

Curriculum Vitae (November 2006)

DAVID HEWETT-EMMETT, Ph.D.

PRESENT TITLE: Associate Professor, Human Genetics Center,
Epidemiology & Disease Control and
Environmental & Occupational Health Sciences Divisions,
University of Texas School of Public Health at Houston,
Houston, Texas.
1994 - present.

UNDERGRADUATE EDUCATION:

Christ's College, Cambridge, UK (B.A. 1968). *Natural Sciences Tripos:*
Chemistry, Biochemistry, Pharmacology, Experimental Psychology

GRADUATE EDUCATION:

University College London (M.Sc. 1969) Biochemistry

University College London (Ph.D. 1973) Biochem./Physical Anthropology

PREVIOUS ACADEMIC APPOINTMENTS:

Research Associate, Wayne State University School of Medicine,
Detroit, Department of Physiology, 1973-1976

Post-Doctoral Research Assistant, University of Bristol, Bristol, UK,
Department of Biochemistry, 1976-1978

Assistant Research Scientist, Univ. of Michigan Medical School,
Ann Arbor, Department of Human Genetics, 1978-1984

Associate Professor, University of Texas Health Science Center at
Houston, Genetics Centers, Graduate School of Biomedical Sciences,
1984-1994 (*tenure in UTHSC-H awarded 1987*)

EDITORIAL BOARD:

Editorial Board, "Molecular Phylogenetics and Evolution"

SOCIETIES:

American Society of Human Genetics (1984-)
American Society of Biochemistry and Molecular Biology (Elected 1984)
International Society of Molecular Evolution (Founding Member, 1994)
Society for Molecular Biology and Evolution (1994-)

SPECIALIST ADVISOR:

HUGO Human Gene Nomenclature Committee, (Chair, Dr. Sue Povey,
London, UK), 1998-

MAJOR UTHSC-H COMMITTEES and ACTIVITIES:

Admissions Committee, Graduate School of Biomedical Sciences,
1986-1989

Program Director, GSBS Program in Genetics, 1992-1995

UTHSC-H MD/PhD Committee (GSBS representative), 1993-1996

UTHSC-H Oversight Committee, 1995-1997

Curriculum Committee, GSBS, 1996-1997

Convenor, Biological Sciences Discipline, UTSPH, 1996-1998

Faculty Affairs Committee, UTSPH, 1996-1998

Member, Academic Standards Committee, UTGSBS, 1997-1999

On Site Faculty representative (GSBS), UTHSC-H Summer Internship
Program, Richmond College, London, UK, July-August 1998.

GSBS Faculty Administrative Representative, UTHSC-H Summer Internship
Program, Richmond College, London, UK, 1998-2000

Chair, Academic Standards Committee, GSBS, 1999-2000

Member, UTSPH Faculty Handbook Revision Committee, 2000-2002

Program Director & Chair of Steering Committee, GSBS Program in
Human & Molecular Genetics, 2001-2004

Member, GSBS Program Coordinating Committee, GSBS, 2001-2004

UTSPH Admissions Committee Rep., Disease Control Module, 2002-2004

Chair, UTSPH Admissions Committee, 2004-2007

UTSPH Environmental & Occupational Health Sciences Division:
Member, Academic Programs Review (APR) Committee, 2004-
Co-Chair, APR Sub-Committee on MS & PhD degrees, 2004-2005

UTSPH Tenure Track Representative, UTHSC-Houston Interfaculty
Council, 2004-2007; *Co-Chair*, Subcommittee on Faculty Status,
Rights & Responsibilities 2005-2007

Member, SPH Certificate Applicants Admissions Review Group, 2005-2007

Chair, Student Affairs Committee, GSBS, 2005-2006

Member, Executive Committee, GSBS, 1999-2000; 2005-2006

Facilitator/Co-Presenter, Student Affairs Section, GSBS Faculty
Retreat, May 2006

GSBS Executive Committee Reviewer, GSBS Program in Molecular
Carcinogenesis, Smithville, Texas, September 2006

INVITED TALKS and SEMINARS (1994-present):

- 4/20/94 "Conservation & convergence in the evolution of the carbonic anhydrases", International Society of Molecular Evolution Workshop: Open Questions in Molecular Evolution, Guanacaste, Costa Rica
- 11/14/94 "The Human Genome", Dept. of Biology, Prairie View A&M University, Prairie View, Texas
- 10/30/95 "The Human Genome Project", Beta Beta Beta and Pre-Medicine Club, West Texas A&M University, Canyon, Texas
- 3/13/95 "Functional diversity, conservation and convergence in the evolution of the carbonic anhydrase gene families", International Symposium - *Molecular Anthropology: Towards a New Evolutionary Paradigm*, Wayne State Univ. School of Medicine, Detroit, Michigan
- 7/27/95 "Evolution of the alpha-, beta-, and gamma-carbonic anhydrase gene families", 4th International Conference on the Carbonic anhydrases, Keble College, Oxford, UK
- 4/6/98 "New alpha-carbonic anhydrases resulting from mining the databases", Dept. of Biochemistry and Molecular Biology, St. Louis University, St. Louis, Missouri
- 7/21/98 "Evolution of the alpha-carbonic anhydrase gene family", Galton Laboratory, University College London, London, UK
- 5/1/99 "The alpha-carbonic anhydrase gene family: Novel members encoding evolutionarily conserved 'acatalytic' isoforms", 2nd International Nomenclature Workshop, Sanger Center, Cambridge, UK
- 10/16/99 "The origins and recent evolution of the more than 15 mammalian alpha-carbonic anhydrase genes", Symposium in honor of Richard E. Tashian, Ann Arbor, Michigan
- 11/20/00 "Gene families then and now", Department of Biology, Prairie View A&M University, Prairie View, Texas
- 03/23/04 "Historical Successes and Limitations of *Genetics and Public Health*", Training Session on "Genetics and Public Health" for 24 Visiting PRC Health Ministers, organized by City and County Health Departments in conjunction with UTSPH, Houston, Texas.
- 10/28/04 "The impact of the human genome project on biomedical research: Is it complete and are there major surprises?", FASEB-MARC Program, Delaware State University, Dover, Delaware.

PUBLICATIONS:

A. BOOK

Tashian,R.E. and HEWETT-EMMETT,D. [eds.] (1984) *Biology and Chemistry of the Carbonic Anhydrases*, Ann. N.Y. Acad. Sci. 429: 1-640.
Based on Conference, New York Academy of Sciences, Sept. 28-30, 1983.

B. REFEREED ORIGINAL ARTICLES in JOURNALS

1. Barnicot, N.A. and HEWETT-EMMETT,D. (1971) Red cell and serum proteins of Talapoin, Patas and Vervet monkeys. *Folia Primat.* 15: 65-76.
2. Barnicot, N.A. and HEWETT-EMMETT,D. (1972) Red cell and serum proteins of Cercocebus, Presbytis, Colobus and certain other species. *Folia Primat.* 17: 442-457.
3. HEWETT-EMMETT,D., McCoy,L.E., Hassouna,H.I., Reuterby,J., Walz,D.A. and Seegers,W.H. (1974) A partial gene duplication in the evolution of prothrombin? *Thrombosis Research* 5: 421-430.
4. Seegers,W.H., Hassouna,H.I., HEWETT-EMMETT,D., Walz,D.A. and Andary,T.J. (1975) Prothrombin and thrombin: Selected aspects of thrombin formation properties, inhibition and immunology. *Seminars in Thrombosis Hemostasis* 1: 211-283.
5. HEWETT-EMMETT,D., Walz,D.A., Reuterby,J., McCoy,L.E. and Seegers,W.H. (1975) The amino acid sequence of PR fragment (NH₂-terminal fragment) of bovine prothrombin. *Thrombosis Research* 7: 227-234.
6. Beard,J.M., Barnicot,N.A. and HEWETT-EMMETT,D. (1976) Alpha and beta chains of the major haemoglobin and a note on the minor component of Tarsius. *Nature* 259: 338-341.
7. Walz,D.A., HEWETT-EMMETT,D., Reuterby,J. and Seegers,W.H. (1976) Human thrombin: Amino acid sequence of the autocatalytically removed 13 residue A1 peptide. *Thrombosis Research* 9: 289-292.
8. Walz,D.A., HEWETT-EMMETT,D. and Seegers,W.H. (1977) Structure of the amino-terminal (vitamin K-dependent) region of human prothrombin. *Life Sciences* 20: 79-84.
9. Walz,D.A., HEWETT-EMMETT,D. and Seegers,W.H. (1977) Amino acid sequence of human prothrombin fragments 1 and 2. *Proc.Natl.Acad.Sci.USA* 74: 1969-1972.
10. Carter,N.D., HEWETT-EMMETT,D., Jeffery,S. and Tashian,R.E. (1981) Testosterone-induced, sulfonamide-resistant carbonic anhydrase isozyme of rat liver is indistinguishable from skeletal muscle carbonic anhydrase III. *FEBS Letters* 128: 114-118.
11. Kageoka,T., HEWETT-EMMETT,D., Stroup,S.K., Yu,Y.-S.L. and Tashian,R.E. (1981) Amino acid substitution and chemical characterization of a Japanese variant of carbonic anhydrase I: CA I Hiroshima-1 (86 Asp->Gly). *Biochem.Genetics* 19: 535-549.
12. Czelusniak,J., Goodman,M., HEWETT-EMMETT,D., Weiss,M.L., Venta,P.J.

and Tashian,R.E. (1982) Phylogenetic origins and adaptive evolution of avian and mammalian haemoglobin genes. *Nature* 298: 297-300.

13. Erickson,R.P., Kay,G., HEWETT-EMMETT,D., Tashian,R.E. and Claflin,J.L. (1982) Cross-reactions among carbonic anhydrase isozymes (CA I, CA II and CA III) studied by binding tests and with monoclonal antibodies. *Biochem.Genetics* 20: 809-819.
14. Sly,W.S., HEWETT-EMMETT,D., Whyte,M.P., Yu,Y.-S.L. and Tashian,R.E. (1983) Carbonic anhydrase II deficiency identified as the primary defect in the autosomal recessive syndrome of osteopetrosis with renal tubular acidosis and cerebral calcification. *Proc.Nat.Acad.Sci.USA* 80: 2752-2756.
15. HEWETT-EMMETT,D., Welty,R.J. and Tashian,R.E. (1983) A widespread silent polymorphism of human carbonic anhydrase III (31 Ile<->Val): Implications for evolutionary genetics. *Genetics* 105: 409-420.
16. Carter,N.D., Chegwiddden,W.R., HEWETT-EMMETT,D., Jeffery,S., Shiels,A. & Tashian,R.E. (1984) Novel inhibition of carbonic anhydrases I, II and III by carbamoyl phosphate. *FEBS Letters* 165: 197-200.
17. Chegwiddden,W.R., HEWETT-EMMETT,D. and Penney,G.G. (1985) N-terminal sequence of creatine kinase from skeletal muscle of rabbit and rhesus monkey. *Int.J.Biochem.* 17: 749-752.
18. Sly,W.S., Whyte,M.P., Sundaram,V., Tashian,R.E., HEWETT-EMMETT,D., Guibaud,P., Vainsel,M., Baluarte,J., Gruskin,A., Al-Mosawi,M., Sakati, N. and Ohlsson,A. (1985) Carbonic anhydrase II deficiency in twelve families with the autosomal recessive syndrome of osteopetrosis with renal tubular acidosis and cerebral calcification. *New Engl.J.Med.* 313: 139-145.
19. Venta,P.J., Montgomery,J.C., HEWETT-EMMETT,D., Wiebauer,K. and Tashian,R.E. (1985) The structure and exon to protein domain relationship of the mouse carbonic anhydrase II gene. *J.Biol.Chem.* 260: 12130-12135.
20. Venta,P.J., Montgomery,J.C., HEWETT-EMMETT,D. and Tashian,R.E. (1985) Comparison of the 5' regions of human and mouse carbonic anhydrase II genes and identification of possible regulatory elements. *Biochim.Biophys.Acta* 826: 195-201.
21. Cabral,A.R., HEWETT-EMMETT,D., Welty,R.J. and Castor,C.W. (1987) Effects of human carbonic anhydrase III (CA III) on synovial and muscle fibroblast glycosaminoglycan metabolism. *Proc.Soc.Exp.Biol.Metab.* 184: 24-30.
22. Montgomery,J.C., Venta,P.J., Tashian,R.E. and HEWETT-EMMETT,D. (1987) Nucleotide sequence of human liver carbonic anhydrase II cDNA. *Nucleic Acids Res.* 15: 4687.
23. Overturf,M.L., Smith,S.A., HEWETT-EMMETT,D., Loose-Mitchell,D.S.,

- Soma, M.R., Gotto, A.M. jr. and Morrisett, J.D. (1989) Development and partial characterization of a dietary cholesterol-resistant colony of rabbits. *J.Lipid Res.* 30: 263-273.
24. Frazier, M.F., Lilly, B.J., Wu, E.F., Ota, T. and HEWETT-EMMETT, D. (1990) Carbonic anhydrase II gene expression in cell lines from human pancreatic adenocarcinoma. *Pancreas* 5: 507-514.
 25. Hanis, C.L., HEWETT-EMMETT, D., Douglas, T.C. and Schull, W.J. (1991) Lipoprotein and apolipoprotein levels among Mexican-Americans in Starr County, Texas. *Arteriosclerosis and Thrombosis* 11: 123-129.
 26. Hanis, C.L., Douglas, T.C. and HEWETT-EMMETT, D. (1991) Apolipoprotein A-IV protein polymorphism: Frequency and effects on lipids, lipoproteins and apolipoproteins among Mexican-Americans in Starr County, Texas. *Human Genetics* 86: 323-325.
 27. Shriver, M.D., Boerwinkle, E., HEWETT-EMMETT, D. and Hanis, C.L. (1991) Frequency and effects of apolipoprotein E polymorphism in Mexican-American NIDDM subjects. *Diabetes* 40: 334-337
 28. Hanis, C.L., HEWETT-EMMETT, D., Douglas, T.C., Bertin, T.K. and Schull, W.J. (1991) Effects of the apolipoprotein E polymorphism on levels of lipids, lipoproteins and apolipoproteins among Mexican-Americans in Starr County, Texas. *Arteriosclerosis* 11: 362-370.
 29. Hanis, C.L., HEWETT-EMMETT, D., Bertin, T.K. and Schull, W.J. (1991) The origins of U.S. hispanics: Implications for diabetes. *Diabetes Care* 14: 618-627.
 30. Mueller, W.H., Wear, M.L., Hanis, C.L., Emerson, J.B., Barton, S.A., HEWETT-EMMETT, D. and Schull, W.J. (1991) Which measure of body fat distribution is best for epidemiologic research? *Amer.J.Epidem.* 133: 858-869.
 31. Cerda-Flores, R.M., Kshatriya, G.K., Bertin, T.K., HEWETT-EMMETT, D., Hanis, C.L. and Chakraborty, R. (1992) Gene diversity and estimation of genetic admixture among Mexican-Americans of Starr County, Texas. *Annals Hum.Biol.* 19: 347-360.
 32. Lomax, M.I., HEWETT-EMMETT, D., Yang, T.L. and Grossman, L.I. (1992) Rapid evolution of the human gene for cytochrome c oxidase subunit IV. *Proc.Nat.Acad.Sci.USA* 89: 5266-5270.
 33. Hanis, C.L., HEWETT-EMMETT, D., Kubrusly, L.F., Maklad, M.N., Douglas, T.C., Mueller, W.H., Barton, S.A., Yoshimura, H., Kubrusly, D.B., Gonzalez, R. and Schull, W.J. (1993) An ultrasound survey of gallbladder disease among Mexican-Americans in Starr County, Texas: Frequencies and risk factors. *Ethnicity and Disease* 3: 32-43.
 34. Hanis, C.L., Chu, H.-H., Lawson, K., HEWETT-EMMETT, D., Barton, S.A., Schull, W.J. and Garcia, C.A. (1993) Mortality of Mexican-Americans with NIDDM: Retinopathy and other predictors in Starr County, Texas. *Diabetes Care* 16: 82-89.
 35. Shimmin, L.C., Chang, H.-J., HEWETT-EMMETT, D. and Li, W.-H. (1993) Potential problems in estimating the male-to-female mutation rate

ratio from DNA sequence data. *J.Mol.Evol.* 37: 160-166.

36. Ellsworth,D.L., HEWETT-EMMETT,D. and Li,W.-H. (1993) Insulin-like growth factor II intron sequences support the hominoid rate-slowdown hypothesis. *Mol.Phylogen.Evol.* 2: 315-321.
37. Chang,H.-J., Shimmin,L.C., Shyue,S.-K., HEWETT-EMMETT,D. and Li,W.-H. (1994) Weak male-driven molecular evolution in rodents. *Proc.Nat.Acad.Sci.USA* 91: 827-831.
38. Ellsworth,D.L., HEWETT-EMMETT,D. and Li,W.-H. (1994) Evolution of base composition in the insulin and insulin-like growth factor genes. *Mol.Biol.Evol.* 11: 875-885.
39. Hopkins,P.J., Bergenhem,N.C.H., Venta,P.J., HEWETT-EMMETT,D. and Tashian,R.E. (1995) Characterization of the carbonic anhydrase I gene of the pigtail macaque: structure and evolutionary aspects. *Gene* 152: 265-269.
40. Shyue,S.-K., HEWETT-EMMETT,D., Sperling,H.G., Hunt,D.M., Bowmaker,J.K., Mollon,J.D. and Li,W.-H. (1995) Adaptive evolution of color vision genes in higher primates. *Science* 269: 1265-1267.
41. HEWETT-EMMETT,D. and Tashian,R.E. (1996) Functional diversity, conservation and convergence in the evolution of the alpha-, beta- and gamma-carbonic anhydrase gene families. *Mol.Phylogen.Evol.* 5: 50-77.
42. Li,W.-H., Ellsworth,D.L., Krushkal,J., Chang,B.H.-J. and HEWETT-EMMETT,D. (1996) Rates of nucleotide substitution in primates and rodents and the generation-time hypothesis. *Mol.Phylogen.Evol.* 5: 182-187.
43. Chang,B.H.-J., HEWETT-EMMETT,D. and Li,W.-H. (1996) Male-to-female ratios of mutation rate in higher primates estimated from intron sequences. *Zool.Studies* 35: 36-48.
44. Huang,W., Chang,B.H.-J., Gu,X., HEWETT-EMMETT,D. and Li,W.-H. (1997) Sex differences in mutation rate in higher primates estimated from AMG intron sequences. *J.Mol.Evol.* 44: 463-465.
45. Sun,H., Rodin,A., Dickinson,D.P., Harper,D., HEWETT-EMMETT,D. and Li,W.-H. (1997) Evolution of paired domains: Isolation and sequencing of jellyfish and hydra Pax genes related to Pax-5 and Pax-6. *Proc.Natl.Acad.Sci.USA* 94: 5156-5161.
46. Zhou,Y.-H., HEWETT-EMMETT,D., Ward,J.P. and Li,W.-H. (1997) Unexpected conservation of the X-linked color vision gene in nocturnal primates: Evidence from two bush babies. *J.Mol.Evol.* 45: 610-618.
47. Boissinot,S., Zhou,Y.-H., Qiu,L., Dulai,K.S., Neiswanger,K., Schneider,H., Sampaio,I., Hunt,D.M., HEWETT-EMMETT,D. and Li,W.-H. (1997) Origin and molecular evolution of the X-linked duplicate color vision genes in howler monkeys. *Zool.Studies* 36: 360-369.
48. Zhao,Z., HEWETT-EMMETT,D. and Li,W.-H. (1998) Frequent gene

conversion between human red and green opsin genes.
J.Mol.Evol. 46: 494-496.

49. Shyue,S.-K., Boissinot,S., Schneider,H., Sampaio,I., Schneider,M.P., Abee,C.R., Williams,L., HEWETT-EMMETT,D., Sperling,H.G., Cowing,J.A., Dulai,K.S., Hunt,D.M. and Li,W.-H. (1998) Molecular genetics of spectral tuning in New World monkey color vision. J.Mol.Evol. 46: 697-702.
50. Gu,X., HEWETT-EMMETT,D. and Li,W.-H. (1998) Directional mutational pressure affects the amino acid composition and hydrophobicity of proteins in bacteria. Genetica 102/103: 383-391.
51. Hunt,D.M., Dulai,K.S., Cowing,J.A., Julliot,C., Mollon,J.D., Bowmaker,J.K., Li,W.-H. and HEWETT-EMMETT,D. (1998) Molecular evolution of trichromacy in primates. Vision Res. 38: 3299-3306.
52. Boissinot,S., Tan,Y., Shyue,S.-K., Schneider,H., Sampaio,I., Neiswanger,K., HEWETT-EMMETT,D., and Li,W.-H. (1998) Origins and antiquity of X-linked triallelic color vision systems in New World monkeys. Proc.Natl.Acad.Sci.USA 95: 13749-13754.
53. Lovejoy,D.A., HEWETT-EMMETT,D., Porter,C.A., Cepoi,D., Sheffield,A., Vale,W.V. and Tashian,R.E. (1998) Evolutionarily Conserved, "acatalytic" carbonic anhydrase-related protein XI contains a sequence motif present in the neuropeptide sauvagine. The human CA-RP XI gene (CA11) is embedded between the Secretor gene cluster and the DBP gene at 19q13.3. Genomics 54: 484-493.
54. Rana,B.K., HEWETT-EMMETT,D., Jin,L., Chang,B.H.-J., Sambuughin,N., Lin,M., Watkins,S., Bamshad,M., Jorde,L., Ramsay,M., Jenkins,T. and Li,W.-H. (1999) High polymorphism at the melanocortin 1 receptor locus. Genetics 151: 1547-1557.
55. Deere,M.W., Dieguez,J.L., Yoon,S.J., HEWETT-EMMETT,D., de la Chapelle,A. and Hecht,J.T. (1999) Genomic characterization of human DSPG3. Genome Res. 9: 449-456.
56. Shah,G.N., HEWETT-EMMETT,D., Grubb,J.H., Migas,M., Fleming,R.E., Waheed,A. and Sly,W.S. (2000) Mitochondrial carbonic anhydrase CA VB: Differences in tissue distribution and pattern of evolution from those of CA VA suggest distinct physiological roles. Proc.Natl.Acad.Sci.USA 97: 1677-1682.
57. Yang,H., HEWETT-EMMETT,D. and Tashian,R.E. (2000) Absence or reduction of carbonic anhydrase II in the red cells of the beluga whale and llama: Implications for adaptation to hypoxia. Biochem.Genet. 38: 241-252.
58. Wu,H., Wang,H., Li,H., Akey,J., Xiao,F.Y., Ke,Y.H., Xu,H.Y., Xiao,J.H., Lu,D.R., Parra,E., Shriver,M., Xiong,M.M., Barton,S.A., HEWETT-EMMETT,D., Liu,W.D. and Jin,L. (2001) Skin reflectance in the Han Chinese and Tibetan populations. Human Biol. 73: 461-466.
59. Zhou,Z., Fu,Y.-X., HEWETT-EMMETT,D. and Boerwinkle,E. (2003)

Investigating single nucleotide polymorphism (SNP) density in the human genome and its implications for molecular evolution. *Gene* 312: 207-213.

60. Kleinke, T., Wagner, S., John, H., HEWETT-EMMETT, D., Parkkila, S., Forssmann, W.-G. and Gros, G. (2005) A distinct carbonic anhydrase in the mucus of the colon of humans and other mammals. *J. Exp. Biol.* 208: 487-496.
61. Li, G., Yin, W., Chamberlain, R., HEWETT-EMMETT, D., Roberts, J.N., Yang, X., Lippman, S. and Clifford, J.L. (2006) Identification and characterization of the human retinoid X receptor alpha gene promoter: A housekeeping gene. *Gene* 372: 118-127.
62. Lindley, T., LaBerge, T., HEWETT-EMMETT, D., Walsh, P.J. and Anderson, P.J. Sequence, expression and evolutionary relationships of carbamoyl phosphate synthetase I in the toad, *Xenopus laevis*. *J. Exp. Zool. (A: Physiology & Evolutionary Genet.)* accepted 11/20/06.

C. CHAPTERS.

1. Cook, C.N. and HEWETT-EMMETT, D. (1974) The uses of protein sequence data in systematics. In: *Prosimian Biology*, eds. R.D. Martin, G.A. Doyle & A.C. Walker, Duckworth, London, pp. 937-958.
2. Barnicot, N.A. and HEWETT-EMMETT, D. (1974) Electrophoretic studies on red cell and serum proteins of Prosimians. In: *Prosimian Biology*, eds. R.D. Martin, G.A. Doyle & A.C. Walker, Duckworth, London, pp. 891-902.
3. HEWETT-EMMETT, D., Cook, C.N. and Barnicot, N.A. (1976) Old world monkey hemoglobins: Deciphering phylogeny from complex patterns of molecular evolution. In: *Molecular Anthropology*, eds. M. Goodman & R.E. Tashian, Plenum Press, New York, pp. 257-275.
4. Seegers, W.H., Walz, D.A., Hassouna, H.I. and HEWETT-EMMETT, D. (1978) Structure and function of prothrombin and prothrombin derivatives. In: *Topics in Haematology (Int. Congress Series #41)*, Excerpta Medica, Amsterdam, pp. 50-53.
5. HEWETT-EMMETT, D. and Cook, C.N. (1978) Atypical evolution of papionine alpha-haemoglobins and indication that *Cercocebus* may not be a monophyletic genus. In: *Recent Advances in Primatology, Vol. 3 (Evolution)*, eds. D.J. Chivers & K.A. Joysey, Academic Press, London, pp. 291-294.
6. Goodman, M., HEWETT-EMMETT, D. and Beard, J.M. (1978) Molecular evidence on the phylogenetic relationships of Tarsius. In: *Recent Advances in Primatology, Vol. 3 (Evolution)*, eds. D.J. Chivers & K.A. Joysey, Academic Press, London, pp. 215-225.
7. HEWETT-EMMETT, D. (1978) Amino acid sequence homology and the vitamin K-dependent proteins. In: *Bibliotheca Haematologica, No. 44*. Karger, Basel, pp. 94-104.
8. Tashian, R.E., HEWETT-EMMETT, D., Stroup, S.K., Goodman, M. and

- Yu, Y.-S.L. (1980) Evolution of structure and function in the carbonic anhydrase isozymes of mammals. In: *Biophysics and Physiology of Carbon Dioxide*, eds. H. Bartels, C. Bauer & G. Gros, Springer-Verlag, Berlin, pp. 165-176.
9. Tashian, R.E., HEWETT-EMMETT, D. and Goodman, M. (1980) Evolutionary diversity in the structure and activity of carbonic anhydrase. In: *Protides of the Biological Fluids, Colloquium 28*, ed. H. Peeters, Pergamon Press, Oxford, pp. 153-156.
 10. HEWETT-EMMETT, D., Venta, P.J. and Tashian, R.E. (1982) Features of gene structure, organization and expression that are providing unique insights into molecular evolution and systematics. In: *Macromolecular Sequences in Systematics and Evolutionary Biology*, ed. M. Goodman, Plenum Press, New York, pp. 357-405.
 11. Tashian, R.E., HEWETT-EMMETT, D. and Goodman, M. (1983) On the evolution and genetics of carbonic anhydrases I, II and III. In: *Isozymes: Current Topics in Biological and Medical Research, Vol. 7: Molecular Structure and Regulation*, eds. M.C. Rattazzi, J.G. Scandalios & G.S. Whitt, Alan R. Liss, New York, pp. 79-100.
 12. Walz, D.A., HEWETT-EMMETT, D. and Guillin, M.-C. (1986) Amino acid sequences and molecular homology of the vitamin K-dependent clotting factors. In: *Prothrombin and Other Vitamin K Proteins*, eds. W.H. Seegers & D.A. Walz, vol. I, CRC Press, Boca Raton, Florida, pp. 125-160.
 13. Tashian, R.E., Venta, P.J., Nicewander, P.H. and HEWETT-EMMETT, D. (1990) Evolution, structure and expression of the carbonic anhydrase multigene family. In: *Isozymes: Structure, Function and Use in Biology and Medicine*, eds. Z.-I. Ogita & C.L. Markert, Wiley-Liss Inc., New York, pp. 159-175.
 14. HEWETT-EMMETT, D. and Tashian, R.E. (1991) Structure and evolutionary origins of the carbonic anhydrase multigene family. In: *The Carbonic Anhydrases: Cellular Physiology and Molecular Genetics*, ed. S.J. Dodgson, Plenum Press, New York, pp. 15-32.
 15. Tashian, R.E., HEWETT-EMMETT, D. and Venta, P.J. (1991) Diversity and evolution in the carbonic anhydrase gene family. In: *Carbonic Anhydrase: From Biochemistry and Genetics to Physiology and Clinical Medicine*, eds. F. Botre G. Gros & B.T. Storey, VCH Publishers, New York, pp. 151-161.
 16. Li, W.-H., Tan, Y., Boissinot, S., Shyue, S.-K. and HEWETT-EMMETT, D. (2000) Genetic diversity of color vision in primates. In: *The Biology of Biodiversity*, ed. M. Kato, Springer, New York, pp. 259-274.
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 18. Tashian, R.E., HEWETT-EMMETT, D., Carter, N.D. and Bergenhem, N.C.H.

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D. OTHER PROFESSIONAL COMMUNICATIONS (e.g. Research Notes).

1. HEWETT-EMMETT,D., Walz,D.A. and Seegers,W.H. (1977) Evolutionary and functional observations on the primary structure of the non-thrombin region (residues 1-273) of human prothrombin. Biochem.Soc.Trans.UK. 5: 1452-1455.
2. HEWETT-EMMETT,D., Czelusniak,J. and Goodman,M. (1981) The evolutionary relationships of the enzymes involved in blood coagulation and hemostasis. Ann.N.Y.Acad.Sci. 370: 511-527.
3. Contel,E.P.B., HEWETT-EMMETT,D., Stroup,S.K. and Tashian,R.E. (1981) Amino acid sequence of chimpanzee carbonic anhydrase I (CAI): Evolutionary implications for the origins of humans and apes. Isozyme Bulletin 14: 44.
4. Carter,N.D., HEWETT-EMMETT,D. and Tashian,R.E. (1981) Molecular identity of the major sulphonamide-resistant carbonic anhydrase isozymes of rat liver and skeletal muscle. Isozyme Bulletin 14: 45.
5. HEWETT-EMMETT,D., Hopkins,P.J., Tashian,R.E. and Czelusniak,J. (1984) Origins and molecular evolution of the carbonic anhydrase isozymes. Ann.N.Y.Acad.Sci. 429: 338-358.
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7. Venta,P.J., Montgomery,J.C., Wiebauer,K., HEWETT-EMMETT,D. and Tashian,R.E. (1984) Organization of the mouse and human carbonic anhydrase II genes. Ann.N.Y.Acad.Sci. 429: 309-323.
8. Chegwidden,W.R., HEWETT-EMMETT,D. and Tashian,R.E. (1984) Active site studies on muscle carbonic anhydrase III. Ann.N.Y.Acad.Sci. 429: 179-181.
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10. Chegwidden,W.R., HEWETT-EMMETT,D. and Tashian,R.E. (1984)

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12. Venta,P.J., Montgomery,J.C., HEWETT-EMMETT,D. and Tashian,R.E. (1985) Comparison of the 5' regions of the carbonic anhydrase II genes of human and mouse. Isozyme Bulletin 18: 48.
13. HEWETT-EMMETT,D. (1985) Identification and quantitation of mammalian carbonic anhydrase isozymes by reverse-phase high-performance liquid chromatography. Isozyme Bulletin 18: 55.
14. HEWETT-EMMETT,D., Cook,R.G. and Dodgson,S.J. (1986) Carbonic anhydrase from hepatocyte mitochondria of guinea-pigs is the product of a novel gene and is not a CA II "splisozyme". Isozyme Bulletin 19: 13.
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E. INVITED ARTICLES (Book Reviews, editorials etc.) in Journals.

1. Methods in Protein Sequence Analysis (ed. M.Elzinga), Humana Press, Clifton, New Jersey, 1982, 589 pp.
Reviewed in: Biochem.Soc.Trans.UK. (1984) 12: 721.
2. Evolutionary Biology Vol. 15 (eds. M.K.Hecht, B.Wallace and C.T.Prance), Plenum Press, New York, 1982, 442 pp.
Reviewed in: Biochem.Soc.Trans.UK. (1984) 12: 722.
3. Evolutionary Perspectives and the New Genetics (eds. H.Gershowitz, D.L.Rucknagel & R.E.Tashian), Alan R.Liss, New York, 1986, 192 pp.
Reviewed in: Mol.Biol.Evol. (1987) 4: 557-558.
4. Glucose-6-Phosphate Dehydrogenase (eds. A.Yoshida and E.Beutler), Academic Press, New York, 1986, 539 pp.
Reviewed in: Amer.J.Hum.Gen. (1988) 42: 902-903.
5. Genetics: Human Aspects (A.P.Mange and E.J.Mange), 2nd Edition, Sinauer, Sunderland, Mass., 1990, 591 pp.

Reviewed in: Mol.Biol.Evol.(1990) 7:395.

F. ABSTRACTS.

1. HEWETT-EMMETT,D., Cook,C.N. and Barnicot,N.A. (1973) Haemoglobin genetics of Old World monkeys; (*abstract of a contributed paper, Genetical Society, Dublin, July 1973*). Heredity 31: 429.
2. Walz,D.A., Reuterby,J., HEWETT-EMMETT,D. and Seegers,W.H. (1975) The activation characteristics of human prothrombin. Fed.Proc. 34: 290 (#410).
3. Reuterby,J., Walz,D.A. and HEWETT-EMMETT,D. (1975) Color-coded thin-layer identification of PTH-amino acids. Fed.Proc. 34: 545 (#1838).
4. HEWETT-EMMETT,D., Walz,D.A., Reuterby,J., McCoy,L.E. and Seegers,W.H. (1975) Sequence data on bovine and human prothrombin: Support for the occurrence of a partial gene duplication. Fed.Proc. 34: 667 (#2543).
5. Walz,D.A., HEWETT-EMMETT,D., Reuterby,J., McCoy,L.E. and Seegers,W.H. (1975) Human and bovine prothrombin: sequence homology. Thromb.Diath.Haemost. 34: 591 (# 278).
6. Hassouna,H.I., Reuterby,J., Walz,D., HEWETT-EMMETT,D. and Seegers,W.H. (1975) Quantitative determination of prothrombin and its fragments in plasma and serum. Thromb.Diath.Haemost. 34: 940(#507).
7. Seegers,W.H., HEWETT-EMMETT,D., Reuterby,J. and Walz,D.A. (1975) Structure and evolution of the non-thrombin portion of bovine prothrombin. Abstr.Amer.Chem.Soc. 170(Aug. 24th): 30.
8. Walz,D.A., HEWETT-EMMETT,D., Reuterby,J. and Seegers,W.H. (1975) Molecular interactions involved in prothrombin and factor X Conversion (*abstract of paper delivered in Symposium on Thrombin-Like Enzymes - Properties and Applications, org. E.Wenzel and Z.S.Latallo, Trier, W.Germany, July 1975*).
9. HEWETT-EMMETT,D., Cook,C.N. and Goodman,M. (1976) Natural selection and atypical alpha-hemoglobin evolution in the Old World monkey tribe Papionini. Fed.Proc. 35: 1605 (#1256).
10. Walz,D.A., HEWETT-EMMETT,D. and Seegers,W.H. (1976) Structure of the activation fragments of human prothrombin. Abstr.Amer.Heart Assoc. 49th Scientific Sessions, Miami Beach, Florida, Nov. 1976.
11. HEWETT-EMMETT,D., Yu,Y.-S.L. and Tashian,R.E. (1979) Isolation and structure of gorilla muscle carbonic anhydrase III (CA III). *Abstr. XIth Int.Congr.Biochem., Toronto, July 1979: p.166 (# 03-1-S147)*.
12. HEWETT-EMMETT,D. and Tashian,R.E. (1979) Human skeletal muscle carbonic anhydrase (CA III): Purification, structure and evolution. Amer.J.Hum.Gen. 31: 50A (#144).
13. HEWETT-EMMETT,D. (1980) Comparative structural studies and evolution of carbonic anhydrase (CA III) from human, gorilla and

- chicken skeletal muscle. Fed.Proc. 39: 1915 (#1625).
14. Strahler, J., HEWETT-EMMETT, D. and Meisler, M. (1981) Structural characterization of the isozymes of mouse pancreatic amylase. *Hereditas* 94: 13 (#21).
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 18. HEWETT-EMMETT, D. (1982) Analytical and preparative high performance liquid chromatography (HPLC) of the three human carbonic anhydrase isozymes and their tryptic peptides on reverse-phase columns. (*Invited speaker: FASEB mini-symposium*) *Fed.Proc.* 41: 1385 (#6518).
 19. HEWETT-EMMETT, D., Welty, R.J. and Tashian, R.E. (1982) Electrophoretically silent, genetic variation of human skeletal muscle carbonic anhydrase III detected by high performance liquid chromatography (HPLC). *Amer.J.Hum.Gen.* 34: 55A (#137).
 20. Welty, R.J. and HEWETT-EMMETT, D. (1983) Silent variation of human red skeletal muscle carbonic anhydrase III is due to an allelic polymorphism. *Clin.Res.* 31: 818A.
 21. Carter, N.D., Shiels, A., Jeffery, S., Chegwiddden, W.R., HEWETT-EMMETT, D. and Tashian, R.E. (1983) Similar inhibition of carbonic anhydrase isozymes I, II and III by carbamyl phosphate. *Fed.Proc.* 42: 2042 (#1668).
 22. Heath, R., Carter, N., HEWETT-EMMETT, D., Fincanci, E., Jeffery, S., Shiels, A. and Tashian, R.E. (1983) Human erythrocytes contain a protein with properties indistinguishable from skeletal muscle carbonic anhydrase III. *Fed.Proc.* 42: 2180 (#2471).
 23. Montgomery, J.C., Venta, P.J., HEWETT-EMMETT, D. and Tashian, R.E. (1984) Evidence for multiple carbonic anhydrase II genes in the mouse. *Fed.Proc.* 43: 1528 (#650).
 24. HEWETT-EMMETT, D. (1984) Aspects of higher primate phylogeny deduced from red blood cell proteins. (*Invited Symposium speaker: Fossils, Genes and Time: Paleontological versus Macromolecular Approaches to the Study of Higher Primate Phylogeny*). *Abstr. 150th National AAAS Meeting, New York, May 1984, p.39.*
 25. Venta, P.J., Montgomery, J.C., HEWETT-EMMETT, D. and Tashian, R.E. (1984) Comparison of the 5' regions of the human and mouse carbonic anhydrase II genes. *Amer.J.Hum.Gen.* 36: 156S (#462).
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28. Venta,P.J., Montgomery,J.C., HEWETT-EMMETT,D., Wiebauer,K. and Tashian,R.E. (1985) Structure and organization of the mouse carbonic anhydrase II gene. Fed.Proc. 44: 669 (#1510).
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34. HEWETT-EMMETT,D., Bertin,T.K. and Hanis,C.L. (1987) A micromethod for typing the human apolipoprotein E polymorphism: Effects of apo E phenotypes on levels of and correlations between apolipoproteins, lipoproteins and lipids in Mexican-American females. Amer.J.Hum.Gen. 41: A7 (#13).
35. HEWETT-EMMETT,D., Montgomery,J.C., Venta,P.J. and Tashian,R.E. (1987) Isolation and structure of human carbonic anhydrase II cDNA. Fed.Proc. 46: 2187 (#1523).
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 46. Rana,B.K., HEWETT-EMMETT,D. and Li,W.-H. (1996) Variation in the human melanocyte stimulating hormone receptor (MSHR) locus. *Pigment Cell Res. Suppl.5*, p.60, (abstract #158).
 47. Tashian, R.E., Yang,H. and HEWETT-EMMETT,D. (1997) Differential expression of carbonic anhydrase I (CA I) in erythrocytes of amniotes. Poster Abstract at Keystone Symposium: *Molecular Mechanisms of Evolution: Structure, Function and Regulation of Genes and Proteins*, Santa Fe, New Mexico, February 16-21, 1997.
 48. Tashian,R.E., Lakkis,M.M. and HEWETT-EMMETT,D. (1997) Diversity in function, and expression in the evolution of the alpha-carbonic anhydrase gene family. *9th International Congress on Genes, Gene Families and Isozymes* (abstr.#50), San Antonio, TX, Apr 14-19,1997.
 49. Lovejoy,D.A., HEWETT-EMMETT,D., Porter,C.A., Cepoi,D.,

Sheffield,A., Vale,W.V. and Tashian,R.E. (1998) Novel "acatalytic" carbonic anhydrase-related protein XI (CA-RP XI) contains a sequence motif related to corticotrophin-releasing factor. FASEB J. 12: A1452 (abstract #819).

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51. Anderson,P.M. and HEWETT-EMMETT,D. (1999) Molecular and comparative aspects of carbamoyl-phosphate synthetase and the urea cycle in fish. *Comp.Biochem.Physiol.* 124A(Suppl.): S137.
52. Zhao,Z., HEWETT-EMMETT,D. and Boerwinkle,E. (2002) Density and distribution of single nucleotide polymorphisms (SNPs) across the human genome. *Amer.J.Hum.Gen.* 71(Suppl.): 206 (abstract #214).

G. GENBANK(NCBI) DNA SEQUENCE SUBMISSIONS (*not linked to publications*).

1. Shimmin,L.C. and HEWETT-EMMETT,D. (3 Feb. 2000) *Mus musculus* carbonic anhydrase XV (Car15) mRNA, cds. Accession # AF231122.
2. Shimmin,L.C. and HEWETT-EMMETT,D. (3 Feb. 2000) *Mus musculus* carbonic anhydrase XIII (Car13) mRNA, cds. Accession # AF231123.
3. Shimmin,L.C. and HEWETT-EMMETT,D. (19 July 2000) *Homo sapiens* carbonic anhydrase-related protein X mRNA, complete cds. Accession # AF288385

PAST GRANT SUPPORT (active since 1994)

Molecular Evolutionary Genetics of Color Vision

Funding source: NIH R01 GM57721 (competitive renewal of R01 EY010317)

Position: Co-P.I. (Dr. W.-H. Li, P.I.)

% time: 10

Total period and total direct support: 11/01/97-08/31/99; \$212,206

Converted to a subcontract from U. Chicago

(Dr. D. Hewett-Emmett, P.I.):

Total period and total direct support: 01/01/99-08/31/99; \$ 25,004

Molecular Evolutionary Genetics of Color Vision

Funding source: NIH R01 EY10317

Position: Co-P.I. (Dr. W.-H. Li, P.I.)

% time: 15

Total period and total direct support: 09/01/94-10/31/97; \$342,041

Estimation of sex ratios of mutation rate in mammals

Funding source: NIH R01 GM49703

Position: Co-P.I. (Dr. W.-H. Li, P.I.)

% time: 15

Total period and total direct support: 05/01/94-04/30/97; \$265,476

Origins of the GC-rich isochores of the human genome

Funding source: NIH R01 GM45670
Position: Co-P.I. (Dr. W.-H. Li, P.I.)
% time: 10
Total period and total direct support: 10/01/91-01/31/96; \$331,514

GRANT SUPPORT:

Training Grant in Biostatistics - University of Texas - Houston
(RFA response)

Funding Source: NIH
Position: Faculty (Dr. Barry Davis, P.I.) Funded (2006)

TEACHING

Co-ordinator and Lecturer:

HUMAN GENETICS II	
Graduate School of Biomedical Sciences	1985-1987
MOLECULAR and CELLULAR APPROACHES TO HUMAN GENETICS	
Graduate School of Biomedical Sciences	1988-1999
School of Public Health	1995-1999
CURRENT TOPICS IN GENETICS	
Graduate School of Biomedical Sciences	1993-95; 1997-99
INTRODUCTION TO BIOLOGICAL SCIENCES	
School of Public Health	1997
EVOLUTION OF DNA AND PROTEIN SEQUENCES	
Graduate School of Biomedical Sciences	1999; 2001; 2003; 2005
School of Public Health	1999; 2001; 2003; 2005
FOUNDATIONS OF MODERN HUMAN GENETICS I.	
School of Public Health	2000
FOUNDATIONS OF MODERN HUMAN GENETICS II.	
School of Public Health	2001
MICROARRAYS AND FUNCTIONAL GENOMICS	
School of Public Health	2001
CURRENT TOPICS IN HUMAN & MOLECULAR GENETICS (Fall & Spring)	
Graduate School of Biomedical Sciences	2002-2004
School of Public Health	2002-2004
HUMAN GENOMICS (telecast from Prairie View A&M)	
School of Public Health (Preceptor)	2003
ENVIRONMENTAL CARCINOGENESIS & MUTAGENESIS	
Graduate School of Biomedical Sciences	2004, 2006
School of Public Health	2004, 2006
ETHICAL DIMENSIONS OF BIOMEDICAL SCIENCES (Discussion Leader)	

Graduate School of Biomedical Sciences 2003; 2005, 2006
School of Public Health 2003

SEMINAR IN GENETICS & POPULATION BIOLOGY (Fall & Spring)
Graduate School of Biomedical Sciences 2004-2006
School of Public Health 2004-2006

FOUNDATIONS OF PUBLIC HEALTH GENETICS
School of Public Health 2006

Guest Lecturer:

BIOCHEMISTRY
Graduate School of Biomedical Sciences 1994-1995

MICROBIAL GENETICS
Graduate School of Biomedical Sciences 1994-1997
School of Public Health 1994-1997

POPULATION GENETICS
Graduate School of Biomedical Sciences 1999
School of Public Health 1999

MOLECULAR and CELLULAR APPROACHES TO HUMAN GENETICS
Graduate School of Biomedical Sciences 2000-2004
School of Public Health 2000-2004

GRADUATED UTSPH ACADEMIC ADVISEES

Jennifer Ludlam: MPH completed Spring 2000:
Disease Control Module, Fall 1998-Spring 2000

Adejoke Fatunde: MPH completed Summer 2001:
Disease Control Module, Spring 2000-Spring 2001

Atousa Maleki: **PhD** completed Summer 2002:
Biological Sciences Discipline, Fall 1997-Summer 2002
Assistant Professor, UT Southwestern, Dallas, TX

Guojun Li MD: **PhD** completed Fall 2002:
Biological Sciences Discipline, Summer 1998-Fall 2002
Assistant Professor, UT M.D.Anderson Cancer Center, Houston, TX

Nitin Mahajan: MPH completed Fall 2004:
Disease Control Module, Fall 2002-Fall 2004
Medical Resident (Brooklyn, N.Y.)

Lum-Awah Atang MPH completed Summer 2005:
Disease Control Module, Spring 2002-Summer 2005
HISD Teacher; applying to Pharmacy School

Anuj Netto MPH completed Summer 2005:
Disease Control Module, Fall 2002-Summer 2005
Admitted to Medical School (South Carolina)

T. Dorina Papageorgiou MS **PhD** completed Fall 2006:
Biological Sciences Discipline, Summer 2002-Fall 2006
Post-doctoral Fellow, Symptom Research, UT M.D.Anderson Cancer Center, Houston, TX

Qianghua Hu MS **PhD** completed Summer 2006:
Biological Sciences Discipline, Fall 2002-Summer 2006
Post-doctoral Fellow, Cancer Genetics, UT M.D.Anderson Cancer Center, Houston, TX

CURRENT UTSPH ACADEMIC ADVISOR for:

John Balogun MBBS	MPH student, Disease Control Module Spring 2005- (<i>became advisor Summer 2006</i>)
Samrat Bhat MBBS	MPH student, Disease Control Module Fall 2004-
Santosh Hanmod MBBS	MPH student, Epidemiology, Epi/DC Division Spring 2006-
Gaurav Parikh MBBS	MPH student, Epidemiology, Epi/DC Division Spring 2006
Alexandria Phan MD	MPH student, Disease Control Module Fall 2002-
	(<i>now Asst. Prof, UTMDACC/leave of absence from MPH</i>)
Aakanksha Prasad MBBS	MPH student, Disease Control, Epi/DC Division Fall 2005-
Lokesh Shohani MBBS	MPH student, Epidemiology, Epi/DC Division Fall 2006-

RECENT UTSPH Ph.D. QUALIFYING EXAM COMMITTEES CHAIRED:

Dorina Papageorgiou MSc (with Drs. Charles Ford & William Mueller)	Fall 2003
Qianghua Hu MS (with Drs. Ralph Frankowski & Mary Ann Smith)	Fall 2004

RECENT (2005 -CURRENT) UTSPH STUDENT COMMITTEE MEMBER for:

Brenda Brown	(Dr. LuAnn Aday, Academic Advisor)	MPH
Leslie Hawrysz	(Dr. Deanna Hoelscher, Academic Advisor)	MPH
Lisa Inchani	(Dr. Dejian Lai, Academic Advisor)	MPH-Grad
Lorianne Janszen	(Dr. Christine Markham, Academic Advisor)	MPH-Grad
Helen Lukefahr	(Dr. Lowell Sever, Academic Advisor)	MPH-Grad
Judith McAlpine	(Dr. Jeanne Martin, Academic Advisor)	MPH
Melanie Mowry	(Dr. Pamela Diamond, Academic Advisor)	MPH
Mario Soares	(Dr. George Delclos, Academic Advisor)	MPH-Grad
Patrice Williams	(Dr. Carl Hacker, Academic Advisor)	MPH
Xin Zhou	(Dr. Mary Ann Smith, Academic Advisor)	PhD-Cand

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Karen Kortum (Dr. Laurence Etkin, Advisor)	Fall 2002-Fall 2004	PhD
Xiaoming Liu (Dr. Yun-Xin Fu, Advisor)	Fall 2002-Fall 2003	PhD
Solida Mak (Dr. James Hixson, Advisor)	Summer 2002-Fall 2003	PhD
Lisa Vincent (Dr. Dianna Milewicz, Advisor)	Fall 2002-Fall 2003	PhD
Deon Uffort (Dr. Julie Ellerhorst, advisor)	Summer 2006-	MS
Shanzi Wang (Dr. William Mattox, advisor)	Fall 2006-	PhD
Shohrae Hajibashi (Dr. Ralf Krahe, advisor)	Fall 2006-	MD/PhD

SUPERVISORY:

Ivone Bruno (Dr. Gilbert Cote, Advisor)	Spring 2002-Fall 2004	PhD Grad
Xiaoming Liu (Dr. Yun-Xin Fu, Advisor)	Spring 2004-Sum. 2006	PhD Grad

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MEMBER:

Charles Chung (Dr. James Hixson, Advisory Professor)	Spring 2004
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