

BIOGRAPHICAL SKETCH			
Provide the following information for the key personnel in the order listed for Form Page 2. Follow the sample format on for each person. (See attached sample). DO NOT EXCEED FOUR PAGES.			
NAME		POSITION TITLE	
Chun-Ming "Eric" Huang, PhD		Research Assistant Professor	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
National Taiwan University, Taipei	B.S.	1990	Zoology
National Taiwan University, Taipei	Ph.D.	1995	Biochemistry
Fred Hutchinson Cancer Research Center, Seattle, Washington	Postdoc	1995-96	Molecular Biology
Institute of Biomedical Sciences, Academia Sinica, Taipei	Postdoc	1996-98	Biochemistry
Institute of Biological Chemistry, Academia Sinica, Taipei	Postdoc	1998- 2000	Proteomics

A. Positions and Honors

Positions and Employment

- 2000- Assistant Professor, Center for Neuroscience, National Sun Yat-sen University,
2001 Kaohsiung, Taiwan
- 2001-2002 Research Scientist, Vaxin, Inc., Birmingham, Alabama
- 2002- Research Assistant Professor, Department of Dermatology, The University of
present Alabama at Birmingham, Birmingham, Alabama
- 2004- Co-director, Skin Proteomics Core of UAB Skin Disease Research Center
present
- 2005- Co-appointment, Assistant Professor, Department of Pathology, The University
present of Alabama at Birmingham, Birmingham, Alabama

Other Experience and Professional Memberships

- 1989 The Book Coupon Award, National Taiwan University
- 2000 Start-Up Fund: \$300,000; National Sun Yat-sen University
- 2000 Allowance of the U.S. patent "Use of Somatostatin Analogs For the Delivery of Anti-Tumor Drugs to Tumor Cells" (Serial No: 09/734,298, Filed: December 11,2000)
- 2000 Allowance of the U.S. patent "New Anti-liver Disease Drug R-YEEE and Method of Synthesizing Branched Galactose-Terminal Glycoproteins." (Serial No:09/490,734. Filing Date:January 25, 2000)
- 2002 Certificate of Achievement for BD FACSCalibur™ Operator Course

Honors

- 2003 Research Grant Award, Dermatology Foundation/USA

B. Selected peer-reviewed publications (in chronological order)

- **1. Huang, C. -M.,** Xu, H., Wang, C-C., Elmets, CA. Proteomic characterization of skin and epidermis in response to environmental agents, *Expert Rev. of Proteomics*, (2005, in press).
- *2. Huang, C. -M.,** Shi, Z., DeSilva, T., Van Kampen, KR., Elmets, CA., and Tang, D.-C. A differential proteome in tumors suppressed by an adenovirus-based skin patch vaccine encoding human carcinoembryonic antigen, *Proteomics*, 2005, 5(4):1013-1023.
- **3. Huang, C.-M.,** Elmets, CA., Van Kampen, KR., DeSilva, TS., Barnes, S., Kim, H., and Tang, D.-C. Prospective highlights of functional skin proteomics. *Mass Spectrometry Review* (2004, in press).
- **4. Huang, C. -M.,** Elmets, CA., Tang, D. -C., Li, F., and Yusuf, N. Proteomics reveals that proteins expressed during the early stage of *Bacillus anthracis* infection are potential targets for the development of vaccines and drugs. *Genomics, Proteomics, Bioinformatics*. 2004, 2(3):143-151.
- *5. Huang, C.-M.** Comparative proteomics analysis of human whole saliva. *Archives of Oral Biology*, 2004; 49(12) 951-962.
- *6. Huang, C.-M.,** Foster, KW., DeSilva TS, Van Kampen, KR, Elmets, CA and Tang DC. 2004. Identification of *Bacillus anthracis* proteins associated with germination and early outgrowth by proteomic profiling of anthrax spores. *Proteomics*, 2004, 4(9):2653-2661.
- *7. Huang, C. -M.,** Foster, KW., DeSilva, T., Shi, Z., Van Kampen, KR., Elmets, CA., and Tang, D.-C. Comparative proteomic profiling of murine skin. *J. Investigative Dermatology*, 2003; 121(1):54-64.
- 8. Huang, Y.-H, Chang, A.-Y, Huang, C.-M,** Huang, S.-W, and Chan S.-H. Proteomic analysis of lipopolysaccharide-induced apoptosis in PC12 cells. *Proteomics*, 2002; 2(9): 1220-1228.
- *9. Chen, S.-T., Pan, T.-L., Tsai, Y.-C. and Huang, C.-M.** Proteomics reveals protein profile changes in doxorubicin-treated MCF-7 human breast cancer cells. *Cancer Letters*, 2002; 181: 95-107.
- 10. Huang, C.-M.,** Shui, H.-A., Wu, Y.-T., Chu, P.-W., Lin, K.-G., Kao L.-S. and Chen, S.-T. Proteomics analysis of proteins in PC12 cells before and after treatment with nerve growth factor: increased levels of a 43-KDa chromogranin B-derived fragment during neuronal differentiation. *Molecular Brain Research*, 2001; 92: 181- 192.
- 11. Chang, A. Y.-M., Huang, C.-M.,** Chan, J. Y.-H., and Chan, S. H.-H. Involvement of noradrenergic innervation from Locus Coeruleus to hippocampal formation in negative feedback regulation of penile erection in the rat. *Hippocampus*, 2001; 11(6): 783-792.
- 12. Chang, A. Y.-M., Chan, J. Y.-H., Kao, F.Y., Huang, C.-M.,** and Chan, S.H.-H. Engagement of inducible nitric oxide synthase at the rostral ventrolateral medulla during mevinphos intoxication in the rat. *J. Biomed. Sci.*, 2001; 8: 475-483.
- 13. Pan T.-L, Goto S, Lord R, Huang Y.-C, Huang C.-M,** Wang P.-W, Lin Y.-C, Kawamoto S, Ono K, Liao P.-C, Lin C.-L, Lai C.-Y, Chang H.-L, Lan C.-H, Lee T.-H, Wang Y.-C, Wu M.-L, Jawan B, Cheng Y.-F, Chen S.-T, Chen C.-L. Proteome analysis in liver transplantation. *Transplant Proc.* 2001, 33(1-2):156.
- 14. Huang, C.-M.,** Wu Y.-T., and Chen, S.-T. Specific delivery of paclitaxel into tumor cells via somatostatin receptor endocytosis. *Chemistry & Biology*, 2000; 7:453-467.

15. Chu, P.-W., Yap, M.-N., **Huang, C.-M.**, Pan, F.-M., and Chen, S.-T. A proteomic analysis of secreted proteins from xylan-induced *Bacillus* sp. Strain K-1. *Electrophoresis*, 2000; 21:1740-1745
16. **Huang, C.-M.**, and Kao, L-S. Nerve growth factor, epidermal growth factor and insulin differentially potentiate ATP-induced $[Ca^{2+}]_i$ rise and dopamine secretion in PC12 cells. *J. Neurochemistry*, 1996; 66:124- 130.
17. **Huang, C.-M.**, Tsay, K-E., and Kao, L.-S. Role of Ca^{2+} in differentiation mediated by nerve growth factor and dibutyryl cyclic AMP in PC 12 cells. *J. Neurochemistry*, 1996; 67:530-539.
18. **Huang, C.-M.**, and Kao, L-S. Long-term treatment with growth-factors potentates ATP-induced $[Ca^{2+}]_i$ rise and catecholamine secretion in PC12 cells. *J. Neurochemistry*, Suppl. S 1995; 65: S13-S13.

** INVITED REVIEW

* CORRESPONDING AUTHOR

Patents:

Huang, C.-M., and Tang, D,-C. *Bacillus anthracis* spore germination-associated proteins as novel targets in immunoprophylaxis and post-exposure therapy against anthrax (USA Patent Applying, UAB/SRI intellectual property disclosure date 11/18/02)

Huang, C.-M., and Tang, D,-C. Heat-shock protein 27 as an adjuvant for epicutaneous vaccines (USA Patent Applying, UAB/SRI intellectual property disclosure date 11/18/02)

Huang, C.-M., Wu Y. -T., and Chen, S.-T. Use of Somatostatin Analogs For the Delivery of Anti-Tumor Drugs to Tumor (USA Patent: Serial No: 09/734,298)

Huang, C.-M., Jiaang, W.-T., Tseng, P.-H., and Chen, S.-T. New Anti-liver Disease Drug R-YEEE and Method of Synthesizing Branched Galactose-Terminal (USA Patent: Serial No:09/490,734)

C. Research Support

Ongoing Research Support

“Anthrax vaccination by targeting spore germination”

Principal Investigator: Chun-Ming Huang, Ph.D.

Agency: National Institutes of Health (NIH), USA

Type: R21 (AI58002-01)

Period: September 30, 2004 to August 01, 2006

Total amount: \$580,000

Effort: 25%

The major goal of this proposal is to clone germination-associated gene and develop skin patch vaccines targeting the anthrax spore germination.

“Noninvasive vaccines targeting novel anthrax toxins”

Principal Investigator: Chun-Ming Huang, Ph.D.

Agency: National Institutes of Health (NIH), USA

Type: Developmental grants (SERCEB)
Period: January 1, 2005 to December 31, 2007
Total amount: \$120,000
Effort: 19%

The major goal of this proposal is to compare the route and number of inoculations required to elicit noninvasive vaccines targeting spore and macrophage interaction during the early stage of *Bacillus anthracis* infection.

“Skin Diseases Research Core Center”

Principal Investigator: Craig Elmets, M.D.
Co-Investigator: Chun-Ming Huang, Ph.D.
Agency: National Institutes of Health (NIH), USA
Type: 1 P30 AR050948-01
Period: April 1, 2004 to March 31, 2009
Effort: 10%

Dr. Huang is a co-director in the Skin Proteomics Core of Skin Diseases Research Center in UAB. He will manage the Skin Proteomics Core and provide the service in running 2-D protein gels and mass spectrometry.

“Therapeutic Vaccines for Biological Threats”

Principal Investigator: Craig Elmets, M.D.
Co-Principal Investigator: Chun-Ming Huang, Ph.D.
Agency: Department of Defense
Period: February 1, 2005 to January 31, 2006
Effort: 46%

Dr. Huang will participate in the construction of non-invasive anthrax vaccines. Additionally, he will optimize these vaccines by incorporating adjuvants.

Completed Research Support

“Skin Proteomics: identification and characterization of human and murine epidermis versus dermis”

Principal Investigator: Chun-Ming Huang, Ph.D.
Agency: Dermatology Foundation, USA
Type: Research Grant
Period: July 1, 2003 to June 30, 2004

“Towards a functional two-dimensional proteome map of PC12 cells”

Principal Investigator: Chun-Ming Huang, Ph.D.
Agency: National Science Council, Taiwan
Type: NSC-90-2320-B110-007
Period: October 1, 2000 to October 1, 2001