-dependent manner. *Arterioscler.Thromb.Vasc.Biol.* 25, 168-173 (2005).
25. Romerio, C.S., Linder, L., Nyfeler, J., Wenk, M., Litynski, P., **Asmis, R.** and Haefeli, W.E. Acute hyperhomocysteinaemia decreases plasma nitrite/nitrate (NOx) and increases lipid peroxides in healthy humans. *Atherosclerosis* 176, 337-344 (2004).
26. **Asmis, R.** and Begley, J.G. Oxidized LDL-induced macrophage death does not require activation of caspase-3. Role for oxidative stress-induced mitochondrial dysfunction. *Circ.Res.* 92, e20-e29 (2003).
27. Hojo, Y., Saito, Y., Tanimoto, T. Hoefen, R.J., Baines, C.P. Yamamoto, K. **Asmis, R.** and Berk, B.C. Fluid shear stress attenuates hydrogen peroxide-induced c-Jun-NH2-terminal kinase activation via a glutathione reductase-mediated mechanism. *Circ.Res.* 91, 712-708 (2002)
28. **Asmis, R.** and Jelk, J. Vitamin E supplementation of human macrophages prevents neither foam cell formation nor the increased susceptibility of foam cells to lysis by oxidized LDL. *Arterioscler.Thromb.Vasc.Biol.* 20, 2078-2086 (2000).
29. Wintergerst, E.S., Jelk, J., Rahner, C. and **Asmis, R.** Apoptosis induced by oxidized low density lipoprotein in human monocyte-derived macrophages involves CD36 and activation of caspase-3. *Eur.J.Biochem.* 267, 6050-6058 (2000).
30. Heider, H., Brenz Verca, S., Rusconi, S. and **Asmis, R.** Comparison of lipid-mediated and adenoviral gene transfer to human monocyte-derived macrophages and COS-7 cells. *BioTechniques*, 28, 260 – 270 (2000).

31. **Asmis, R.** and Jelk, J. Large variations in human foam cell formation in individuals. A fully autologous in vitro assay based on the quantitative analysis of cellular neutral lipids. *Atherosclerosis*, 148, 243-253 (2000).
32. Wintergerst, E.S., Jelk, J. and **Asmis, R.** Differential expression of CD14, CD36 and the LDL receptor on human monocyte-derived macrophages. A novel cell culture system to study macrophage differentiation and heterogeneity. *Histochem.Cell Biol.* 110, 231-241 (1998).
33. **Asmis, R.** and Wintergerst, E.S. Dehydroascorbic acid prevents apoptosis induced by oxidized LDL in human monocyte-derived macrophages. *Eur.J.Biochem.* 255, 147-155 (1998).
34. **Asmis, R.** Physical partitioning is the main mechanism of  $\alpha$ -tocopherol and cholesterol transfer between lipoproteins and P388D<sub>1</sub> macrophage-like cells. *Eur.J.Biochem.* 250, 600-607 (1997).
35. **Asmis, R.**, Bühler, E., Jelk, J. and Gey, K.F. Concurrent quantification of cellular cholesterol, cholesteryl esters and triglycerides in small biological samples. *J.Chromatogr.B.* 691, 59-66 (1997).
36. **Asmis, R.**, Llorente, V. and Gey, K.F. Prevention of cholesteryl ester accumulation in P388D<sub>1</sub> macrophage-like cells by increased cellular vitamin E depends on species of extracellular cholesterol. Conventional heterologous non-human cell cultures are poor models of human atherosclerotic foam cell formation. *Eur.J.Biochem.* 233, 171-178 (1995).
37. **Asmis, R.** and Dennis, E.A. PAF-stimulates cAMP formation in P388D<sub>1</sub> macrophage-like cells via the formation and secretion of prostaglandin E<sub>2</sub> in an autocrine fashion. *Biochim.Biophys.Acta* 1224, 295-301 (1994).
38. **Asmis, R.** and Dennis, E.A. Regulation of prostaglandin E<sub>2</sub> production in P388D<sub>1</sub> macrophage-like cells. *Ann.N.Y.Acad.Sci.* 744, 1-10 (1994).
39. **Asmis, R.**, Randriamampita, C., Tsien, R.Y. and Dennis, E.A. Extracellular Ca<sup>2+</sup>, inositol-1,4,5-trisphosphate and additional signaling in the PAF stimulation of PGE<sub>2</sub> formation in P388D<sub>1</sub> macrophage-like cells. *Biochem.J.* 298, 543-551 (1994).
40. **Asmis, R.** and Dennis, E.A. Cell signaling in LPS-primed and PAF stimulated P388D<sub>1</sub> macrophage-like cells. *Adv.Oncology*, 37, 183-186 (1992).
41. Glaser, K.B., **Asmis, R.** and Dennis, E.A. PAF receptor mediated PGE<sub>2</sub> production in lipopolysaccharide primed P388D<sub>1</sub> macrophage-like cells. *Adv.Prostaglandin Thromboxane Res* 21, 249-255 (1990).
42. Glaser, K.B., **Asmis, R.** and Dennis, E.A. LPS priming of P388D<sub>1</sub> macrophage-like cells for enhanced arachidonic acid metabolism: PAF receptor activation and regulation of phospholipase A<sub>2</sub>. *J.Biol.Chem.* 265, 8658-8664 (1990).
43. **Asmis, R.** and Joerg, A. Calcium ionophore-induced formation of platelet-activating factor and leukotrienes by horse eosinophils: a comparative study. *Eur.J.Biochem* 187, 475-480 (1990).

### **Reviews and Commentaries**

1. **Asmis, R.** Redox signaling In Macrophages. In preparation for *Free Radic.Biol.Med.*
2. **Asmis, R.** Macrophage glutathione reductase, thiol redox signaling and atherosclerosis. Invited Commentary; International Atherosclerosis Society, <http://www.athero.org/comm-index.asp>; February 7, 2008.
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## **Abstracts:**

1. Lee, C.F. and **Asmis, R.** Monocytic NOX4, a Novel Source of Intracellular ROS, Localizes to Redox Signaling Complexes and is Required for Oxidized LDL-induced Macrophage Death. 78<sup>th</sup> European Atherosclerosis Society Congress, Hamburg, Germany, June 20 – 23, 2010.
2. Zhao, Q., Ullevig, S. and **Asmis, R.** The Cellular Thiol Redox State Determines Monocyte Responsiveness to Chemoattractants and Regulates Macrophage Recruitment into Atherosclerotic Lesions. 78<sup>th</sup> European Atherosclerosis Society Congress, Hamburg, Germany, June 20 – 23, 2010.
3. Lee, C.F., Qiao, M., and **Asmis, R.** Nox4 is a Novel Source of intracellular ROS Required for Oxidized LDL-Induced Macrophage Death. 13<sup>th</sup> Annual Scientific Meeting of Institute of Cardiovascular Science and Medicine, Hong Kong SAR, China, December 12, 2009.
4. Ullevig, S., Zhao, Q. and **Asmis, R.** Protein-S-Glutathionylation Mediates Accelerated Monocyte Chemotaxis Induced by Oxidative Stress. 16<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, San Francisco, CA, November 17 – 22, 2009.
5. Zamora, D., Zhao, Q. and **Asmis, R.** Increased levels of inflammatory monocytes induced by diabetes in mice is prevented by dietary supplementation with resveratrol and ursolic acid. 16<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, San Francisco, CA, November 17 – 22, 2009.
6. Lee, C.F., Qiao, M. Katrin Schröder, and **Asmis, R.** Nox4, a Novel Macrophage NADPH Oxidase, Localizes to Sites of Redox Signaling: Implications for Macrophage Functions. 16<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, San Francisco, CA, November 17 – 22, 2009.
7. Lee, C.F., Qiao, M. Katrin Schröder, and **Asmis, R.** Nox4 is a Novel Inducible Source of Intracellular Reactive Oxygen Species in Human Monocyte-Derived Macrophages and mediates Oxidized LDL-induced Macrophage Death. AHA Scientific Sessions 2009, Orlando, FL, November 14 – 17, 2009.
8. **Asmis, R.**, Zhao, Q., Ullevig, S. and Qiao, M. Metabolic Stress, Thiol Oxidative Stress and Macrophage Recruitment. 15<sup>th</sup> International Symposium on Atherosclerosis, Boston, MA, June 14 – June 18, 2009.
9. **Asmis, R.**, Qiao, M., Zhao, Q., Lee, C.F., Tannock, L.R., Smart, E.J., LeBaron, R.G. and Phelix, C.F. Thiol Oxidative Stress Induced by Metabolic Disorders Amplifies Macrophage Chemotactic Responses and Accelerates Atherogenesis and Kidney Injury in LDL Receptor-Deficient Mice. 10<sup>th</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Denver, CO, April 29 – May 1, 2009.
10. Zhao, Q., Ullevig, S., Qiao, M. and **Asmis, R.** Increased Monocyte Responsiveness to Chemoattractants Induced by Oxidative Stress *In Vitro* and *In Vivo* is Mediated by Protein-S-Glutathionylation. 10<sup>th</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Denver, CO, April 29 – May 1, 2009.
11. Ullevig, S., Zhao, Q., Qiao, M. and **Asmis, R.** Thiol oxidative stress induced by metabolic disorders enhances chemotactic responses in monocytes: A new paradigm for the development of chronic inflammatory diseases. 15<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine,, Indianapolis, IN, November 19 – 23, 2008.
12. Lee, C.F., Qiao, M., Ma, W. and **Asmis, R.** Nox4: A novel source of intracellular ROS in human monocyte-derived macrophages and upregulated by oxidized LDL via the MEK1/ERK Pathway. 15<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, Indianapolis, IN, November 19 – 23, 2008.
13. **Asmis, R.**, Zhao, Q., Ullevig, S., and Qiao, M. and Thiol oxidative stress sensitizes monocytes to chemoattractants: A new mechanism contributing to the recruitment of macrophages in

atherosclerosis and diabetic nephropathy. AHA Scientific Sessions 2008, New Orleans, LA, November 8 – 12, 2008.

14. **Asmis, R.** Enhanced monocyte chemotaxis induced by thiol oxidative stress: New paradigm for recruitment of macrophages in chronic inflammatory diseases. Gordon Research Conference on Thiol-Based Redox Regulation & Signaling, Lucca, Italy, May 25 – May 30 2008.
15. **Asmis, R.**, Kisgati, M., Wang, Y., Cholewa, J.M., Zhu, W. Sulistio, M. and Qiao, M. Role of the glutathione-glutathione reductase-glutaredoxin system in macrophage injury and atherosclerotic lesion development in LDL receptor-deficient mice. 39<sup>th</sup> Annual Meeting of the Society for Leukocyte Biology, San Antonio, TX, November 9 – 11, 2006
16. **Asmis, R.**, Kisgati, M., Wang, Y., Cholewa, J.M., Zhu, W. Sulistio, M. and Qiao, M. Role of the glutathione-glutathione reductase-glutaredoxin system in macrophage injury and atherosclerotic lesion development in LDL receptor-deficient mice. 13<sup>th</sup> Biennial Congress of the International Society for Free Radical Research. Davos, Switzerland, August 15 – 19, 2006
17. Qiao, M., Kisgati, M., Cholewa, J.M., Zhu, W., Sulistio, M. and **Asmis, R.** Increased expression of cytosolic and mitochondrial glutathione reductase in macrophages inhibits atherosclerotic lesion development in LDL receptor-deficient mice. 9<sup>th</sup> Annual Medicine Research Day, UTHSCSA, May 18<sup>th</sup>, 2006
18. Kisgati, M., Qiao, M., Cholewa, J.M., Zhu, W. and **Asmis, R.** Increased expression of cytosolic and mitochondrial glutathione reductase in macrophages inhibits atherosclerotic lesion development in LDL receptor-deficient mice. 7<sup>th</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Denver, CO, April 27 – 29, 2006.
19. Li, X.-A., Guo, L., **Asmis, R.** and Smart, E.J. Scavenger receptor BI prevents nitric oxide-induced cytotoxicity and endotoxin-induced animal death. AHA Scientific Sessions, Dallas, TX, November 13 – 16, 2005.
20. Liu, B., Begley, J.G., Xu, L. and **Asmis, R.** Effects of mitochondrial permeability transition pore inhibitors bongkrekic acid and cyclosporin A on OxLDL-induced macrophage death. 12<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, Austin, TX, November 16 – 20, 2005.
21. Wang, Y., Begley, J.G., Xu, L., Stevens, J. and **Asmis, R.** Role for alkenals in glutathione depletion macrophage injury induced by OxLDL. 6<sup>th</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Washington, D.C., April 27 – 30, 2005.
22. **Asmis, R.**, Wang, Y., Xu, L., Mieyal, J.J. and Begley, J.G. A novel thiol oxidation-based mechanism for adriamycin-induced cell injury in human macrophages. Gordon Conference on Oxidative Stress and Disease, Ventura, CA, March 13 – 17, 2005.
23. Wang, Y., Xu, L., Begley, J.G. and **Asmis, R.** Role of glutathione efflux in OxLDL-induced macrophage injury. 11<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, St. Thomas, Virgin Islands, November 17 – 21, 2004.
24. **Asmis, R.**, VanZant, G.E. and Fanti, P. The isoflavone genistein blocks the lipopolysaccharide (LPS)-induced expression of tumor necrosis factor- $\alpha$  (TNF $\alpha$ ) in peripheral blood monocyctic cells (PBMCs) from ESRD on maintenance hemodialysis (HD). American Society of Nephrology 37<sup>th</sup> Annual Meeting & Scientific Exposition, St. Louis, MO, October 29 - November 1, 2004.
25. Fanti, P., **Asmis, R.**, Fraer, M., Stephenson, T.J., Sawaya, P.B. and Franke, A.A. Improvement of inflammation and malnutrition correlates with the blood level of soy isoflavones following dietary intervention in hemodialysis (HD) patients. American Society of Nephrology 37<sup>th</sup> Annual Meeting & Scientific Exposition, St. Louis, MO, October 29 - November 1, 2004.
26. Wang, Y., Begley, J.G., Xu, L. and **Asmis, R.** A role for the glutathione reductase/ glutaredoxin system in protecting macrophages from OxLDL-induced cell injury. 5<sup>th</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, San Francisco, CA, May 5 – 8, 2004.

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28. Begley, J.G. and **Asmis, R.** Aggregation-induced uptake of oxidized LDL protects human monocyte-derived macrophages from cell death. 10<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, Seattle, Washington, November 20 – 24, 2003.
29. Rossi, R.M., Xu, L. and **Asmis, R.** Adriamycin promotes macrophage dysfunction and impaired wound healing in mice. 10<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, Seattle, Washington, November 20 – 24, 2003.
30. **Asmis, R.** and Begley, J.G. Adriamycin promotes superoxide formation, glutathione oxidation and cell lysis in human macrophages. A role for glutathione reductase. 4<sup>th</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Washington, D.C., May 8 – 10, 2003.
31. Fraer, M., **Asmis, R.**, Stevens, J., Stephenson, T.J., Tsukamoto, Y., Morishita, T., Nomura, M. and Fanti, P. Ethnic diets do not affect the short-term reproducibility of circulating homocysteine levels in US and Japanese hemodialysis patients. J. Am. Soc. Nephrol., 13:486A, 2002. American Society of Nephrology 35<sup>th</sup> Annual Meeting & Scientific Exposition, Philadelphia, Pennsylvania, November 1 – 4, 2002.
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33. **Asmis, R.** Macrophage death induced by oxidized LDL does not require caspase-3 activation. South Eastern Lipid Research Conference, Pine Mountain, Georgia, October 3 – October 6, 2002.
34. **Asmis, R.** Macrophage death induced by oxidized LDL does not require caspase-3 activation. Gordon Research Conference on Cell Death, Waterville, Maine, June 16 – June 21, 2002.
35. **Asmis, R.** and Begley, J.G. A role for glutathione reductase in OxLDL-induced macrophage Oncosis. Meeting of the SVE, SGEF, SFEFS, Berne, Switzerland, June 14, 2002.
36. **Asmis, R.** and Begley, J.G. A role for glutathione reductase in OxLDL-induced macrophage Oncosis. 3<sup>rd</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Salt Lake City, Utah April 6 – 8, 2002.
37. Post, S., Glass, C., Rice, S., Nikolic, D. and **Asmis, R.** Regulation of class A scavenger receptor-mediated cell adhesion by G<sub>i/o</sub> signaling pathways. 3<sup>rd</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Salt Lake City, Utah April 6 – 8, 2002.
38. Rice, S., Glass, C., **Asmis, R.**, and Post, S. Use of an inducible expression system to examine the role of class A scavengers in cell adhesion. Cardiovascular Research Day, University of Kentucky, October 13, 2001.
39. **Asmis, R.** Oxidized LDL-Induced macrophages lysis is preceded by the collapse of the intracellular GSH/GSSG ratio and the loss of ATP. 2<sup>nd</sup> Annual Conference on Arteriosclerosis, Thrombosis and Vascular Biology, Arlington, VA, May 11 – 13, 2001.
40. Wintergerst, E.S., Jelk, J., Rahner, C. and **Asmis, R.** Oxidized low density lipoprotein-induced apoptosis in human monocyte-derived macrophages involves CD36 and activation of caspase-3. Cardiovascular Research Day, University of Kentucky, October 27, 2000.
41. **Asmis, R.** and Jelk, J. Foam cell formation reduces cellular vitamin E and increases the susceptibility of human macrophages to lysis by oxidized LDL. XII<sup>th</sup> International Symposium on Atherosclerosis, Stockholm, Sweden, June 25 – 29, 2000.
42. **Asmis, R.**, Jelk, J. Wintergerst, E.S. Stark, Ch. and Brawand, F. Oxidized LDL triggers the lysis of human macrophages concurrently to but independent of the induction of apoptosis by depleting

- intracellular ATP. XII<sup>th</sup> International Symposium on Atherosclerosis, Stockholm, Sweden, June 25 – 29, 2000.
43. Heider, H. Gough, P.J., Greaves, D.R. and **Asmis, R.** Scavenger receptor A1, co-expressed in COS cells with Acyl-coenzym A-acyl transferase, enhances cholesteryl ester accumulation in response to acetylated LDL. XII<sup>th</sup> International Symposium on Atherosclerosis, Stockholm, Sweden, June 25 – 29, 2000.
  44. Wintergerst, E.S. and **Asmis, R.** Impact of lymphocytes on the differentiation of blood mononuclear phagocytes. XII<sup>th</sup> International Symposium on Atherosclerosis, Stockholm, Sweden, June 25 – 29, 2000.
  45. **Asmis, R.** Wintergerst, E.S. and Jelk, J. Oxidized LDL concurrently induces apoptosis and loss of membrane integrity in human macrophages. Society for Leukozyte Biology, 15<sup>th</sup> International Congress, Cambridge, United Kingdom, September 22 - September 26, 1999.
  46. Heider, H. and **Asmis, R.** Adenoviral and lipid-mediated gene transfer to human monocyte-derived macrophages and COS-7 cells. 26<sup>th</sup> Meeting of the Federation of European Biochemical Societies, Nice, France, June 19 – June 24, 1999.
  47. **Asmis, R.** Wintergerst, E.S. and Jelk, J. Oxidized LDL concurrently induces by two independent pathways apoptosis and loss of membrane integrity in human macrophages. Gordon Research Conference on Vascular Cell Biology, Plymouth, New Hampshire, June 20 – June 25, 1999.
  48. **Asmis, R.** Wintergerst, E.S. and Jelk, J. Oxidized LDL concurrently induces by two independent pathways apoptosis and loss of membrane integrity in human macrophages. European Society For Clinical Investigations, 33<sup>rd</sup> Annual Scientific Meeting, Phagozyte Workshop, Milano, Italy, April 7 – April 10, 1999.
  49. **Asmis, R.** and Wintergerst, E.S. Apoptosis induced by oxidized low density lipoprotein in human monocyte-derived macrophages might involve oxidized thiols on apolipoprotein B. 70<sup>th</sup> European Atherosclerosis Society Congress, Geneva, Switzerland, September 6 - September 9, 1998.
  50. Heider, H. and **Asmis, R.** Oxidized LDL suppresses signaling events in serum-deprived human macrophages. 70<sup>th</sup> European Atherosclerosis Society Congress, Geneva, Switzerland, September 6 - September 9, 1998.
  51. **Asmis, R.** Wintergerst, E.S. and Rahner, C. Apoptosis of human macrophages induced by oxidized LDL is mediated by CD36 and might involve oxidized thiols on apolipoprotein B-100. Gordon Research Conference on Vascular Cell Biology, Plymouth, New Hampshire, June 28 – July 3 1998.
  52. Mohacsi, P. Plüss, K., Tschanz, H.U., Gaschen, S., **Asmis, R.** and Sponer, G. Does carvedilol inhibit aortal smooth muscle cell proliferation? 47<sup>th</sup> Annual American College of Cardiology Scientific Session, Atlanta, Georgia, March 29 - April 1, 1998.
  53. Wintergerst, E.S. Rahner, C. and **Asmis, R.** Oxidized Low Density Lipoprotein-Induced Apoptosis in Human Monocyte-Derived Macrophages Involves CD36. 17th European workshop on the Cell Biology of Phagocytes, Catania, Italy, May 27-31, 1998.
  54. **Asmis, R.** and Wintergerst, E.S. New Insights into the Cytotoxicity of Oxidized Low Density Lipoprotein in Human Monocyte-Derived Macrophages. *Atherosclerosis* 134 (1,2), p. 220, XI<sup>th</sup> International Symposium on Atherosclerosis, Paris, France, October 5 - 9, 1997.
  55. **Asmis, R.** and Wintergerst, E.S. Dehydroascorbic Acid Prevents Apoptosis Induced by Oxidized Low Density Lipoprotein in Human Monocyte-Derived Macrophages. Gordon Conference, Meridan, New Hampshire, June 15 -20, 1997.
  56. **Asmis, R.** and Wintergerst, E.S. Dehydroascorbic acid prevents apoptosis induced by oxidized low density lipoprotein in human monocyte-derived macrophages. 16th European workshop on the Cell Biology of Phagocytes, Irsee, Germany, March 27 - 31, 1997.

57. **Asmis, R.** In vitro supplementation of vitamin E increases clearance of modified LDL by macrophages in a fully autologous model of human foam cell formation. 30<sup>th</sup> Annual Meeting of the European Society of Clinical Investigations, Interlaken, Switzerland, April 24 - 27, 1996.
58. **Asmis, R.,** Randriamampita, C., Tsien, R.Y. and Dennis, E.A. Role of intracellular Ca<sup>2+</sup>, inositol-1,4,5-trisphosphate and additional signaling in the PAF stimulation of PGE<sub>2</sub> formation in P388D<sub>1</sub> macrophage-like cells Keystone Symposia: Lipid Second Messengers, Taos, New Mexico, February 26 - March 4, 1994.
59. **Asmis, R.** and Dennis, E.A. Signal transduction in P388D<sub>1</sub> macrophage-like cells: Two distinct pathways of priming? 8<sup>th</sup> International Conference on Second Messengers and Phosphoproteins, Glasgow, Scotland, UK, August 3-8 1992.
60. **Asmis, R.** and Dennis, E.A. Regulation of PAF receptor-mediated prostaglandin E<sub>2</sub> formation in LPS primed P388D<sub>1</sub> macrophage-like cells. *J Cell Biochem* supplement 16C: Keystone Symposia on Molecular and Cellular Biology, CB300 (1992).
61. Glaser, K.B., **Asmis, R.** and Dennis, E.A. LPS priming of P388D<sub>1</sub> macrophage-like cells and PAF receptor regulation of phospholipase A<sub>2</sub>, *FASEB J* **4** (2), 1265 (1990).
62. Mueller, T., **Asmis, R.** and Joerg, A. Medium and stimulus-dependent eicosanoid formation in horse eosinophils. 6<sup>th</sup> International Conference on Prostaglandins and Related Compounds, Florence, Italy, 191 (1986).
63. **Asmis, R.** and Joerg, A. Studies on the formation of platelet-activating-factor (PAF) and leukotrienes in eosinophils. 6<sup>th</sup> International Conference on Prostaglandins and Related Compounds, Florence, Italy 291 (1986).
64. **Asmis, R.,** Mueller, T. and Joerg, A. The formation of platelet-activating-factor (PAF) and leukotrienes (LT) in eosinophils: Are these correlated phenomena? *Experientia* **42** (6), 666 (1986).

### **Invited Presentations**

1. Thiol-oxidative Stress, Macrophage Recruitment and Atherosclerosis. Keynote Lecture, Annual Meeting of the Association of Clinical Scientists, San Antonio, May 14, 2010.
2. A Tale of Thiols and Noxes. New Insights Into the Redox Regulation of Monocytes and Macrophages. J.W. Goethe Universität Frankfurt, Germany, October 22, 2009.
3. The Macrophage Thiol Redox State. Its Role in Monocyte Recruitment, Atherosclerosis and Other Chronic Inflammatory Diseases. Department of Biochemistry, University of Texas Health Science Center at San Antonio, September 1, 2009.
4. The Macrophage Thiol Redox State. Its Role in Monocyte Recruitment, Atherosclerosis and Other Chronic Inflammatory Diseases. Whitaker Cardiovascular Institute, Boston University, April 21, 2009.
5. The Macrophage Thiol Redox State and Its Role in Atherosclerosis and Other Chronic Inflammatory Diseases. ERAHC, University of Texas Health Science Center at San Antonio, February 25, 2009.
6. Thiol Redox Signaling and Macrophage Dysfunction: A New Paradigm for Chronic Inflammatory Diseases. Department of Biology, University of Texas at San Antonio, October 27, 2008.
7. Thiol Redox Signaling and Macrophage Dysfunction: A New Paradigm for Chronic Inflammatory Diseases. Department of Molecular Medicine, University of Texas Health Science Center at San Antonio, September 22, 2008.



8. Thiol Redox Signaling in Macrophage Dysfunction and Atherogenesis. Barshop Institute for Longevity and Aging Studies, University of Texas Health Science Center at San Antonio, April 9, 2008.
9. Thiol Redox Signaling and Macrophage Dysfunction in Chronic Inflammatory Diseases. Department of Cellular and Structural Biology, University of Texas Health Science Center at San Antonio, January 14, 2008.
10. Nox4 Expression in Human Monocyte-Derived Macrophages: Upregulation by Oxidized LDL via a MEK-ERK1/2-dependent Pathway. AHA Scientific Sessions 2007, Orlando, Florida, November 4 – 7, 2007.
11. Thiol Redox Signaling, Macrophage Death and Atherosclerosis. Division of Cardiology, University of Texas Health Science Center at San Antonio, September 11, 2007
12. Thiol Oxidative Stress in Macrophage Injury and Atherosclerotic Lesion Development in LDL Receptor-Deficient Mice. 76<sup>th</sup> Congress of the European Atherosclerosis Society, Helsinki, Finland, June 10 – 13, 2007
13. Nutrition Education in San Antonio. School of Allied Health Sciences, University of Texas Health Science Center at San Antonio, May 2, 2007
14. Increased Expression of Mitochondrial and Cytosolic Glutathione Reductase Prevents Mitochondrial Hyperpolarization Induced by OxLDL. 13<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, Denver, Colorado, November 15 – 19, 2006.
15. The Role of Thiol Oxidative Stress in Macrophage Dysfunction. Department of Biochemistry, University of Texas Health Science Center at San Antonio, May 5, 2006
16. Antioxidants and Atherosclerosis: The Role of Glutathione in Macrophage Dysfunction and Cell Death. Department of Medicine, University of Texas Health Science Center at San Antonio, November 29, 2005.
17. A Central Role for the Glutathione-Glutaredoxin System in OxLDL-Induced Macrophage Injury. 12<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, Austin, Texas, November 16 – 20, 2005.
18. The Glutathione-Dependent Antioxidant System: Thiol Oxidation and Cell Dysfunction, Sanders-Brown Center on Aging, University of Kentucky, April 15, 2005
19. Thiol Oxidation in Macrophage (Dys)Function and Cell Death, Cardiovascular Research Seminar Series, University of Berne, December 21, 2004.
20. A Novel Thiol Oxidation-Based Mechanism for Adriamycin-Induced Cell Injury in Human Macrophages. 11<sup>th</sup> Annual Meeting of the Society for Free Radical Biology and Medicine, St. Thomas, Virgin Islands, November 17 – 21, 2004
21. Thiol Oxidation, Cell (Dys)Function and Cardiovascular Disease. University of Texas Health Science Center at San Antonio, September 23, 2004.
22. Glutathione Reductase and Macrophage Death. A New Therapeutic Target in Atherosclerosis? Cardiovascular Research Unit, University of Berne, Switzerland, December 16, 2002.
23. Macrophage Death and Atherosclerosis: A Role for Glutathione Reductase? Gill Heart Institute, University of Kentucky, December 6, 2002.
24. Oxidative Stress and Cardiovascular Disease. New Approaches to an Old Problem, Grand Rounds, Department of Medicine, University of Kentucky, October 16, 2002.
25. Oxidized LDL and Macrophage Death: Apoptosis or Oncosis? Department of Physiology, University of Kentucky, December 14, 2000.

26. Vitamin E and Atherosclerosis, Center for Nutritional Sciences, University of Kentucky, October 21, 2000.
27. Schützt Dehydroascorbinsäure vor Arteriosklerose? Swiss Foundation for Nutrition Research, ETH Zürich, October 15, 1999.
28. Macrophage-derived Foam Cells in Atherogenesis: The good, the bad, ... or just ugly? Gill Heart Institute, University of Kentucky, March 2, 1999.
29. New Insights into the Cytotoxicity of Oxidized Low Density Lipoprotein in Human Monocyte-derived Macrophages, Eleventh Annual Conference of the European Macrophage Study Group, Lübeck, Germany, September 30 - October 2, 1997.
30. Role of Intracellular  $\text{Ca}^{2+}$ , Inositol-1,4,5-trisphosphate and Additional Signaling in the PAF Stimulation of  $\text{PGE}_2$  Formation in  $\text{P388D}_1$  Macrophage-like Cells. Biozentrum, University of Basel, Switzerland, July 1993
31. Role of Intracellular  $\text{Ca}^{2+}$ , Inositol-1,4,5-trisphosphate and Additional Signaling in the PAF Stimulation of  $\text{PGE}_2$  Formation in  $\text{P388D}_1$  Macrophage-like Cells. Institute of Biochemistry and Molecular Biology, University of Berne, Switzerland, June 1992
32. Signal Transduction in LPS-primed and PAF-stimulated  $\text{P388D}_1$  Macrophage-like Cells, Institut de Recherches Medicales, University of Geneva, Switzerland, July 1991
33. Role of Calcium in the PAF Stimulation of  $\text{PGE}_2$  Formation in  $\text{P388D}_1$  Macrophage-like Cells. Washington Spring Symposium, Washington, DC, May 13 - 17, 1991
34. Role of Phospholipase  $\text{A}_2$  in Prostaglandin Production in Macrophage-like Cell Lines, Institute for Research on Aging, University of California at San Diego, La Jolla, March 7, 1990