

Stanford



Howard Sussman

Professor of Pathology, Emeritus

Bio

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Pathology

PROFESSIONAL EDUCATION

- M.S./M.D., Univ. Oregon Medical School , Biochemistry Medicine (1960)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The general problem with which we are concerned is the elucidation of cellular mechanisms of gene regulation which are related to the neoplastic process in humans. The phenomenon of ectopic protein synthesis in human cancer offers a good experimental model for investigating this problem. The ectopic synthesis of placental proteins by non-trophoblastic neoplasms is of special interest because of the frequent association of similar characteristics in neoplastic cells and embryonic cells. We are investigating the mechanisms associated with the derepression of the genes synthesizing embryonic proteins and those involved in neoplastic transformation:

1. Studies on the regulation of ectopic gene expression in neoplastic breast cells. In these studies we examine the effects of steroid hormones and cholecalciferol analogs on the expression of ectopically produced placental alkaline phosphatase and the eutopic breast-class isoenzyme in human breast cancer cell lines in which embryonic genes are ectopically (non-phenotype) expressed.
2. Studies on a set of nuclear proteins which bind to the regulating sequences controlling the transcription of the placental alkaline phosphatase in response to 1,25, (OH)2D3, which down-regulates the gene and down-regulates cell division.

CLINICAL TRIALS

- Effects of Glutathione (an Antioxidant) and N-Acetylcysteine on Inflammation, Not Recruiting

Publications

PUBLICATIONS

- **Representational fragment amplification: Exponential amplification of fragmented cDNA enables multimillion-fold expression testing**
Sgarlato, G. D., Sussman, H. H.
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- **Panel of genes transcriptionally up-regulated in squamous cell carcinoma of the cervix identified by representational difference analysis, confirmed by macroarray, and validated by real-time quantitative reverse transcription-PCR** *CLINICAL CHEMISTRY*
Sgarlato, G. D., Eastman, C. L., Sussman, H. H.

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- **Selective downregulation of neutrophils by a phosphatidic acid generation inhibitor in a porcine sepsis model** *JOURNAL OF SURGICAL RESEARCH*
Oka, Y., Hasegawa, N., Nakayama, M., Murphy, G. A., Sussman, H. H., Raffin, T. A.
1999; 81 (2): 147-155
- **Cross-linking hybridization assay for direct detection of factor V Leiden mutation** *29th Annual Oak Ridge Conference*
Zehnder, J., VANATTA, R., Jones, C., Sussman, H., Wood, M.
AMER ASSOC CLINICAL CHEMISTRY.1997: 1703-8
- **Restoration of the G(1) checkpoint and the apoptotic pathway mediated by wild-type p53 sensitizes squamous cell carcinoma of the head and neck to radiotherapy** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*
Chang, E. H., Jang, Y. J., Hao, Z. M., Murphy, G., Rait, A., Fee, W. E., Sussman, H. H., Ryan, P., Chiang, Y. W., Pirollo, K. F.
1997; 123 (5): 507-512
- **Plasma concentrations after rectal administration of acetaminophen in preterm neonates** *Annual Meeting of the American-Society-of-Anesthesiologists*
Lin, Y. C., Sussman, H. H., Benitz, W. E.
BLACKWELL PUBLISHING.1997: 457-59
- **Differential expression of tubulin isotypes during the cell cycle** *CELL MOTILITY AND THE CYTOSKELETON*
Dumontet, C., Duran, G. E., Steger, K. A., Murphy, G. L., Sussman, H. H., Sikic, B. I.
1996; 35 (1): 49-58
- **TGF-BETA(1) CAUSES INCREASED ENDOTHELIAL ICAM-1 EXPRESSION AND LUNG INJURY** *JOURNAL OF APPLIED PHYSIOLOGY*
Suzuki, Y., Tanigaki, T., Heimer, D., Wang, W. Z., Ross, W. G., Murphy, G. A., Sakai, A., Sussman, H. H., Vu, T. H., Raffin, T. A.
1994; 77 (3): 1281-1287
- **THE PROTEIN-KINASE-C INHIBITOR, H-7, INDUCES ACUTE LUNG INJURY IN GUINEA-PIGS** *CRITICAL CARE MEDICINE*
Tanigaki, T., Suzuki, Y., Heimer, D., Wang, W. Z., Sussman, H. H., Ross, W. G., Murphy, G. A., Ikeda, H., Raffin, T. A.
1994; 22 (7): 1167-1173
- **MASSIVE CISPLATIN OVERDOSE BY ACCIDENTAL SUBSTITUTION FOR CARBOPLATIN - TOXICITY AND MANAGEMENT** *CANCER*
Chu, G., MANTIN, R., Shen, Y. M., BASKETT, G., Sussman, H.
1993; 72 (12): 3707-3714
- **ATTENUATION OF ACUTE LUNG INJURY AND OXYGEN RADICAL PRODUCTION BY THE 21-AMINOSTEROID, U-78518F** *JOURNAL OF APPLIED PHYSIOLOGY*
Tanigaki, T., Suzuki, Y., Heimer, D., Sussman, H. H., Ross, W. G., Raffin, T. A.
1993; 74 (5): 2155-2160
- **FURTHER CHARACTERIZATION OF HUNGARIAN ACATALASEMIA BY HINF1 POLYMORPHISM OF CATALASE GENE** *ENZYME & PROTEIN*
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- **INTRACELLULAR GLUTATHIONE LEVELS IN T-CELL SUBSETS DECREASE IN HIV-INFECTED INDIVIDUALS** *AIDS RESEARCH AND HUMAN RETROVIRUSES*
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- **POLYETHYLENE GLYCOL-CONJUGATED SUPEROXIDE-DISMUTASE ATTENUATES SEPTIC LUNG INJURY IN GUINEA-PIGS** *AMERICAN REVIEW OF RESPIRATORY DISEASE*
Suzuki, Y., Tanigaki, T., Heimer, D., Wang, W. Z., Ross, W. G., Sussman, H. H., Raffin, T. A.
1992; 145 (2): 388-393
- **IRON IN CANCER** *PATHOBIOLOGY*
Sussman, H. H.
1992; 60 (1): 2-9
- **A DIFFERENCE IN THE REGULATION OF MESSENGER-RNA EXPRESSION BETWEEN THE PHENOTYPIC AND THE EMBRYONIC ALKALINE-PHOSPHATASE GENES IN HUMAN CANCER-CELLS** *EXPERIMENTAL CELL RESEARCH*

Penhallow, R. C., Sussman, H. H.
1990; 188 (2): 279-285

- **HUMAN PLACENTAL ALKALINE-PHOSPHATASE PSTI RFLP ALLELES ARE THE RESULT OF A SINGLE BASE SUBSTITUTION** *NUCLEIC ACIDS RESEARCH*

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1990; 18 (7): 1930-1930

- **PST-I RESTRICTION FRAGMENT LENGTH POLYMORPHISM OF HUMAN PLACENTAL ALKALINE-PHOSPHATASE GENE - MENDELIAN SEGREGATION AND LOCALIZATION OF MUTATION SITE IN THE GENE** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*

Tsavalier, L., Penhallow, R. C., Sussman, H. H.
1988; 85 (20): 7680-7684

- **EXPRESSION OF HUMAN PLACENTAL CELL-SURFACE ANTIGENS ON PERIPHERAL-BLOOD LYMPHOCYTES AND LYMPHOBLASTOID CELL-LINES** *SCANDINAVIAN JOURNAL OF IMMUNOLOGY*

Hamilton, T. A., Wada, H. G., Sussman, H. H.
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