

CURRICULUM VITAE

NAME: Richard Ivan Cronkhite

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BIOGRAPHICAL:

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RESEARCH:

2003-4. The University of Cincinnati, Department of Pathology and Laboratory Medicine, Cincinnati, OH. 2003-2004.

Project: The mechanisms responsible for the differences in the chromosomal rearrangements and tumorigenesis of thyroid cancer in children versus adult victims of radiation exposure were studied. A new model was proposed, a knock-in construct was designed and a unique homologous recombination method was designed and evaluated.

2002-3. Children's Hospital of Cincinnati, Ohio. Temporary position with XLC temporary services in the laboratory of Mark Sussman, Ph.D. currently at San Diego State University, San Diego, CA.

Project: Recombinant adenoviruses were created and characterized in a BSL-2 laboratory for studying signaling in cardiomyocytes.

2000-1. Independent position in the Laboratory of retiring J.Gabriel Michael, Ph.D. in the Department of Molecular Genetics, Biochemistry, and Microbiology. Novel oral vaccines were studied for the potential treatment of allergic and infectious diseases.

Project: Two different preparations of microbeads were developed by Dr.

Michael that differ in their pH-release properties, L30D and FS30D. L30D microbeads release antigen at pH values above 6.5 and FS30D microbeads release antigen at pH values above 7.0, and therefore deliver antigen to the duodenum/jejunum and ileum, respectively. Ovalbumin encapsulated into these two types of microbeads was utilized to immunize specific regions of the GI tract in two different strains of mice. This allowed a very precise analysis of this GI compartment of the mucosal immune system. Acute, chronic, and pervasive immunization protocols were utilized to stimulate specific types of immunity. The upper small intestine was shown to be biased toward a T_H2 phenotype. However, chronic immunization of either region of the SI induced antibody isotypes that are influenced by T_H2 cytokines. Pervasive immunization of two regions of the GI tract simultaneously stimulated high levels of IgE. Acute immunization was best able to potentiate antibody isotypes influenced by T_H1 cytokines. Furthermore, a sequential segregated immunization protocol allowed the targeting of T_H1-like memory responses.

1992-3. The National Jewish Center for Immunology and Respiratory Medicine, Department of Immunology, Denver, CO.

Project: Signaling pathways of T cells involved in experimental allergic encephalomyelitis were studied. Pertussis toxin, which is required for the induction of EAE in mice, was shown to induce a proliferation pathway parallel to the inhibition mediated by TGF- β .

1991-2. The University of Arizona, The Department of Microbiology and Immunology, Tucson, AZ.

Project: Characterization of an antiserum directed against peptides and believed to react with unique T cell receptors on arsonate-binding suppressor T cells.

1990-1. The University of Pennsylvania, The Department of Neurology, Philadelphia, PA.

Project: Guillain Barré syndrome was studied using the animal model of experimental allergic neuritis, EAN. The disease could be transferred by CD4+ T cells. Immunological tolerance was successfully achieved with two different protocols by oral administration of a peptide of the P2 protein of peripheral nerve myelin.

1988-90. Rush University, The Department of Medical Oncology, Chicago, IL.

Project: Various interleukin 1 receptors were studied on a variety of cell lines in an effort

to further define the role of this cytokine in immune responses, cell growth, and cell differentiation.

1987. The University of Chicago, The Department of Molecular Genetics and Cell Biology, Chicago, IL.

Project: The regulation of immunoglobulin gene rearrangement was studied in pre-B cells lines from normal and SCID mice.

1980-1. Undergraduate research projects at the Michigan Department of Public Health:

- (1) Serological screening for endemic arboviral encephalitides using immune adherence hemagglutination.
- (2) Optimization of techniques for isolation of *Chlamydia trachomatis*.

TEACHING EXPERIENCE

Biology Laboratories for University College Students. University of Cincinnati, Cincinnati, OH, 2000.

General Microbiology Lecture, Biology Department, Wayne State University, Detroit, MI, 1998.

Health Science Laboratory for Majors, Grand Valley State University, Allendale, MI, 1996.

Biology Laboratories for Majors and Non-Majors, Grand Valley State University, Allendale, MI, 1995.

Medical Microbiology Laboratory, The University of Texas Medical Branch, Galveston TX, 1983-1986.

AWARDS

McLaughlin Pre-Doctoral Fellowship in "Infection and Immunity", 1985-1987.

McLaughlin Award for "Excellence in Research in Infection and Immunity", 1983.

SOCIETIES

The American Association for the Advancement of Science.

Past memberships in the following Societies: American Association of Immunologists, New York Academy of Sciences, Chicago Association of Immunologists, DNA Methylation Society.

BIBLIOGRAPHY

ARTICLES:

Cronkhite, R.I. and Michael, J.G. 2004. Sub-compartmentalization of the gastrointestinal immune system determined by microspheres with different release properties. *Vaccine* 22 (17-18):2106-2115. <http://authors.elsevier.com/sd/article/S0264410X04000040> .

Cronkhite, R.I.. 1993. Lymphocyte proliferation induced by pertussis toxin utilizes a pathway parallel to TGF- β -sensitive growth. *Int. Arch. All. Immunol.* 102:141-143.

Cronkhite, R.I., Lobick, J., and J.M.D. Plate. 1993. Heterogeneity of type II interleukin-1 receptors (IL 1R): Heterogeneity of B cell interleukin 1 binding created by dimerization of the type II IL-1R. *Human Immunology* 36:128-136.

Strickland, F.M., R.I. Cronkhite, and J. Cerny. 1989. Regulation of idiotype expression II. The phenotypic diversity of T15 idiotype-bearing antibody to phosphorylcholine in response to T-dependent and T-independent antigens. *Immunology* 67: 8-15.

Cronkhite, R., D. Schulze, and J. Cerny. 1989. Regulation of idiotope expression. IV. Genetic linkage of two D region-dependent T15 idiotopes to the Igh allotype. *J. Immunol.* 142:568-574.

Cronkhite, R., F. Strickland, and J. Cerny. 1987. Regulation of idiotope expression III. H-2 influences the magnitude and the idiotypy of a T-independent antibody response in mice of certain genetic backgrounds. *J. Immunol.* 141:921-925.

Cronkhite, R.I. The University of Texas Medical Branch. Ph.D. Dissertation. 1987. Genes influencing expression of TEPC 15 idiotopes.

Cronkhite, R.I. and J. Cerny. 1986. A novel idiotopic determinant on phosphorylcholine-binding immunoglobulins restricted to isotype and allotype. *J. Immunol.* 136:3729-3731.

Cerny, J., R. Cronkhite, and J.T. Stout. 1986. Rapid changes in the regulatory potential of autologous anti-idiotopic T cells during an antigen-driven primary response. *J. Immunol.* 136:3597-3606.

Cronkhite, R., J. Cerny and C. Delisi. 1984. Inhibition of plaque forming cells with anti-idiotope or hapten: Variation due to hapten density on indicator red cells. *J. Immunol. Meth.* 68: 109-118.

Cerny, J., and R. Cronkhite. 1983. An independent regulation of distinct idiotopes of the T15 idiotype by autologous T cells. *Annals N.Y. Acad. Sci.* 418:31-39.

Cerny, J., R. Cronkhite, and C.H. Heusser. 1983. Antibody response of mice following neonatal treatment with a monoclonal anti-receptor antibody. Evidence for B cell tolerance and T suppressor cells specific for different idiotopic determinants. *Eur. J. Immunol.* 13: 244-248.

LETTERS:

Cronkhite, R.I. TH2 shift. 1994. Submitted to *Science*.

ABSTRACTS:

R.I. Cronkhite. 1993. Biphasic Response of T cell Subpopulations to Pertussis Toxin. *Fed. Proc.* 1993.

Rostami, A.M. and R.I. Cronkhite. 1992. Prevention of Experimental Allergic Neuritis (EAN) by oral administration of immunological tolerance. *American Academy of Neurology*. San Diego, CA.

Cronkhite, R.I. and A.M. Rostami. 1991. Feeding Lewis rats a synthetic peptide of the P2 protein of peripheral nerve myelin results in protection against experimental allergic neuritis. *Philadelphia Immunology Conference*. Philadelphia, PA. 1991.

Cronkhite, R.I. and J.M.D. Plate. 1990. Receptors for IL-1 on human B cell lines bind I IL-1 α and β uniquely. *Autumn Immunology Conference*. Chicago, IL.

Cronkhite, R.I. and J.M.D. Plate. 1990. Receptors for IL-1 α and β on EBV-transformed B cell lines possess unique binding properties. *Amer. Assoc. Can. Res.* 31:238.

Cronkhite, R.I., J. Lobick, and J.M.D. Plate. 1990. Receptors for IL 1- α and β on EBV-transformed B cell lines possess distinct characteristics. *Fed. Proc.* Abstract Number 1315.

Strickland, F., R. Cronkhite, and J. Cerny. 1986. Factors influencing the expression of T15 idiotopes during an antigen driven response to phosphorylcholine (PC). *Fed. Proc.* 45(1): 730.

Cronkhite R.I., D. Schulze, J.T. Stout, M.J. Caulfield and J. Cerny. 1986. Linkage of TEPC15 idiotope expression to Igh complex by restriction fragment length polymorphisms (RFLPs). Fed. Proc. 45(1): 738.

Cronkhite, R. and J. Cerny. 1985. A T15 idiotope dependent on the IgA isotype. Fed. Proc. 44(2): 1694.

Cronkhite, R., K. Tabbara, and J. Cerny. 1983. Genetic control of expression of distinct idiotopes within T15 is mediated by specific T cells. Fed. Proc. 42(1): 703.