

BIOGRAPHICAL SKETCH

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NAME Christine A. Cartwright		POSITION TITLE Professor of Medicine/Gastroenterology	
eRA COMMONS USER NAME			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Stanford University, Stanford CA	B.S.	1973	Biology
University of Utah, Salt Lake City Utah	M.D.	1978	Medicine

A. Positions and HonorsPostdoctoral Training:

- 1978-81 Intern and Resident in Internal Medicine, University of California, San Diego
- 1982 Chief Medical Resident, University of Utah
- 1982-84 Fellow in Gastroenterology, University of California, San Diego
- 1984-89 Research Associate, Molecular Biology and Virology Laboratory
The Salk Institute, San Diego, California

Faculty Appointments:

- 1984-87 Instructor in Medicine (Clinical), University of California, San Diego
- 1987-89 Assistant Professor of Medicine (Clinical), University of California, San Diego
- 1989-95 Assistant Professor of Medicine/Gastroenterology, Stanford University
- 1989- Director, Center for Inflammatory Bowel Diseases, Stanford University
- 1995- Associate Professor of Medicine/Gastroenterology, with tenure, Stanford University
- 2005- Professor of Medicine/Gastroenterology, Stanford University

Research Awards:

- 1983-84 AGA Interdisciplinary Research Training Award, University of California, San Diego
- 1984-85 Giannini Foundation Medical Research Fellow, The Salk Institute
- 1989-91 Merck Faculty Development Award, Stanford University
- 1989-91 Hume Faculty Scholar, Stanford University
- 1989-91 Named Investigator Award, Digestive Disease Center Grant, NIH/NIDDK, P30-DK38707
- 1992 AGA/SmithKline Beecham Clinical Research Award

Professional Activities:

- 1995-99 Member, Tumor Biochemistry/Endocrinology Study Section, American Cancer Society
- 1998 Ad Hoc Member, General Medicine A-2 Study Section, National Institutes of Health
- 1997-00 Editorial Board, American Journal of Physiology: Gastrointestinal and Liver Physiology
- 1995- Member, American Society for Clinical Investigation

Research Grants: Principal Investigator: Christine A. Cartwright:

- 1985-88 NIH, NCI, 1 K08 CA01040, Clinical Investigator Award
- 1989-91 American Cancer Society, Faculty Research Grant, CD-400
- 1994-96 Crohn's and Colitis Foundation of America
- 1996-98 American Cancer Society, #BE-246
- 1991-06 NIH, NIDDK, 2R01-DK43743-12
- 2003-08 NIH, NCI, RO1-CA97020

B. Selected Publications (29 of 46)

1. Schulz R, CA Cartwright and A Goldstein. Reversibility of morphine tolerance and dependence in guinea pig brain and myenteric plexus. *Nature* 251:329-331, 1974.
10. Cartwright CA, JA McRoberts, KG Mandel and K Dharmasathaphorn. Synergistic action of cyclic adenosine monophosphate- and calcium-mediated chloride secretion in a colonic epithelial cell line. *J Clin Invest* 76:1837-1842, 1985.
12. Cartwright CA, MA Hutchinson and W Eckhart. Structural and functional modification of pp60^{c-src} associated with polyoma middle tumor antigen from infected or transformed cells. *Mol Cell Biol* 5:2647-2652, 1985.
13. Cooper JA, KL Gould, CA Cartwright and T Hunter. Tyr⁵²⁷ is phosphorylated in pp60^{c-src}: implications for regulation. *Science* 231:1431-1434, 1986.

14. Cartwright CA, PL Kaplan, JA Cooper, T Hunter and W Eckhart. Altered sites of tyrosine phosphorylation in pp60^{c-src} associated with polyomavirus middle tumor antigen. *Mol Cell Biol* 6:1562-1570, 1986.
15. Kaplan PL, S Simon, CA Cartwright and W Eckhart. cDNA cloning with a retrovirus expression vector: generation of a c-src cDNA clone. *J Virol* 61:1731-1734, 1987.
16. Cartwright CA, W Eckhart, S Simon and PL Kaplan. Cell transformation by pp60^{c-src} mutated in the carboxy-terminal regulatory domain. *Cell* 49:83-91, 1987.
17. Cartwright CA, R Simantov, PL Kaplan, T Hunter and W Eckhart. Alterations in pp60^{c-src} accompany differentiation of neurons from rat embryo striatum. *Mol Cell Biol* 7:1830-1840, 1987.
18. Cartwright CA, R Simantov, WM Cowan, T Hunter, and W Eckhart. pp60^{c-src} expression in the developing rat brain. *Proc Natl Acad Sci USA* 85:3348-3352, 1988.
20. Cartwright CA, MP Kamps, AI Meisler, JM Pipas and W Eckhart. pp60^{c-src} activation in human colon carcinoma. *J Clin Invest* 83:2025-2033, 1989.
23. Wu JY, Z-Y Zhou, A Judd, CA Cartwright and WS Robinson. The hepatitis B virus-encoded transcriptional *trans*-activator hbx appears to be a novel protein serine/threonine kinase. *Cell* 63:687-695, 1990.
24. Cartwright CA, AI Meisler and W Eckhart. Activation of the pp60^{c-src} protein kinase is an early event in colonic carcinogenesis. *Proc Natl Acad Sci USA* 87:558-562, 1990.
26. Cartwright CA, S Mamajiwalla, SA Skolnick, W Eckhart and DR Burgess. Intestinal crypt cells contain higher levels of cytoskeletal-associated pp60^{c-src} protein tyrosine kinase activity than do differentiated enterocytes. *Oncogene* 8:1033-1039, 1993.
27. Park J, AI Meisler and CA Cartwright. c-Yes tyrosine kinase activity in human colon carcinoma. *Oncogene* 8:2627-2635, 1993.
29. Cartwright CA, CA Coad and BM Egbert. Elevated c-Src tyrosine kinase activity in premalignant epithelia of ulcerative colitis. *J Clin Invest* 93:509-515, 1994.
31. Peña SV, MF Melhem, AI Meisler and CA Cartwright. Elevated c-Yes tyrosine kinase activity in premalignant lesions of the colon. *Gastroenterology* 108:117-124, 1995.
32. Park J and CA Cartwright. Src activity increases and Yes activity decreases during mitosis of human colon carcinoma cells. *Mol Cell Biol* 15:2374-2382, 1995.
33. Peng Z-Y and CA Cartwright. Regulation of the Src tyrosine kinase and Syp tyrosine phosphatase by their cellular association. *Oncogene* 11:1955-1962, 1995.
34. Kumble S, MB Omary, CA Cartwright and G Triadafilopoulos. Src activation in malignant and premalignant epithelia of Barrett's esophagus. *Gastroenterology* 112:348-356, 1997.
35. Cartwright CA. Intestinal cell growth control: Role of Src tyrosine kinases. *Gastroenterology* 114:1335-38, 1998.
36. Chang BY, KB Conroy, E Machleder and CA Cartwright. RACK1, a receptor for activated C kinase and a homolog of the β subunit of G proteins, inhibits activity of Src tyrosine kinases and growth of NIH 3T3 cells. *Mol Cell Biol* 18:3245-3256, 1998.
37. Walter AO, Peng Z-Y and CA Cartwright. The Shp-2 tyrosine phosphatase activates the Src tyrosine kinase by a non-enzymatic mechanism. *Oncogene* 18:1911-1920, 1999.
38. Chang BY, M Chiang and CA Cartwright. The interaction of Src and RACK1 is enhanced by PKC activation and tyrosine phosphorylation of RACK1. *J Biol Chem* 276:20346-20356, 2001.
39. Chang BY, R Harte and CA Cartwright. RACK1: a novel substrate for the Src protein-tyrosine kinase. *Oncogene* 21:7619-7629, 2002.
42. Chang BY, and CA Cartwright. Detection of protein kinase binding partners by the yeast two-hybrid analysis *Methods in Molecular Biology* 233:327-343, 2003.
43. Kambham N, R Vij, CA Cartwright and T Longacre. Cytomegalovirus infection in steroid-refractory ulcerative colitis: a case-control study. *Am J Surg Pathol* 8:365-373, 2004.
44. Mamidipudi V, BY Chang, R Harte, KC Lee and CA Cartwright. RACK1 inhibits the serum- and anchorage-independent growth of v-Src transformed cells. *FEBS Letters* 567:321-326, 2004.
45. Mamidipudi V, J Zhang, KC Lee and CA Cartwright. RACK1 regulates G₁/S progression by suppressing Src kinase activity. *Mol Cell Biol* 24:6788-6798, 2004.
46. Miller LD, KC Lee, D Mochly-Rosen and CA Cartwright. RACK1 regulates Src-mediated Sam68 and p190RhoGAP signaling. *Oncogene* 23:5682-5686, 2004.

C. Research Support

Ongoing Research Support

5 R01 DK43743-14 Cartwright (PI) 06/01/01 – 03/31/06

NIH/NIDDK

Intestinal Cell Growth Control: Role of Tyrosine Kinases

The goal of this project, and the competing renewal, is to investigate mechanisms whereby normal intestinal cells regulate their growth.

Role: PI

5 R01 CA097020-02 Cartwright (PI) 07/03/03 – 06/30/08

NIH/NCI

Human Colon Cancer: Role of the Src Tyrosine Kinase

The goals of this project are to investigate RACK1's influence on cell transformation by v-Src, and to identify mutations, post-translational modifications and subcellular translocations of Src and RACK1 that deregulate their function in colon cancer cells.

Role: PI

IBD-0068 Cartwright (PI) 09/01/03 – 08/31/05

Broad Medical Research Foundation

Ulcerative Colitis: Molecular Mechanisms of Carcinogenesis

The goal of this pilot project is to analyze molecular mechanisms of carcinogenesis in ulcerative colitis.

Role: PI

Completed Research Support

None