

## CURRICULUM VITAE

**NAME:** *Hassan Ahmad*

**TITLE AND AFFILIATION:**

*Professor of Biochemistry*  
*Department Chair*  
*Assistant Director,*  
*University Honors Program*  
Department of Chemistry  
University of Texas-Pan American  
Edinburg, Texas 78539

2002- present

2003- present

2009-present

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**EDUCATION:**

**Ph.D. (Biochemistry)**  
Department of Chemistry  
Aligarh Muslim University, Aligarh, India

1978-1983

**M.Phil. (Biochemistry)**  
Department of Chemistry  
Aligarh Muslim University, Aligarh, India

1978-1980

**M.Sc. (Biochemistry)**  
Department of Chemistry  
Aligarh Muslim University, Aligarh, India

1976-1978

**B.Sc. (Chemistry)**  
Department of Chemistry  
Aligarh Muslim University, Aligarh, India

1973-1976

**AWARDS:**

Outstanding UT-Pan American Faculty Award  
for Professional Achievement

Sept. 1999

Leadership Award for the UT-Pan American Student-Athletes	Feb. 2000
UTPA Honors Program Outstanding Service Award	May 2000
1999-2000 College of Science and Engineering Research Excellence Award	Aug. 2000
UT-Pan American Provost Scholar's Award	April 2001
Provost's Award for Service Excellence	Aug. 2002
UT-System Chancellor's Outstanding Teaching Award	Aug. 2003

#### **POST-GRADUATE TRAINING:**

<b>Post-Doctoral Fellow</b> (Prof. Dr. Mohammed Saleemuddin; Advisor) Department of Biochemistry Aligarh Muslim University Aligarh, India	1984-1985
<b>Post-Doctoral Fellow</b> (Prof. Dr. Heinrich Kauss; Mentor) Deutsches Forschungsgemeinschaft University of Kaiserslautern Kaiserslautern, Federal Republic of Germany	1985-1986
<b>Post-Doctoral Fellow</b> (Prof. Dr. Yogesh C. Awasthi; Mentor) Department of Human Biol. Chem. & Genet. University of Texas Medical Branch Galveston, Texas	1986-1990

#### **ACADEMIC AND PROFESSIONAL APPOINTMENTS:**

<b>Program Director</b> HHMI , Science Education Program Department of Chemistry UT-Pan American, Edinburg, Texas 78539	2004-present
<b>Department Chair</b> Department of Chemistry UT-Pan American, Edinburg, TX 78539	2003-present
<b>Professor of Biochemistry</b>	2002-present

Department of Chemistry UT-Pan American, Edinburg, Texas 78539 <b>Associate Professor of Biochemistry</b> Department of Chemistry UT-Pan American, Edinburg, Texas 78539	1996-2002
<b>Interim Department Chair</b> Department of Chemistry UT-Pan American, Edinburg, Texas 78539	Sept.00-Dec.01
<b>Program Coordinator, South Texas Doctoral Bridge Program</b> Department of Chemistry UT-Pan American, Edinburg, Texas 78539	1999-2008
<b>Member, Board of Directors</b> South Texas Technology Education Chartered High School, Weslaco, Texas-78596	2000-present
<b>Graduate Faculty</b> UT-Pan American, Edinburg, Texas 78539	1996-present
<b>Graduate Faculty</b> Texas A&M University, Kingsville, Texas 78363	1998-present
<b>Assistant Professor of Biochemistry</b> Department of Chemistry UT-Pan American, Edinburg, Texas 78539	1992-1996
<b>Research Assistant Professor</b> Department of Human Biol. Chem. & Genet. UT-Medical Branch, Galveston, Texas	1990-1992

#### COMMITTEE MEMBERSHIP:

##### (a) National Committees:

<b>Member</b>	Minority Education Sub-committee Society of Toxicology	1997-1999
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##### (b) Institutional Committees:

<b>Chair</b>	Faculty Research Council University of Texas Pan American	1999-2000
<b>Chair</b>	Environmental Health and Occupational Safety Council University of Texas Pan American	1999-2002

<b>Chair</b>	Advisory Committee for MBRS Program University of Texas Pan American	2001-2002
<b>Member</b>	Provost's Academic Leadership Committee	2006-present
<b>Member</b>	College of Science & Engineering executive Committee	2006-present
<b>Member</b>	Search Committee Director, Department of Environmental Health & Safety	2003-2004
<b>Member</b>	Faculty Research Council University of Texas Pan American	1997-2000
<b>Member</b>	Environmental Health and Occupational Safety Council University of Texas Pan American	1996-present
<b>Member</b>	Radiation Safety/Biohazard Committee University of Texas Pan American	1996-present
<b>Member</b>	Advisory committee for MBRS Program University of Texas Pan American	1995-1998
<b>Member</b>	Externally Funded Grants and Contracts Committee University of Texas Pan American	1994-1995
<b>Member</b>	Faculty Senate sub-committee on University Budget University of Texas Pan American	1993-1994
<b>Alternate Member</b>	New Science Building Task Force University of Texas Pan American	1995-1996
<b>Member</b>	University Library Committee University of Texas Pan American	1993-1997

(c) Other Committees:

<b>Chair</b>	Search Committee for Department of Chemistry Professor/Chair Position University of Texas Pan American	2000-2001
<b>Chair</b>	Search Committee for Department of Chemistry Lecturer Position University of Texas Pan American	1999-2000
<b>Chair</b>	Department of Chemistry	1996-1999

Faculty Tenure and Promotion Committee  
University of Texas Pan American

**SEMINARS:**

(a) Local, National, and International:

<i>Application of Bradford's protein reagent for the assay of protein and proteases</i> University of Kaiserslautern, West Germany	1985
<i>Glutathione S-transferases and detoxification mechanisms</i> Pathology Department Seminar Series University of Texas Medical Branch Galveston, Texas	1989
<i>Structure of human placental glutathione S-transferase</i> Mini-Symposium Department of Human Biol. Chem. & Genet. University of Texas Medical Branch, Galveston, Texas	1990
<i>Role of Glutathione-S transferases in cellular defense mechanism</i> Department of Biochemistry Aligarh Muslim University, India,	1992
<i>Dietary Antioxidants and their Role in Prevention of Cancer</i> 1999 Faculty Colloquium Series University of Texas-Pan American, Edinburg, TX	1999
<i>Dietary Antioxidants and Prevention of Cancer</i> The Physical Science Department South Texas Community College, McAllen, TX	2001
<i>Role of Phytochemicals in Cancer Prevention</i> College of Agriculture, GB Pant University of Agricultural and Technology Pantnagar, India	2002
<i>Induction of Glutathione-S transferases and Cancer Prevention</i> Department of Biochemistry, Aligarh Muslim University, Aligarh, India.	2002

**PROFESSIONAL SOCIETY MEMBERSHIP:**

<b>Member</b>	Association of Research in Vision and Ophthalmology	1989-2000
<b>Member</b>	American Association for Cancer Research	1993-present

## BIBLIOGRAPHY:

### (a) Published Refereed Articles:

1. Saleemuddin, M., **Ahmad, H.** and Husain, A. A simple, rapid and sensitive procedure for the assay of endoproteases using Coomassie Blue G-250. *Anal. Biochem.*, 105: 202-205, 1980.
2. **Ahmad, H.** and Saleemuddin, M. Protein estimation in plant tissue homogenates using Coomassie Blue G-250 assay. *Ind. J. Exptl. Biol.*, 19: 280-282, 1981.
3. **Ahmad, H.** and Saleemuddin, M. Bromophenol Blue Protein assay: Improvement in Buffer tolerance and adaptation for measurement of proteolytic activity. *J. Biochem. Biophys. Methods*, 7: 335-343, 1983.
4. Saleemuddin, M. and **Ahmad, H.** Protein estimation using Coomassie Blue G-250 and related dyes. *J. Sci. Indust. Res.*, 43: 324-328, 1984.
5. **Ahmad, H.** and Saleemuddin, M. A Coomassie Blue binding assay for the micro-determination of immobilized protein. *Anal. Biochem.*, 148: 533-541, 1985.
6. Awasthi, Y.C., Singh, S.V., **Ahmad, H.** and Moller, P.C. Immunocytochemical evidence that GST1, GST2 and GST3 gene loci for glutathione S-transferase are expressed in human lung. *Lung*, 165: 323-332, 1987.
7. **Ahmad, H.**, Singh, S.V. and Awasthi, Y.C. Drug metabolizing enzymes in rat lens. *Lens Res.*, 4: 283-294, 1987.
8. LaBelle, E.F., Singh, S.V., **Ahmad, H.**, Wronski, L. Srivastava, S.K. and Awasthi, Y.C. A novel dinitrophenyl glutathione stimulated ATPase is present in human erythrocyte membrane. *FEBS Letts.*, 228: 53-56, 1988.
9. Awasthi, Y.C., Singh, S.V., **Ahmad, H.**, Moller, P.C. and Gupta, V. Expression of glutathione S-transferase isoenzymes in human small cell lung cancer lines. *Carcinogenesis*, 9: 89-93, 1988.
10. Singh, S.V., Haque, A.K., **Ahmad, H.**, Medh, R.D. and Awasthi, Y.C. Glutathione S-transferase isoenzymes in human lung tumors. *Carcinogenesis*, 9: 1681-1685, 1988.
11. Singh, S.V., **Ahmad, H.**, Kurosky, A. and Awasthi, Y.C. Purification and characterization of unique glutathione S-transferase from human muscle. *Arch. Biochem. Biophys.*, 264: 13-22, 1988.
12. **Ahmad, H.**, Singh, S.V., Ansari, G.A.S., Medh, R.D., Kurosky, A. and Awasthi, Y.C. Differential expression of  $\gamma$ ,  $\alpha$ , and B classes of isoenzymes of glutathione S-transferase in bovine lens, cornea and retina. *Arch. Biochem. Biophys.*, 266: 416-426, 1988.

13. **Ahmad, H.**, Singh, S.V., Srivastava, S.K. and Awasthi, Y.C. Glutathione S-transferase and glutathione peroxidase of bovine iris and ciliary body: characterization of isoenzymes. *Current Eye Res.*, 8: 175-184, 1989.
14. Gupta, V., Singh, S.V., **Ahmad, H.**, Medh, R.D. and Awasthi, Y.C. Glutathione and glutathione S-transferase in human plasma cell line resistant to melphalan. *Biochem. Pharmacol.*, 38: 1993-2000, 1989.
15. Singh, S.V., Nair, A., **Ahmad, H.**, Awasthi, Y.C. and Krishan, A. Glutathione S-transferase and glutathione peroxidase in doxorubicin-resistant murine leukemic P388 cells. *Biochem. Pharmacol.*, 38: 3505-3510, 1989.
16. Wang, J., **Ahmad, H.**, Moller, P.C. and Awasthi, Y.C. Differential expression of glutathione S-transferase isoenzymes in porcine aorta smooth muscle and endothelial cells. *Clin. Chem. Enzy. Comms.*, 2: 97-106, 1989.
17. Awasthi, Y.C., Singh, S.V., **Ahmad, H.**, Wronski, L.W., Srivastava, S.K. and LaBelle, E.F. ATP dependent primary active transport of xenobiotics-glutathione conjugates by human erythrocyte membrane. *Mol. Cell. Biochem.*, 91: 131-136, 1989.
18. **Ahmad, H.**, Medh, R.D., Singh, S.V., Caccuri, A.M., Ansari, G.A.S. and Awasthi, Y.C. Anionic glutathione S-transferase of human erythrocytes, placenta and lung: Evidence for structural differences. *Enzyme*, 42: 129-135, 1989.
19. Singh, S.V., **Ahmad, H.**, and Krishan, A. Expression of glutathione S-transferases in human bladder cancer cell lines. *Biochem. Pharmacol.*, 39: 1817-1820, 1990.
20. Gupta, S., **Ahmad, H.**, Haque, A.K. and Awasthi, Y.C. Glutathione S-transferases of human lung: Evidence that two distinct : type subunits are expressed differentially in human population. *Clin. Chem. Enzy. Comms.*, 3: 115-124, 1990.
21. **Ahmad, H.**, Wilson, D.E., Fritz, R.R., Singh, S.V., Medh, R.D., Nagle, T.G., Awasthi, Y.C. and Kurosky, A. Primary and secondary structural analysis of glutathione S-transferase from human placenta. *Arch. Biochem. Biophys.*, 278: 398-408, 1990.
22. Singhal, S.S., Gupta, S., **Ahmad, H.**, Sharma, R. and Awasthi, Y.C. Characterization of a novel  $\mu$  class anionic glutathione S-transferase isoenzyme from human liver. *Arch. Biochem. Biophys.*, 279: 45-53, 1990.
23. Sharma, R., Gupta, S., **Ahmad, H.**, Ansari, G.A.S. and Awasthi, Y.C. Stimulation of a human membrane ATPase by glutathione conjugates. *Toxicol. Applied Pharmacol.*, 104: 421-428, 1990.
24. Sharma, R., Gupta, S., Singh, S.V., Medh, R.D., **Ahmad, H.**, LaBelle, E.F. and Awasthi, Y.C. Purification and characterization of dinitrophenylglutathione ATPase of human erythrocyte and

its expression in other tissues. *Biochem. Biophys. Res. Commun.*, 171: 155-161, 1990.

25. Sharma, R., Gupta, S., Singhal, S.S., **Ahmad, H.**, Haque, A.K. and Awasthi, Y.C. Independent segregation of glutathione S-transferase and fatty acid ethyl ester synthase from pancreas and other tissues. *Biochem. J.*, 275: 507-513, 1991.
26. Singhal, S.S., Tiwari, N.K., **Ahmad, H.**, Srivastava, S.K. and Awasthi, Y.C. Purification and characterization of glutathione S-transferase from sugarcane (*Saccharum officinarum* L.) leaves. *Phytochemistry*, 30: 1409-1414, 1991.
27. Singhal, S.S., **Ahmad, H.**, Sharma, R., Gupta, S., Haque, A.K., and Awasthi, Y.C. Purification and characterization of human muscle glutathione S-transferase .. *Arch. Biochem. Biophys.*, 285: 64-73, 1991.
28. Awasthi, Y.C., Singhal, S.S., Gupta, S., **Ahmad, H.**, Zimniak, P., Radomska, A., Lester, R. and Sharma, R. Purification and characterization of an ATPase from human liver which catalyzes ATP hydrolysis in presence of the conjugates of bilirubin, bile acids and glutathione. *Biochem. Biophys. Res. Commun.*, 175: 1090-1096, 1991.
29. Singhal, S.S., Sharma, R., Gupta, S., **Ahmad, H.**, Zimniak, P., Radomska, A., Lester, R. and Awasthi, Y.C. The anionic conjugates of bilirubin and bile acids stimulate ATP hydrolysis by S-(Dinitrophenyl) glutathione ATPase of human erythrocyte. *FEBS Lett.*, 281: 255-257, 1991.
30. Rausch, U., **Ahmad, H.**, Maier, B. and Kauss, H. Proteinase nature of an enzyme capable of activating the galactosyltransferase involved in volume regulation of *Poteroiochromonas malhamensis*. *Physiol. plant*, 82:93-98, 1991.
31. **Ahmad, H.**, Singh, S.V. and Awasthi, Y.C. Inhibition of bovine lens glutathione S-transferase by hematin, bilirubin and S-Bromosulphophthalein. *Lens and Eye Toxicity Research*, 8:431-441, 1991.
32. Medh, R., Saxena, M., Singhal, S.S., **Ahmad, H.** and Awasthi, Y.C. Characterization of a novel glutathione S-transferase isoenzyme from mouse lung and liver having structural homology to rat GST 8-8. *Biochemical J.*, 278:793-799, 1991.
33. Awasthi, Y.C., Sharma, R., Mansour, A.M. and **Ahmad H.** Effect of *t*-butylated hydroxytoluene on glutathione-linked detoxification mechanisms in rat ocular tissues *in vivo* and *in vitro*. In *Ocular Pharmacology: Recent Advances*, (Gupta S.K. ed.) pp 39-48, Paryus Publishing House, New Delhi, 1991.
34. Singhal, S.S., Gupta, S., Saxena, M., Sharma, R., **Ahmad, H.**, Ansari, G.A.S. and Awasthi, Y.C. Purification and characterization of glutathione S-transferases from rat pancreas. *Biochem. Biophys. Acta*, 1079:285-292, 1991.
35. Saxena, M., Sharma, R., Singhal, S.S., **Ahmad, H.**, and Awasthi, Y.C. The effect of doxorubicin on the transport of glutathione conjugates from human erythrocytes. *Biochem.*

*Archives*, 7:285-292, 1991.

36. **Ahmad, H.**, Sharma, R., Mansour, A.M. and Awasthi, Y.C. *t*-butylated hydroxytoluene enhances the intracellular levels of glutathione and related enzymes *in vitro* rat lens organ culture. *Exptl. Eye Res.*, 54:41-48 1992.
37. Singhal, S.S., Saxena, M., **Ahmad, H.**, and Awasthi, Y.C. Glutathione S-transferases of mouse liver: Sex-related difference in the expression of various isoenzymes. *Biochim. Biophys. Acta*, 1116:137-146, 1992
38. Singhal, S.S., Saxena, M., Awasthi, S., **Ahmad, H.**, Sharma, R., and Awasthi, Y.C., Gender related difference in the Expression of Glutathione S-Transferase in human colon. *Biochim. Biophys. Acta*, 1171:19-26, 1992
39. Singhal, S.S., Saxena, M., **Ahmad, H.**, Awasthi, S., Haque, A. and Awasthi, Y.C. Glutathione S-transferase of human lung: Characterization and evaluation of the protective role of the  $\nabla$ -class isoenzymes against lipid peroxidation. *Arch. Biochem. Biophys.*, 299:232-241, 1992
40. Awasthi, Y.C., Saxena, M., Sharma, R., Sharma, R., Singhal, S.S., and **Ahmad, H.** Role of GSTs and Dnp-SG ATPase in protection mechanisms against oxidative stress. *Int. J. Toxicol. Occupat. environ. Hlth.*, 1:77-83, 1992
41. Awasthi, S., Ahmad, F., Sharma, R. and **Ahmad, H.** Reversed-phase chromatographic method for specific determination of glutathione in cultured malignant cells. *Journal of Chromatography*, 584:167-173, 1992
42. **Ahmad, H.**, Singhal, S.S., Saxena, M. and Awasthi, Y.C. Characterization of two novel subunits of the alpha-class glutathione S-transferases of human liver. *Biochim. Biophys. Acta*, 1161:333-336, 1993
43. Srivastava, S.K., Singhal, S.S., **Ahmad, H.**, and Awasthi, Y.C. Quantitative and Qualitative sex-related differences in glutathione S-transferases of mouse kidney. *Biochemical Arch.*, 9:73-81, 1993
44. **Ahmad, H.** Singhal, S.S. and Awasthi, S. The inhibition of the  $\nabla$ ,  $\cdot$ , and B class isoenzymes of glutathione S-transferases by sulfasalazine, 5-aminosalicylic acid and sulfapyridine. *Biochem. Arch.*, 8:355-361, 1993
45. Singhal, S.S., Saxena, M., **Ahmad, H.**, Mukhtar, H., Zaidi, S.I.M. and Awasthi, Y.C. Sex related difference in glutathione S-transferase isoenzymes of human skin. *Biochim. Biophys. Acta*, 1163:266-272, 1993
46. Sharma, R., **Ahmad, H.**, Singhal, S.S., Saxena, M., Srivastava, S.K. and Awasthi, Y.C. Comparative studies on the effect of butylated hydroxytoluene on glutathione and glutathione s-transferase in the tissues of male and female CD-1 mice. *Comp. Biochem. & Physiol.*, 105C:31-37, 1993

(d) Manuscript under Review and/or Preparation:

1. Perez, J. I., Jayaprakasha G. K., Munoz, D., Veldevia, V., Depak, V. D., **Ahmad, H.**, and Patil, B. S. (2008) Limonin methoxylation influences induction of glutathione S-transferase and quinone reductase. *Food and Chemical Toxicology (in press)*
2. Li, J., Turner, N. D., Pike, L. M. Pike, **Ahmad, H.**, Patil, B. S. Induction of Glutathione and Glutathione S Transferase by Citrus Limonoids in Mouse Tissues (Submitted to Nutrition and Cancer)
3. **Ahmad, H.**, Valdez, F and Tobola A. Differential inhibition of human Glutathione S-transferase by sulfonamides.(under preparation)
4. **Ahmad, H.**, Valdez, F., Tobola, A.S. Inhibition of human glutathione s- transferase isoenzymes by sulfonamide. (under preparation)

(e) Abstracts and Presentations in National and International Meetings:

1. Saleemuddin, M., Husain, A. and **Ahmad, H.** (1979) A highly sensitive and rapid calorimetric procedure for measurement of proteolytic activity in the secretions of gastrointestinal tract. Proc. 6th Conference of Association of Clinical Biochemist, Vishakapatnam, India.
2. **Ahmad, H.**, Husain, A. and Saleemuddin, M. (1980) A rapid, simple and highly sensitive calorimetric assay for the endoproteases using Coomassie Brilliant Blue G-250. Ind. J. Biochem. Biophys. (Suppl) 17:69.
3. **Ahmad, H.** and Saleemuddin, M. (1981) Evaluation of protein dye-binding procedures for the direct estimation of proteins in plant tissue homogenates. Ind. J. Biochem. Biophys. (suppl) 18:130.
4. **Ahmad, H.** and Saleemuddin, M. (1984) A novel micro dye binding assay for insolubilized proteins. Ind. J. Biochem. Biophys. (suppl) 21:350.
5. **Ahmad, H.**, Singh, S.V., Moller, P.C., Leal, T. and Awasthi, Y.C. (1987) Immunocytochemical localization of glutathione S-transferase isoenzymes of human lung. Fed. Proc. (suppl) 46:1492.
6. **Ahmad, H.**, Singh, S.V., Kurosky, A. and Awasthi, Y.C. (1988) Glutathione S-transferase of human muscle is distinct from the V, : and B class of glutathione S-transferase isoenzymes. FASEB J., 2:8413.
7. Medh, R.D., Caccuri, A.M., **Ahmad, H.**, Singh, S.V., Ansari, G.A.S. and Awasthi, Y.C. (1988) Interrelationship among anionic isoenzymes of human glutathione S-transferase. FASEB J., 2:8414.

47. Awasthi, S., Srivastava, S.K., Ahmad, F., **Ahmad, H.**, and Awasthi, Y.C. Interaction of glutathione S-transferase-B with ethacrynic acid and its glutathione conjugate. *Biochim. Biophys. Acta*, 1164:173-178, 1993
48. **Ahmad, H.**, Tijerina, M.T., and Tobola, A, S. Preferential overexpression of a class mu glutathione S-transferase subunit in mouse liver by myristicin. *Biochem. Biophys. Res. Commun.* 236: 825-828, 1997
49. **Ahmad, H.**, Tobola, A. S., Silva, A and Castillo, R. (1998) Glutathione S-Transferase of goat lens: Evidence for expression of only class mu isoenzymes. *Current Eye Research*, 17: 1097-1101. 1998.
50. Liu, Y., **Ahmad, H.**, Luo, Y., Gardiner, D.T., Gunasekera, R.S., McKeehan, W.L., and Patil, B.S.(2001) Citrus Pectin: Characterization and Inhibitory Effect on Fibroblast Growth Factor-Receptor Interaction *Journal of Agricultural and Food Chemistry* 49:3051-3057.
51. Tian, Q., Miller, E.G., **Ahmad, H.**, Tang, L., and Patil, B.S. (2001) Differential Inhibition of Human Cancer Cells Proliferation by Citrus Limonoids *Nutrition and Cancer* 40:180-184.
52. Liu, Y., **Ahmad, H.**, Luo, Y., Gardiner, D.T., Gunasekera, R.S., McKeehan, W.L., and Patil, B.S. (2002) Influence of Harvest Time on Citrus Pectin and its in vitro Inhibition of Fibroblast Growth Factor Signal Transduction *Journal of the Science of Food and Agriculture* 82:469-477.
53. **Ahmad, H.**, Li, J., Polson, M., Mackie, K., Quiroga, W., and Patil, B. S. (2006) Citrus limonoids and flavonoids: Enhancement of phase-II enzymes and its potential in chemoprevention. In Health Benefits of Citrus *Patil, Broadbelt, Turner, and Miller* eds. ACS Press, Washington, DC.

(b) Peer Reviewed Articles in Press:

- 1 **Ahmad, H.**, V. Valdivia, A. Cadena, E. Martinez, B. Robles, R. Patel, A. Zapata, A. Mancha, W.S. Lai, R. Gelman, and M. Amro. (2008) Myristicin: Inducer of Phase-II Drug Metabolizing Enzymes and prospective Chemoprotective agent against Cancer. *Acta Horticulturae* (in press)
- 2 Perez, J., Jayaprakasha, G.K., Valdivia, V., Munoz, D., Dandekar, D., Ahmad, H., and Patil, B. (2009) Limonin Methoxylation Influences Induction of Glutathione S-Transferase and Quinone Reductase *J of Agric Food Chem* ( in press)

(c) Peer Reviewed Articles published elsewhere:

- 1 **Ahmad, H.** (2000) Polyacrylamide Slab Gel Electrophoresis of Proteins " *PACT Presents: A Collection of PACT Participant Activities*; Terrific Science Press, Middletown, OH, at [www.terrificscience.org/PACT/pactpresents/index.htmlx](http://www.terrificscience.org/PACT/pactpresents/index.htmlx)

8. Kurosky, A., Wilson, D., Nagle, T.G. and **Ahmad, H.** (1988) Non-heroic protein/peptide sequencing in a centralized core facility. Applied Biosystems' FASEB/ASBC Protein Sequencer User Meeting, Las Vegas, NV.
9. Awasthi, Y.C., Singh, S.V., **Ahmad, H.**, Srivastava, S.K. and LaBelle, E.F. (1988) Evidence for the presence of a novel dinitrophenyl glutathione stimulated ATPase in human erythrocyte membrane. *FASEB J.*, 2:8400.
10. Awasthi, Y.C., **Ahmad, H.**, Medh, R.D., Kurosky, A. and Singh, S.V. (1988) Subunits of glutathione S-transferases are differentially expressed in bovine lens, cornea and retina. *Invest. Ophthalmol. Visual Sci. (suppl.)*, 29:99.
11. **Ahmad, H.**, Singh, S.V., Kurosky, A. and Awasthi, Y.C. (1988) Glutathione S-transferase of human muscle is distinct from the isoenzymes of GST1, GST2 and GST3 gene loci. Texas Genet. Soc. Annual Meeting, Denton, TX.
12. **Ahmad, H.**, Singh, S.V., Haque, A.K. and Awasthi, Y.C. (1989) Glutathione and related enzymes in human lung tumors. Society of Toxicology Annual meeting, The Toxicologists, 9:830.
13. Gupta, S., Leal, T., Medh, R.D., **Ahmad, H.** and Awasthi, Y.C. (1989) Expression of glutathione S-transferase isoenzymes in mouse tissues. *FASEB J.*, 3:A426.
14. **Ahmad, H.**, Medh, R.D., Singh, S.V., Awasthi, Y.C. and Gupta, V. (1989) Glutathione and related enzymes in a human plasma cell line resistant to melphalan. *FASEB J.*, 3:A640.
15. Medh, R.D., Gupta, S., Wang, J., **Ahmad, H.** and Awasthi, Y.C. (1989) Characterization of mouse lung glutathione S-transferase isoenzymes. *FASEB J.*, 3:A426.
16. Medh, R.D., **Ahmad, H.**, Singh, S.V., Gupta, V. and Awasthi, Y.C. (1989) Overexpression of glutathione S-transferase gene in a melphalan resistant plasma cell line. Texas Genet. Soc. Annual Meeting, San Antonio, TX.
17. Awasthi, Y.C., Singh, S.V., Srivastava, S.K. and **Ahmad, H.** (1989) Glutathione S-transferase isoenzymes of bovine iris and ciliary body. *Invest. Ophthalmol. Visual Sci. (suppl.)*, 30(3):333.
18. Singh, S.V., Nair, S., **Ahmad, H.**, Awasthi, Y.C. and Krishan, A. (1989) Glutathione S-transferase isoenzymes in doxorubicin sensitive and resistant cells. AACR Annual Meeting, San Francisco, CA.
19. Gupta, S., **Ahmad, H.**, Haque, A.K. and Awasthi Y.C. (1990) Glutathione S-transferase isoenzymes in lung among humans. Texas Genetic Society Annual Meeting, Austin, TX.
20. Sharma, R., Gupta, S., **Ahmad, H.**, Ansari, G.A.S. and Awasthi, Y.C. (1990) Glutathione conjugates stimulate ATP hydrolysis in membrane vesicles prepared from erythrocytes. Society of Toxicology Annual Meeting, The Toxicologist, 10: 98.

21. **Ahmad, H.**, Wilson, D.E., Fritz, R.R., Singh, S.V., Medh, R.D., Nagle, G.T., Kurosky, A. and Awasthi, Y.C. (1990) Human placental glutathione S-transferase B: Primary and secondary structural analysis. *FASEB J.*, 4:A1164.
22. Sharma, R., Gupta, S., **Ahmad, H.** and Awasthi, Y.C. (1990) Glutathione S-transferase of human pancreas. *FASEB J.*, 4:A2050.
23. Singhal, S.S., Gupta, S., **Ahmad, H.**, Sharma, R. and Awasthi, Y.C. (1990) Characterization of a novel  $\nabla$ -class anionic glutathione S-transferase isoenzyme from human liver. *FASEB J.*, 4:A1164.
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26. Awasthi Y.C., Sharma, R., Mansour, A. and **Ahmad, H.** (1990) Effect of BHT on the GSH-linked detoxification system of rat ocular tissues: Possible protective role against oxidative damage. International Symposium on Ocular Pharmacology and Therapeutics held at the Satellite meeting of International Congress of Eye Research at New Delhi, India Aug. 1990.
27. Saxena, M., **Ahmad, H.**, Singhal, S.S., Medh, R.D. and Awasthi, Y.C. (1991) Characterization of a novel glutathione S-transferase isoenzyme from mouse liver. *FASEB J.*, 5:A422.
28. Singhal, S.S., Gupta, S., **Ahmad, H.**, Sharma R. and Awasthi, Y.C. (1991) Evidence that human muscle glutathione S-transferase . does not belong to the  $\nabla$ ,  $\gamma$  or B class. *FASEB J.*, 5:A422.
29. **Ahmad, H.**, Tiwari, N., Singhal, S.S. and Awasthi, Y.C. (1991) Glutathione S-transferase of sugarcane (*Saccharum officinarum* L) leaves. *FASEB J.*, 5:A1202.
30. **Ahmad, H.**, Sharma, R. and Awasthi, Y.C. (1991) Effect of induction of glutathione-linked detoxification system on lipid peroxidation in rat lens. *Invest. Ophthalmol. Visual Sci. (suppl.)* 32:724.
31. Zaidi, S.I.A., Evans, B.N., Raza, H., Agarwal, R., **Ahmad, H.**, Awasthi, Y.C. and Mukhtar, H. (1991) Altered expression of glutathione S-transferase isozymes in murine and human skin tumors. Society for Investigative Dermatology Meeting.
32. Singhal, S.S. **Ahmad, H.**, Saxena, M., and Awasthi, Y.C. (1992) Sex-related differences in the expression of glutathione S-transferase isoenzymes in mouse liver. *FASEB J.*, 6:A1881.
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J., 6:1280.

34. Awasthi, S, Sharma, R., and **Ahmad, H.** (1992) A simple and specific procedure for the quantitation of reduced glutathione in cultured tumor cells. Annual meeting of the American Association for Cancer Research, San Diego, CA
35. **Ahmad, H.**, Singhal, S.S., Saxena, M., and Awasthi, Y.C. (1993) Primary structure of the  $\gamma$ -class glutathione s-transferase T. The FASEB J. vol. 7, A-838, 1993.
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37. Tijerina, M.T. Farooqui, M, and **Ahmad H.** (1996) Myristicin induces glutathione transferase isoenzymes in mouse tissues. Society of Toxicology Annual Meeting, The Toxicologist, 30:286.
38. Tobola, A.S., Tijerina, M.T., Castillo, R., and **Ahmad, H.** (1996) Effect of myristicin on induction of mouse liver glutathione S-transferase. Proceedings of the American Association for Cancer Research Annual Meeting Volume 37, page 386.
39. **Ahmad, H.**, Tobola, A.S. Castillo, R and Silva, A. (1996) Glutathione s-transferase of goat lens: Purification and characterization os isoenzymes. Investigative Ophthalmology and Visual Science Vol. 37 Page B623
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42. Tobola, A., Munoz, J., Valdez, F., Tanguma, R., Izaguirre, N and **Ahmad, H.** (1997) Inhibition of glutathione S-transferase pi in human cancer cell lines by sulfonamides Proceedings of the American Association of Cancer Research, Vol 38, page 395
43. **Ahmad, H.**, Valdez, F., Tobola, A.S., Izaguirre, N., Gonzalez, J., Reyes, C., Tanguma, R., and Spurgeon, D.W. (1997) catalytic and structural properties of glutathione s-transferase from cotton boll weevil. *FASEB Journal* Vol., 11, Page A1021.
44. Munoz, J. and **Ahmad, H.** (1998.) Characterization of glutathione and glutathione linked enzymes in human small cell lung cancer cells (H128) selected for resistance against cisplatin. Presented at the 89<sup>th</sup> Annual Meting of the American Association for Cancer Research, New Orleans, LA, March 28-Apr. 1, 1998 and the abstract was published in *Proceedings of the Annual Meeting of American Association for Cancer Research* Volume 39, page 259.
45. Cortez, G, N., Tobola, A. S. Ochoa, M., Sanchez, E, Saldivar, E., Reyas, C., and **Ahmad, H.**

- (1999) "The comparative effect of myristicin on glutathione and glutathione S-transferase levels in target tissues of Fischer 344 rats." Presented at the 90<sup>th</sup> Annual Meeting of American Association for Cancer Research held at Philadelphia, PA April, 10-14, 1999 and the abstract was published in *Proceedings of the Annual Meeting of American Association for Cancer Research* Volume 40, page 259.
- 46 **Ahmad, H.**, Ochoa, M., Cortez, G. N., and Tobola, A. S. (1999). "Induction of DT-diphorase and glutathione S-transferase by myristicin in Fisher 344 rat liver." Presented at the Annual Meeting of *American Society of Biochemistry and Molecular Biology* held at San Francisco, CA, May 16-20, 1999 and the abstract was published in *FASEB Journal*, Volume 13, page A1531.
  - 47 Liu, Y., **Ahmad, H.**, Gardiner, D.T., and Patil, B. S. (1999) "Best grapefruit harvest time for potential health benefits of pectin." Presented at the Annual Meeting of *American Society for Horticultural Science* to be held at Minneapolis, MN, July 28-31.
  - 48 **Ahmad, H.** Saldivar, E and Sanchez, E. (2000) "Detoxification of The Carcinogens 4-nitroquinoline 1-oxide And Benzo(a)pyrene-4,5-oxide by Myristicin Induced Glutathione S-transferases in Mouse Liver." Presented at the 91<sup>th</sup> Annual Meeting of American Association for Cancer Research held at San Francisco, CA, May April 1-4, 2000 and the abstract was published in *Proceedings of the Annual Meeting of American Association for Cancer Research* Volume 41, page 571.
  - 49 **Ahmad, H.**, Sanchez, E. Cortez, G, Saldivar, E. Ochoa L and Arguello R. (2000) "glutathione and glutathione-related enzymes in diabetic and non-diabetic human cataract lenses" presented at the XIV International Congress of Eye Research held at Santa Fe, NM Oct. 15-20.
  - 50 Q. Tian, Y. Liu, E. G.Miller, **H. Ahmad**, L.Tang and B. S. Patil (2000) "Characterization of obacunone glucosides and its potential inhibition of human cancer cells" presented at the International Conferences and Exhibition on Nutraceutrcals and Functional Foods to be held at Houston, TX, Sept. 13-17.
  - 51 Y. Liu, **H. Ahmad**, Y. Luo, D. T. Gardiner, W.L. McKeehan, and B. S. Patil (2000) "Seasonal changes in grapefruit pectin and its inhibitory effect on fibroblast growth factor signal transduction" presented at the International Conferences and Exhibition on Nutraceutrcals and Functional Foods held at Houston, TX, Sept. 13-17.
  - 52 Liu, Y., **Ahmad, H.**, Luo, Y., Gardiner, D.T., McKeehan, W.L., and Patil, B.S. (2000) "Citrus pectin Characterization of citrus pectin and inhibition of fibroblast growth factor signal transduction process presented at the International Citrus Congress held in Orlando, FL, Dec.3-7.
  - 53 Gunasekera, R.S., R.S., Kan, M., Liu, Y., McKeehan W. L., **H. Ahmad**, and B. S. Patil (2001) Activity of Citrus Pectin and other Heparan Sulfate Mimetics at the FGFR Complex. To be presented at the 11<sup>th</sup> Annual Research Conference on Diet, Nutrition and Cancer. Washington, DC. July 1-17, 2001,
  - 54 Mendoza,, A., **Ahmad, H.**, Escanlante, M.X., Sanchez, J.M., Kato, H., and Zaremba, C.M. Age-

- Strain, Gender-Related Differences on the induction of Glutathione S-transferase by Myristicin in Mice. Presented at the Annual Biomedical Research Conference for Minority Students held at Orlando, Florida. Oct. 31-Nov.03, 2001
- 55 Mackie, K. M., Ortega, P., Quiroga, W., Poliquit, D. M., and **Ahmad, H.** Induction of glutathione S- transferase by flavonoids in mice. Presented at the 94<sup>th</sup> annual national meeting of the American Association for Cancer Research in Washington DC, July 14, 2003.
  - 56 Quiroga, W., Garza, T., Cantu, M., Diaz-Miron, J., Maani, N., Patil, B., and **Ahmad, H.** Induction of Phase-II Drug Metabolizing Enzymes in Mouse Tissues by Citrus Flavonoids. Presented at the 8<sup>th</sup> International Union of Biochemistry and Molecular Biology and 2004 Annual American Society of Biochemistry and Molecular Biology (IUBMB & ASBMB) joint meeting; The FASEB Journal Vol. 18, # 8, Page C23. Boston, July12-16, 2004.
  - 57 **H. Ahmad**, J. Li, M. Polson, K. Mackie, W. Quiroga and B.S. Patil. Citrus limonoids and flavonoids: Enhancement of phase II enzymes and its potential in chemoprevention. Presented at the 228th ACS National Meeting, Philadelphia, PA, August 22-26, 2004.
  - 58 Patil B., Liu, Y., **Ahmad, H.**, and McKeehan W. Consumed byproducts of citrus are good sources of healthy pectin. Presented at the 229th ACS National Meeting, San Diego, CA, March 13-17, 2005.
  - 59 **Ahmad H.** Can Citrus Bioactive Compounds Increase Beneficial Enzyme Activity *to Prevent Cancer?* Presented at the Mini-Symposium: Citrus and Human Health, by Texas A&M Fruits and Vegetable Center Valencia, California July 13, 2006.
  - 60 **Ahmad H.** Increasing Beneficial Enzymes Activity with Citrus Compounds. Presented at the Texas Produce Convention, San Antonio, Texas. August 10-12, 2006.
  - 61 Perez, J., Jayaprakasha, G.K., **Ahmad, H.**, and Patil, B.S Potential Cancer Prevention by Citrus: Nomilin and its Deacetalated Form Induce Phase II Detoxifying Enzymes presented at the American Society For Horticultural Science Annual Conference held at Scottsdale, AZ, July 16-19 2007.
  - 62 **H. Ahmad**, V. Valdivia, A. Cadena, E. Martinez, B. Robles, R. Patel, A. Zapata, A. Mancha, W.S. Lai, R. Gelman, and M. Amro. (2008) Myristicin: Inducer of Phase-II Drug Metabolizing Enzymes and prospective Chemoprotective agent against Cancer. *Acta Horticulturae (in press)*.
  - 63 Win Shun Lai, Anthony Zapata, Annie Mancha, Barbara Robles, Rachel Gelman, G.K Jayaprakasha, Deepak V. Dandekar, Bhimanagouda S. Patil, and **Ahmad, H.**, (2008) The Effects of Limonin modification to Limonin 7-Methoxime on the induction of Phase II Enzymes in Balb/c Mice presented at the Annul meeting of the American Association for Cancer Research, to be held at San Diego, April 11-4.
  - 64 **Ahmad, H.**, Lai W. S., Robles, B., Gelman R., Mancha A.M., Barron, D, Jaggi S., Hanes, J. (2009) Myristicin prevents Benzo(a) pyrene induced carcinogenesis in mouse lung and stomach.

Presented at the annual meeting of the American Association for Cancer Research, held at Denver, CO, April 18-22, 2009.

**GRANT SUPPORT:**

(a) Active Grant Award:

**Program Director**

HHMI Undergraduate Science Education Program  
Howard Hughes Medical Institute  
9/1/2008 -8/31/2012  
Total Direct Cost **\$1,200,000**

2008-2012

**Principal Investigator**

Mechanism of Anticarcinogenic Effects of Myristicin  
NIH/National Institute of Cancer  
7/1/2004 - 6/31/2007  
Total Direct Cost **\$150,000**

2004-2009

(b) Pending Grant:

None

(c) Past Grants Award at UTPA:

**Program Director**

HHMI Undergraduate Science Education Program  
Howard Hughes Medical Institute  
9/1/2004 -8/31/2008  
Total Direct Cost **\$1,300,000**

2004-2008

**Co-Director/Mentor**

"South Texas Doctoral Bridge Program"  
NIH/National Institute of General Medical Sciences  
Total direct cost **\$596,345**, Total Direct Cost to UTPA: **\$104,925**  
*Lead Institution: Univ. of Texas Health Science Center at San Antonio*  
*Dr. Damon Herbert, PI*

2004-2008

**Co-Investigator**

"Exploring Biological Activities of Citrus Limonoids:  
A Multidisciplinary Approach"

2002-2006

USDA

Total Direct cost \$ **1,075,165**; Total Direct Cost to UT-Pan American **\$126,368**

*Lead Institution: Texas A&M Univ. Kingsville Citrus Center at Weslaco.*

*Dr. Bhimu Patil, PI*

**Co-Investigator**

2002-2004

Biological Activities of Citrus Flavonoids

THECO/ATP program

01/01/2002 - 12/31/2003

Total direct Cost **\$249,370**; Total direct Cost to UTPA **\$49,926**

*Lead Institution: University of Texas at Austin.*

*Dr. Jennifer Brodbelt, PI*

**Collaborator**

2002-2005

Collaborative Initiative to attract under representative students to Agriculture and Food Science careers.

USDA-HSI Program

01/01/2002 - 12/31/2004

Total direct Cost **\$299,734**; Total Direct Cost to UT-Pan American **\$24,734**

*Lead Institution: Texas A&M Univ. Kingsville Citrus Center at Weslaco.*

*Dr. Bhimu Patil, PI*

**Principal Investigator**

1998-2002

"Glutathione/Glutathione Transferase-Mediated Mechanisms of Drug Resistance"

National Institute of General Medical Sciences.

Total Direct Cost : **\$473,277**

**Principal Investigator:**

1994-1998

"Glutathione Transferase Mediated Mechanisms of Drug Resistance"

Department of Health and Human Services (National Institute of General Medicine) Minority Biomedical Research Support (MBRS) grant

Total Direct cost **\$379,000**

**Principal Investigator**

1994-1998

"Anticataractogenic Mechanism of Antioxidants"

National Eye Institute.

Total Direct Cost: **\$75,000**

**Principal Investigator**

1996-1998

"Role of Free radicals in Diabetic Retinopathy"

Texas Coordinating Board's Advance Research Program

Total Direct Cost: **\$30,311**

**Principal Investigator**

1992-1993

"Anticataractogenic Mechanisms of Antioxidants"

Faculty Research Council  
Total Direct Cost: \$3,500

**Principal Investigator**

1994-1995

"Evaluation of Anticarcinogenic Properties of Parsley Leaf"  
Faculty Research Council  
Total Direct Cost: \$3,500

(d) Past Grants Award at UT-Medical Branch:

**Principal Investigator**

1992-1993

"Glutathione Mediated Mechanism of Drug Resistance"  
UTMB Small Grant Program  
Total Direct Cost: \$12,500

**Co-Principal Investigator**

1990-1995

"Detoxification of Xenobiotics in Erythrocytes"  
National Institute of General Medical Sciences  
Total Direct Coat: \$475,000

**Co-Principal Investigator**

1991-1996

"Detoxification of Xenobiotics in Ocular Tissues"  
National Eye Institute  
Total Direct Cost: \$458,456

(e) Past Grants Application not funded:

**Co Investigator**

2002-2003

Prevention/Delay of Diabetic retinopathy by Antioxidants Therapy  
THECO/ARP program  
01/01/2002 - 12/31/2003  
Total Direct Cost \$49,000  
*Lead Institution: University of Texas medical Branch at Galveston*  
*Dr. Naseem Ansari, PI*

**Principal Investigator**

1998-2000

"Glutathione S-transferase -Mediated detoxification in  
in Boll Weevil (*Anthonomus grandis*)"  
USDA-National Research Initiative Competitive Grants Program.  
Total Direct Cost: \$213,102

**Co-principal Investigator**

1998-1999

"Preventing Diabetic Retinopathy by

antioxidant-based Nutritional Supplementation"  
 Texas Coordinating Board's Advance Research Program  
 Total Direct Cost: **\$39,000**

**Co-principal Investigator on:**

1996 -1997

"A Novel Approach for Elucidation of Early Stages of Cataract".  
 Texas Higher Education Coordinating Board grant  
 Total Direct Cost **\$30,950**

**Co-principal Investigator on:**

1996 - 2000

"*Undergraduate Biological Sciences Education Program*".  
 Howard Hughes Medical Institute grant  
 Total Direct Cost **\$1,599,038**

**FORMAL TEACHING:**

At the Department of Chemistry  
 University of Texas-Pan American

1992-present

- General Chemistry
- General chemistry Laboratory
- Introduction to Biochemistry
- Biochemistry Laboratory
- Advanced/Graduate Biochemistry

At Texas A&M, College Station/Kingsville

2001-present

- Teaching the *Phytochemicals in Fruits and Vegetables to Improve Human Health* offered through Texas A&M system Trans-Texas Video Conference Network.

**SUPERVISORY TEACHING:**

(a) Graduate Students Supervised:

Maria T. Tijerina (Biology)	M.S.	1994-1996
Jesus Munoz (Biology)	M.S.	1995-1997
Jesus Garcia (Biology)	M.S.	1996-1997
Eduardo Saldevar (Biology)	M.S.	1997-1999
Acacia Mendoza (Biology)	M.S.	1999-2001
Kimberly Mackie (Biology)	M.S.	2002-2007
Annie Marie Mancha (Chemistry)	M.S.	2006-2008

(b) Thesis Committees of Graduate Students:

Maria T. Tijerina (Biology)	M.S.	1994-1996
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Jesus Munoz (Biology)	M.S.	1995-1997
Eduardo Saldevar (Biology)	M.S.	1997-1999
Yan Lui ( <i>Texas A&amp;M, Kingsville</i> )	M.S.	1998-2000
Michael Gay (Biology)	M.S.	1998-2000
Roxane Garza (Biology)	M.S.	1999-2002
Heather Quintanilla (Biology)	M.S.	1999-2002
Jiaxing Li ( <i>Texas A&amp;M, College Station</i> )	M.S.	2001-2003
Acacia Mendoza (Biology)	M.S.	1999-2001
Kimberly Mackie (Biology)	M.S.	2001-2007
Thomas Eubank (Biology)	M.S.	2002-2004
Jose Perez ( <i>Texas A&amp;M, College Station</i> )	M.S.	2005-2007

(c) Undergraduate Students Supervised:

Anna Maria Espinosa ( <i>Chemistry major</i> )	1993-1994
Araceli Silva ( <i>Chemistry major</i> )	1993-1995
Jesus Eduardo Mariel ( <i>Biology major</i> )	1994-1995
Rogelio Castillo ( <i>Biology major</i> )	1994-1996
Andrea Trager ( <i>Biology major</i> )	1995-1996
Fernando Valdez ( <i>Biology major</i> )	1995-1997
Mario Salazar ( <i>Biology major</i> )	1996-1997
Roxana Tanguma ( <i>Biology major</i> )	1996-1997
Joanne Gonzalez ( <i>Chemistry major</i> )	1996-1997
Nilda Izaguirre ( <i>Chemistry major</i> )	1996-1998
Cassandra Reyes ( <i>Chemistry major</i> )	1997-1998
Melissa Ochoa ( <i>Biology major</i> )	1997-1998
Josefina De La Tejera ( <i>Chemistry major</i> )	1997-1998
Grace Cortez ( <i>Chemistry major</i> )	1997-1999
Erica Sanchez ( <i>Chemistry major</i> )	1998-1999
Norma Magee ( <i>Biology major</i> )	1998-2000
Christina De la Fuente ( <i>Biology major</i> )	1998-1999
Anthony Conley ( <i>Biology major</i> )	1998-2000
Jeffrey Pierce ( <i>Biology major</i> )	1999-2000
Juan Martinez ( <i>Chemistry major</i> )	2000-2001
Mirna Escalante ( <i>Biology major</i> )	2000-2001
Chalam Mulukutla ( <i>Biology major</i> )	2000-2001
Charles Zarembo ( <i>Biology major</i> )	2000-2001
Haruna Kato ( <i>Chemistry major</i> )	2000-2002
Joy De Los Reyes ( <i>Biology major</i> )	2001-2002
Natalie Ayala ( <i>Biology major</i> )	2001-2002
Donna Palquit ( <i>biology major</i> )	2002-2003
Priscilla Alcala ( <i>Biology major</i> )	2002-2003
Walter Quiroga ( <i>Chemistry major</i> )	2002-2004
Trini J. Garza ( <i>Biology major</i> )	2003-2004
Monica Cantu ( <i>Biology major</i> )	2003-2005
Jose Diaz-Miron ( <i>Chemistry major</i> )	2003-2005

Natalia Maani ( <i>Chemistry major</i> )	2003-2005
Flor Limas ( <i>Biology major</i> )	2004-2005
Julie Rivas ( <i>Biology major</i> )	2004-2005
Adriana Cadena ( <i>Chemistry major</i> )	2004-2006
Elvia Martinez ( <i>Biology major</i> )	2005-2006
Saifullah Nasir ( <i>Biology major</i> )	2005-2006
Charisma Garcia ( <i>Biology major</i> )	2005-2006
Violeta Valvidia ( <i>Biology major</i> )	2005-2007
Diana Munoz ( <i>Chemistry major</i> )	2005-2008
Moath Amro ( <i>Chemistry major</i> )	2006-2007
Roshni Patel ( <i>Biology major</i> )	2006-2008
Barbara Robles ( <i>Biology major</i> )	2006-2008
Anthony Zapata ( <i>Biology major</i> )	2006-2008
Win Shun Lai ( <i>Biology major</i> )	2006-2008
Daniel Barron ( <i>Biology major</i> )	2007-2008
Rachel Gilman ( <i>Biology major</i> )	2007-2008
Sonam Jaggi ( <i>Biology major</i> )	2007-present
Nagham Alatrash ( <i>Chemistry major</i> )	2008-present
Briana Chapa ( <i>Biology major</i> )	2008-present
Paul Praraduiso ( <i>Biology major</i> )	2008-present
Bilal Nasif ( <i>Chemistry major</i> )	2008-present
Stephanie Gallegos ( <i>Biology major</i> )	2008-present
Jonathan Langoria ( <i>Chemistry major</i> )	2008-present

(d) Honors Thesis Students:

- (1) **Natalie Ganceres:** (1997-1998) Thesis Committee Member  
Title: "Isolated Lung System: A comparative Study and Applications to the Medical Field."
- (2) **Grace Cortez:** (1998-1999) Thesis Advisor  
Title: "The comparative effects of Myristicin on Glutathione S-Transferase levels in Target Organ of Fisher 344 rats."
- (3) **Melissa Ochoa:** (1998-1999) Thesis Advisor  
Title: "Myristicin's Effect on the detoxification System of Male Fisher 344 rats."
- (4) **Dalia C. Galicia:** (1998-1999) Thesis Committee Member  
Title: "Calcium Intake in Peripubesecent Mexican-American Females."
- (5) **Juan A. Contreras:** (1998-99) Thesis Committee Member  
Title: "The relationship between Acanthosis Nigricans and Type 2 Diabetes."
- (6) **Jeffrey Pierce:** (1999-2000) Thesis Advisor  
Title: "The Role of the Glutathione Efflux Pump Protein in Cisplatin Resistant Lung Cancer cells."

- (7) **Christina De la Fuente** (1999-2000) Thesis Committee Member  
Title: "Characterization of Heat Shock Factor-1 and Heat Shock Binding Protein-1 in *Caenorhabditis elegans* using Green Fluorescent protein and  $\beta$ -Galactosidase Activity."
- (8) **Omar Rodriguez** (1999-2000) Thesis Committee Member  
Title: "The Effect of Acetaminophen on the Development of Atherosclerosis and on the Response to Vascular Injury in the Hypercholesterolemic Rabbit Model."
- (9) **Roberto Moreno:** (1999-2000) Thesis Advisor  
Title: "A Comparison in Estrogen Receptor Levels Between eNOS Knock-out & Wild-Type Mice."
- (10) **Cynthia Luna** (1999-2000) Thesis Committee Member  
Title: "The *Arabidopsis hsl1* but not *cop2* Mutant is Blocked in Systemic Acquired Resistance."
- (11) **Jesus A. Rodriguez** (1999-2000) Thesis Committee Member  
Title: "Myocardial Remodeling in Transgenic Mice: Post Occlusion/Reperfusion."
- (12) **Mirna X. Escalante** (2000-2001) Thesis Advisor  
Title: "The Effect of Myristicin as a Function of Age in the Induction of Glutathione-S-Transferase in Target Organ of A/J Mice."
- (13) **Reynaldo Lejah** (2000-2001) Thesis Committee Member  
Title: "A descriptive Analysis of Lung Cancer Among Men and Women of Selected Counties along the Texsa-Mexico Border."
- (14) **Chalam V. Mulukutla** (2000-2001) Thesis Committee Member  
Title: "Does Arch Hypoplasia Affects Recoarctation of the Aorta or Mortality? When Should a Patient Have Surgery to Repair a Coarctation of the Aorta?."
- (15) **Micheal Luna** (2000-2001) Thesis Committee Member  
Title: "A T>C Transition Intron 6 of the Galactocerebrosidase Gene is Associated with Abnormal Splicing."
- (16) **Yvette Almendarez** (2000-2001) Thesis Committee Member  
Title: "Effect of Spermatogenesis on the sterility of *Drosophila Pseudoobscura* and *drosophila perimilis* Hybrid Males."
- (17) **Alvero Morena** (2000-2001) Thesis Committee Member  
Title: "The effect of Simulated Acid rain on the Development and Biomass of *Rephanus sativus*."
- (18) **Haruna Kato** (2002-2002) Thesis Advisor  
Title: "Age-Dependent Change of Glutathione S-Transferase Induction Capacity in Rat Tissues Using Myristicin."

- (19) **Mohammed Owais Ahmed** (2001-2002) Thesis Committee Member  
Title: "Repeatability of Rapid-PCR Fingerprinting in Hard Ticks."
- (20) **Amanda Garza** (2001-2002) Thesis Committee Member  
Title: "A Diastereoselective Synthesis of (Z)-1-Trimethylgermyl-1-alkenes."
- (21) **Linda Jo Saenz** (2001-2002) Thesis Committee Member  
Title: "Indecence of tuberculosis in the Rio Grande Valley."
- (22) **Donna Poliquit** (2002-2003) Thesis Advisor  
Title: "Glutathione S-transferase and Quinone reductase induction by flavonoids in mouse Hep c1c1 cells."
- (23) **Laura Rubinos** (2003-2004) Thesis Committee Member  
Title: "Involvement of sulfonylurea receptor1 and ATP dependent potassium channels in glucose metabolism under conditions of T2DM."
- (24) **Flor Limas** (2004 2005) Thesis Advisor  
Title: "Induction of Glutathione S-Transferase and Quinone Reductase by Flavanoids in Mammalian Cancer Cells."
- (25) **Charisse Lloren** (2004 2005) Thesis Committee Member  
Title: Purification and Analysis and Metallothioneins
- (26) **Sharifa Llemmit** (2004 2005) Thesis Committee Member  
Title: "Cloning and analysis of metal tolerance protein gene from the Ni hyperaccumulator *Thlaspi montanum* (var *siskiyouense*) strep~~th~~anthus poly glaioides."
- (27) **Natalia Maani** (2004-2005) Thesis Advisor  
Title: "The Induction of Glutathione-S Transferase and NAD(P)H: Quinone Oxidoreductase by Flavonoids in Colo205 and HepG2 Cell Lines."
- (28) **Wendy Lai** (2005-2006) Thesis Advisor  
Title: "Synthesis of glucoside via transglycosylation in ionic liquid."
- (29) **Mathew Carroll** (2005-2006) Thesis Committee Member  
Title: "Synthesis of a 2, 5-diphenyl substituted Lamellarin-like Compound."
- (30) **Moath Amro** (2006-2007) Thesis committee Chair  
Title: "Comparative studies of myristicin induction on murine detoxification enzymes in different strains."
- (31) **Juan Carlos Martinez** (2006-2007) Thesis committee member  
Title: "Ubiquitin Chain Formation by Rsp5."

- (32) **Glee-Ann Llemit** (2006-2007) Thesis committee member  
**Title:** "Characterization of P450 enzymes from corn and wheat involved in herbicide tolerance."
- (33) **Rejh Lester Cabrera** (2006-2007) Thesis committee member  
**Title:** "The use of remote sensing and atomic absorption spectrometry to assess the effect of nickel toxicity in non-accumulator and hyperaccumulator plant species."
- (34) **Isabella Garcia** (2007-2008) Thesis Committee member  
**Title:** "Diastereoselective Synthesis of Novel  $\beta$ -Lactams: Exploratory Approach Toward New Heterocycles."
- (35) **Joshua Garcia** (2007-2008) Thesis Committee member  
**Title:** "Novel Synthetic Routes to Lamisil, an Antifungal Agent."
- (36) **Frances Rachel Morales** (2007-2008) Thesis committee member  
**Title:** "Bithmus nitrate-catalyzed Michael reaction of indols in water."
- (37) **Sonia Rivera** (2008-2009) Thesis committee member  
**Title:** "Bismuth nitrate-catalyzed novel synthesis of heterocycles."
- (38) **Win shun Lai** (2008-2009) Thesis Advisor  
**Title:** "Induction of phase II enzymes glutathione transferase and quinine reductase by limonin and methoxymine substituted limonin."
- (39) **Cynthia Miranda** (2008-2009) Thesis committee member  
**Title:** "Chromium AND Manganese Reduction by Streptomyces Isolates from the Laguna Madre"
- (40) **Karla Miranda** (2008-2009) Thesis committee member  
**Title:** Role of phosphates in E2F Associated Apoptosis
- (41) **Alcides Amador** (2009-2010) Thesis committee member  
**Title:** "Novel diastereoselective synthesis of both (E) and (Z)-trisubstituted alkenes containing phenyl and thiophene moieties."
- (42) **Lorena e. Reyna** (2009-2010) Thesis committee member  
**Title:** Novel diastereoselective synthesis of both (E) and (Z)-trisubstituted alkenes containing phenyl and naphthyl moieties.
- (43) **Bilal Nasif** (2009-2010) Thesis Advisor  
**Title:** Structure activity relationship of the flavonoids on the induction of GST in human cancer cell lines.

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