

TAK WAH MAK

CURRICULUM VITAE

Citizenship: Canadian

Education: B.Sc. (1967) University of Wisconsin, Madison, Wisconsin
Major: Biochemistry

M.Sc. (1969) University of Wisconsin, Madison, Wisconsin
Major: Biophysics Minor: Chemistry

Ph.D. (1972) University of Alberta, Edmonton, Alberta
Major: Biochemistry

Thesis subject: Biophysical and biochemical studies of the three variants of mengo encephalomyelitis virus.

Awards & Honors:

- 1984 - The Outstanding Award of the Year
Chinese Cultural Association of Canada
- 1985 - E.W.R. Steacie Award, National Sciences and Engineering
Research Council, Ottawa
- 1985 - Ayerst Award, Canadian Biochemical Society
- 1985 - Merit Award, Federation of Chinese
Professionals of Canada
- 1986 - Stacie Prize, Stacie Trust Foundation
- 1986 - Fellow of the Royal Society of Canada
- 1988 - 1988 Canadian Association of Manufacturers of
Medical Devices Award, Toronto
- 1988 - Emil von Behring Prize (1988-1990)
Phillips-Universitat Marburg, Germany
- 1989 - University of Alberta 75th Anniversary Distinguished Scientist
Award

Awards & Honors:
(Cont'd)

- 1989 - Gairdner International Award, Gairdner Foundation
- 1990 - McLaughlin Medal, Royal Society
- 1991 - Canadian Foundation for AIDS Research Award
- 1994 - 1994 Cinader Award
- 1994 - Fellow of The Royal Society of London
- 1995 - King Faisal International Prize for Medicine
- 1996 - Sloan Prize, General Motors Cancer Research Foundation
- 1996 - McLeans Magazine's Honour Roll
- 1997 - Robert Noble Prize, National Cancer Institute of Canada
- 1997 - Alumni of the Year - University of Alberta
- 1997 - University Professor, University of Toronto
- 1997 - McLaughlin Medal, University of Texas, Galveston, Texas
- 1998 - Novartis Immunology Prizes, Novartis, Inc. Basel, Switzerland
- 2000 - Order of Canada, Governor General of Canada
- 2002 - Foreign Associate, National Academy of Sciences (US)
- 2003 - Killam Prize, Canada Council
- 2004 - Paul Ehrlich Prize
Ludwig Darmstaedter Prize, Republic of Germany
- 2005 - Member, American Academy of Arts & Sciences, USA
- 2007 - Premier's Summit Awards in Medical Research, Ontario, Canada
- 2008 - Order of Ontario, Canada
- 2008 - University of Alberta Alumni Recognition Award
- 2009 - 2009 Inductee to Canadian Medical Hall of Fame, Canada

Honorary Degrees & Professorship:

- 1986 - Honorary Professor, Cancer Institute, Chinese Academy of Medical Sciences
- 1986 - Honorary Professor, Beijing Union Medical University
- 1989 - Honorary Doctor of Science, Carleton University
- 1992 - Honorary Doctor of Science, Laurentian University
- 1995 - Honorary Member, Scandinavian Society of Immunology
- 2001 - Honorary Doctor of Medicine, University of Zurich, Switzerland
- 2004 - Honorary Doctor of Science, York University, Ontario
- 2004 - Honorary Doctor of Science, Ryerson University, Ontario
- 2004 - Honorary Professor, Dept. of Pathology, Hong Kong University
- 2007 - Honorary Professor, Dept. of Medicine Faculty, University of Rome "Tor Vergata", Italy
- 2007 - Honorary Professor, Dept of Biology and Chemistry, City University of Hong Kong
- 2008 - Honorary Degree, Doctor of Science *honoris causa*, University of Hong Kong
- 2008 - Honorary Degree, Doctor of Medicine in Surgery, University of Rome
- 2008 - Honorary Degree, Faculty of Medicine, Georg-August-University, Goettengen, Germany
- 2008 - 2008 University of Alberta Distinguished Alumni Recognition Awards, Alberta, Canada

***Inaugural, Keynote &
Names Addresses:***

- 1985 - Presidential Lecturer, American Society of Hematology Annual Meeting, New Orleans
- 1986 - Distinguished Lecturer, University of Rochester, Rochester
- 1986 - Pfizer Lecturer, Clinical Research Institute of Montreal, Montreal
- 1988 - Keynote Address, Japanese Society of Transplantation, Fukuoka City, Japan
- 1988 - Inaugural Address, European Society of Hematopathology, Geneva, Switzerland
- 1989 - Gladys Everson Lectureship, University of Wisconsin, Madison, Wisconsin
- 1989 - Cybermedix Lecture, Canadian-American Association of Medical Biochemistry, Hamilton, Ontario
- 1990 - Michael Heidelberger Lecture, Columbia University, New York
- 1990 - Keynote Address, American Association of Physicians for Human Rights Annual Meeting, Toronto, Ontario
- 1991 - Keynote Address, American Society for Urology Research Meeting
- 1991 - Irvington Institute Annual Distinguished Lecturer, Albert Einstein College of Medicine of Yeshiva University, New York
- 1992 - Keynote Address, American Society of Clinical Immunology Annual Meeting, Philadelphia, Pennsylvania
- 1993 - Keynote Address, Fifth International Conference on Malignant Lymphoma, Lugano, Switzerland
- 1993 - Keynote Address, UCLA/UCI AIDS Symposium, Palm Springs, California

***Inaugural, Keynote &
Names Addresses:
(Cont'd)***

- 1993 - Yohei Ito Memorial Lectureship, International Association for Comparative Research on Leukemia and Related Diseases, Montreal
- 1994 - Keynote Address, T Cell, Tolerance, Transplantation and Tumor, Kiel, Germany
- 1994 - Keynote Address, First European Hematology Association Meeting, Brussels, Belgium
- 1994 - Keynote Address, Eighth International Workshop on Immunodeficient Animals, Utrecht, The Netherlands
- 1994 - Keynote Address, Fifth International Congress on Tumor Necrosis Factor, Monterey, California
- 1994 - Howard Temin Memorial Symposium
Bethesda, MD
- 1994 - Keynote Address, 44th Annual Society of Allergology, Tokyo, Japan
- 1994 - Keynote Address, Cleveland Clinic Fourteenth Annual Research Day, Cleveland, Ohio
- 1994 - Keynote Address, Symposium on Signal Transduction National, Research Council Biotechnology Research Lab, Montreal, Quebec
- 1995 - Paul Erlich Lecture, University of Nebraska,
Lincoln, Nebraska
- 1996 - David L Thompson Lecture, McGill University
Montreal, Quebec
- 1997 - James W. McLaughlin Visiting Professor, University of Texas,
Texas, Galveston
- 1998 - Keynote Address, 1998 Keystone Symposia Conference on Breast and Prostate Cancer, Copper Mountain, Co
- 1998 - Keynote Address, 1998 Keystone Symposia Conference on Motility and Metastasis, Copper Mountain, Co

***Inaugural, Keynote &
Names Addresses:
(Cont'd)***

- 1998 - Keynote Address, 6th Pacific Rim Biotechnology Conference and BioExpo '98, Hong Kong
- 1998 - Keynote Address, International Society of Experimental Hematology, Vancouver, B.C.
- 1998 - Congress Address, Congress of Multiple Sclerosis, Stockholm, Sweden
- 1999 - Keynote Address, Canadian Breast Cancer Research Initiative Symposium, Toronto, Canada
- 1999 - Keynote Speaker, 13th International Conference on Lymphoid Tissues in Immune Reactions, Geneva, Switzerland
- 1999 - Keynote Speaker, Society of Chinese Bioscientists in America, Hong Kong
- 1999 - Keynote Speaker, Symposium in Honour of Professor Tomio Tada, Tokyo, Japan
- 1999 - Keynote Address, Symposium on Apoptosis, University of California, Biotechnology Services, San Diego, USA
- 2000 - Keynote Address, 12th Lorne Cancer Conference, Australia
- 2000 - Keynote Address, Japanese Society of Hematology, Fukuoka City, Japan
- 2000 - Presidential Lecturer, ISH 2000, 28th World Congress of the International Society of Hematology, Toronto, Canada
- 2001 - Rutherford Lecturer, Royal Society of London, U.K.
- 2002 - Keynote Address, Symposium on Apoptosis in Cancer and Infections, Capri, Italy
- 2002 - Keynote Address, Symposium on Inflammation and Transformation in the Pancreas, Ulm, Germany
- 2002 - Keynote Address, Annual Retreat on Cancer, University of Alabama, Birmingham, Alabama

***Inaugural, Keynote &
Names Addresses:
(Cont'd)***

- 2003 - E. Donnell Thomas Lecture (Keynote Address), American and International Joint Meeting on Blood and Bone Marrow Transplantation Society, Keystone, Colorado
- 2003 - Edward Youde Lecture, Joint Universities of Hong Kong Science and Technology Annual Symposium
- 2003 - Kenneth B McCredie Memorial Lecturer, The Leukemia and Lymphoma Society
- 2004 - Keynote Address, Second International Conference on "B cells & Autoimmunity: New concepts & therapeutic perspectives", Quebec City, Canada
- 2004 - Keynote Address, Institute for International Research 2nd Annual "Developing Targeted Cancer Therapeutics-From Discovery to Market", Washington, D.C.
- 2004 - Peter A. Steck Lecture, MD Anderson Hospital, Houston, Texas USA
- 2004 - Keynote Address, 2nd International Congress on B Cells & Autoimmunity, Quebec City, Canada
- 2004 - Keynote Address, International Congress of Immunology, Montreal, Canada
- 2004 - Keynote Address, International Congress of Cytokines, Puerto Rico
- 2005 - Keynote Address, Gordon Conference "The Challenge Of Breast Cancer", Salve Regina University, Newport, RI
- 2005 - Keynote Address, Official Opening of Centre For Mathematical Medicine, Fields Institute, Toronto, Canada
- 2005 - Keynote Address, Computational Biology Institute of Ontario, Toronto, Canada
- 2006 - Keynote Address, 20th IUBMB International Congress of Biochemistry & Molecular Biology and 11th FAOBMB Congress, Kyoto, Japan

***Inaugural, Keynote &
Names Addresses:
(Cont'd)***

- 2006 - Keynote Address, "Signaling Transduction Modulators in Cancer Therapy", BioSymposia, Inc. Denver, Colorado, USA
- 2006 - Keynote Address, "7th Symposium of Molecular & Cellular Immunity 2006", Chinese Society of Immunology Annual Meeting, Chongqing, China
- 2006 - Concluding Lecture, 34th Meeting of the International Society for Oncodevelopmental Biology and Medicine, Pasadena, California, USA
- 2006 - Keynote Address, Cancer Immunology Symposium, St. Gallen, Switzerland
- 2006 - Keystone Address, Drug Development, BioSymposia, Inc., Denver, CO
- 2007 - Presidential Lecture, Sloan Kettering Memorial Institute, New York
- 2007 - Keynote Address, International p63 p73 Workshop, Rome, Italy
- 2007 - Stanley Korsmeyer Memorial Lecture, 100th Annual Meeting, American Association for Cancer Research, Los Angeles, CA
- 2007 - Keynote Address, 37th Scandinavian Society for Immunology Meeting, Turku, Finland
- 2008 - Nordic Lecturer, 38th Scandinavian Society for Immunology Annual Meeting, Stockholm, Sweden

Professional Activities:

- 1975 - organized the Hematology, Immunology and Differentiation Meeting at the Ontario Cancer Institute
- 1976 - organized the Tumor Virology Meeting Sponsored by the National Cancer Institute of Canada
- 1981 - organized the Symposium on Cellular and Molecular Biology of Hemopoietic Stem Cell Differentiation, Honey Harbor, Ontario

***Professional Activities:
(Cont'd)***

- 1983 - organized the Symposium on Cellular and Molecular Biology of Neoplasia, Honey Harbor, Ontario
- 1985 - organized the International Symposium on Cancer: Perspectives for Control, Beijing, Peoples' Republic of China
- 1986 - organized the annual meeting of the Royal Society of Canada, session on "Acquired Immunodeficiency Syndrome", at McMaster University, Ontario
- 1989 - organized the Bristol Myers Symposium on Molecular Mechanisms and the Clinical Application in Malignancy, Toronto, Ontario
- 1990 - organized the American Association for Cancer Research Workshop on "Molecular Basis of Tumor Immunology", Washington, D.C. U.S.A.
- 1991 - organized committee, Second International Symposium on Recent Advances in Basic and Clinical Research in Hodgkin's Disease, Cologne, Germany
- 1991 - organized the Symposium on Molecular and Cellular Biology of the Hemopoietic Stem Cells, Toronto, Ontario
- 1992 - organized the Winter Advanced Course in Immunology and Infectious Disease, Hong Kong
- 1992 - Chairman, Immunology Panel, American Association for Cancer Research Annual Meeting, San Diego, California
- 1993 - organized Immunotherapy 2001: Peptides or Chemicals, Monterey, California
- 1994 - External Expert, Medical Faculty, Karolinska Institute, Stockholm, Sweden
- 1994 - organized T Cell Tolerance Workshop, Palm Island, Florida
- 1994 - Promotion Committee Member, Harvard Medical School, Boston, Mass.
- 1995 - organized "Lymphocytes in Health and Disease" Meeting, Hong Kong
- 1996 - Review Team Member, German Cancer Institute, Heidelberg, Germany
- 1997 - organized Tolerance and Autoimmunity Symposium, Keystone Symposium, Keystone, Colorado
- 1998 - Review Team Member, Biotechnology Centre, Karolinska Institute, Sweden

Professional Activities:
(Cont'd)

- 1999 - organize Tolerance and Autoimmunity Symposium, Keystone Symposium, Keystone, Colorado
- 2000 - Steering Committee, Era of Hope 2000, Atlanta, Georgia
- 2000 - Ad hoc member, Consellers of General, NIAID, Intramural Program, NIH
- 2000 - Review Team, National Cancer Institute
- 2000 - Leukemia, Lymphoma, and Myeloma Review Team, NCI, Bethesda, MD
- 2003 - Chairman, National Institute of Health Review Team, University of Pennsylvania
- 2007 - Organizer, Cantoblanco Workshops on Biology Signaling and Metabolic Pathways in Cancer, Madrid, Spain
- 2007 - Organizer, Cancer Therapeutics: The Road Ahead, Capri, Italy
- 2008 – Co-chairperson, American Association for Cancer Research, Frontiers in Cancer Prevention Research Conference, Washington, D.C.
- 2008 – Reviewer, Ludwig Boltzmann Gesellschaft, Vienna, Austria

Experience:

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| 1967-1968 | Research Assistant, Department of Biochemistry, University of Wisconsin, Madison, Wisconsin |
| 1968-1969 | Research Assistant, Department of Biochemistry, University of Alberta, Edmonton, Alberta |
| 1969-1971 | Instructor, Department of Biochemistry, University of Alberta, Edmonton, Alberta |
| 1972-1973 | Postdoctoral Fellow, The Ontario Cancer Institute, Toronto |
| 1974-present | Senior Scientific Staff, Ontario Cancer Institute, Toronto, Ontario |
| 1974-1979 | Assistant Professor, Department of Medical Biophysics, University of Toronto, Toronto |

Experience:
(Cont'd)

1979-1984	Associate Professor, Department of Medical Biophysics, University of Toronto, Toronto
1980	The American Cancer Society, Visiting Professorship, McArdle Laboratory for Cancer Research, University of Wisconsin, Madison, Wisconsin
1984	Professor, Department of Medical Biophysics, University of Toronto, Toronto
1984	Professor, Department of Immunology, University of Toronto, Toronto
1979 - Present	Member, Institute of Medical Science, University of Toronto, Toronto
1991 - 1993	Head, Division of Cellular and Molecular Biology, Ontario Cancer Institute
1993 - 2002	Founding Director, Amgen Institute, Toronto, Canada
1995 - 2001	Graduate Secretary, Department of Medical Biophysics, University of Toronto, Toronto
2002 – Present	Director, Advanced Medical Discovery Institute, University Health Network, Toronto
2004 – 2007	Honorary Professor, Dept of Pathology, University of Hong Kong
2004 – Present	Director, The Campbell Family for Breast Cancer Research Institute, Princess Margaret Hospital, University Health Network, Toronto

Professional Duties:

1988 - 1990	Associate Editor, Scandinavian Journal of Immunology
1988 - 1994	Associate Editor, Immunology Letters
1987 - 1994	Associate Editor, Biosciences Report

***Professional Duties:
(Cont'd)***

1987 - 1994	Editor, The Journal of the Federation of the American Societies for Experimental Biology
1987 - Present	Editor, The International Journal of Immunology
1987 - 1996	Associate Editor of Cancer Research
1987 - Present	Fellowship Panel, Cancer Research Institute, New York
1990 - 2000	Editor, Scandinavian Journal of Immunology
1991 - 1993	Associate Editor, Cellular Immunology
1991 - 1997	Associate Editor, The Journal of Experimental Medicine
1994 - Present	Editor, The Immunologist
2001 - Present	Editor, Current Opinion in Immunology
2002 - Present	Associate Editor, Cancer Cell
2003 – Present	Editor, Proceedings of the National Academy of Sciences, USA
2007 – 2009	Editor, Cell Death Differentiation, Nature

Board Member:

1987 - Present	Journal of Clinical Immunology and Immunopathology
1989 - 1994	Pittsburgh University Cancer Institute, Pittsburgh
1989 - 2000	T Cell Sciences, Cambridge, Massachusetts
1989 - 1991	Xytronics Inc., San Diego, California
1989 - 1991	Hong Kong Institute of Biotechnology, Hong Kong
1989 - Present	Cancer Research Inc. New York
1990 - 1992	Northwestern University, Cancer Center, Chicago
1990 - 1994	General Motors Award Assembly, New York, N.Y.

**Board Member:
(Cont'd)**

1990 - 1993	R.W. Johnson Research Institute
1990 - 1993	Allelix Biopharmaceuticals, Canada
1992 - Present	Scientific Advisory Council, Cancer Research Institute, New York
1994 - Present	Induced Mutant Resource at The Jackson Laboratory, Bar Harbor, Maine
1994 - Present	Member of the Advisory Council of the General Motors. Cancer Research Foundation, New York, N.Y.
1995 - 2003	Lombard Odier Bank, Geneva, Switzerland
1995 - Present	Honorary Member, The Scandinavian Society for Immunology
1997 - 2000	Advisory Board on Cancer Genetics, National Cancer Institute (US)
1997 - 2000	Board of Directors, Rigel Inc., California, USA
1997 - Present	Ad hoc Member, National Cancer Institute (US) Breast Cancer Think Tank
2000 - Present	Editorial Board Member, Cancer Cell
2002 - 2005	Board of Directors, Affinium Pharmaceuticals
2002 - 2006	Scientific Advisory Board, Institute of Molecular & Cellular Biology, Singapore
2002	Scientific Advisory Board, Kalypsys Pharmaceuticals
2003 - 2006	Boards of Directors, Miikana Therapeutics, Fremont, Calif.
2003 - 2006	Chief Scientific Officer, Miikana Corporation, Fremont, Calif.
2002	Editorial Board Member, Proceedings of the National Academy of Sciences, USA
2004	Scientific Advisory Board, Affibody, Inc., Stockholm, Sweden
2003	Scientific Advisory Board, Ohio State University Comprehensive Cancer Center, Ohio

**Board Member:
(Cont'd)**

2006	Scientific Advisory Board, CBR Institute for Biomedical Research Harvard Medical School, Boston, Mass
2006	Scientific Advisory Board, International Scientific Committee of the Fundacion Caubet-Cimera Illes Balears, Mallorca, Spain
2006	Chairman, Scientific and Clinical Advisory Board, EntreMed Inc., Rockville, Maryland
2006	Scientific Advisory Board, Ontario Institute for Cancer Research, Toronto
2006	Trustee, The Croucher Foundation, Hong Kong
2007	Scientific Advisory Board, Mayo Clinic Cancer Center, Rochester, MN
2007	Scientific Advisory Board, Lymphoma Program, MD Anderson Hospital, Houston, Texas
2007	Scientific Advisory Board, Singapore Health Services Pte Ltd ("SingHealth"), Singapore
2008	Scientific Advisory Board (Founder), Agios Pharmaceuticals, Cambridge, Mass. USA
2008	Scientific Advisory Committee, Stand Up To Cancer, American Association for Cancer Research, USA

Patents Granted or Pending:

Canadian Patent	1,197,480	T cell receptor - Issued December 3, 1985
U.S. Patent	4,713,332	T cell receptor - Issued December 15, 1987
U.S. Patent	4,923,799	T cell receptor - Issued May 8, 1990
Japanese Patent	#4829/1985	T cell receptor (Pending)
Japan Patent	#84426/1986	T cell receptor (Issued)
European Patent	#85300243.4	T cell receptor (Issued)

***Patents Granted or Pending:
(Cont'd)***

U.S. Patent	#5,530,178	Mice lacking CD8 - Issued June 25, 1996
U.S. Patent	#5,532,158	IL-2R KO constructs - Issued July 2, 1996
U.S. Patent	#5,557,032	CD28 KO constructs - Issued September 17, 1996
U.S. Patent	#5,616,491	Mice lacking CD28 - Issued April 1, 1997
U.S. Patent	#5,625,122	Mice lacking lck - Issued April 29, 1997
U.S. Patent	#5,698,765	Mutant mouse lacking the CD4 surface marker - Issued December 16, 1997
U.S. Patent	#5,684,222	Mice lacking TNF receptor p55 - Issued November 4, 1997
U.S. Patent	#5,675,059	Mice lacking IRF-2 - Issued October 7, 1997
U.S. Patent	#5,714,667	Mice lacking expression of CTLA-4 receptor - Issued February 3, 1998
U.S. Patent	#5,731,490	Mutant mouse lacking the expression of interferon regulatory factor 1 (IRF-1) - Issued March 24, 1998
U.S. Patent	#5,786,152	Methods of Inhibiting SYP Binding to a CTLA-4 Receptor - Issued July 28, 1998
U.S. Patent	#5,907,079	MSH2 disrupted mice develop lymphoma - Issued May 25, 1999
U.S. Patent	US6468528	Blocking IL-13 to treat Hodgkin's Lymphoma - Issued November 22, 2002
U.S. Patent	US2003039999	B7 related protein-2 molecules and uses thereof - Issued February 27, 2003
U.S. Patent	US 6,552,246 B1	Transgenic mice comprising CD45 knockout - Issued April 22, 2003

***Patents Granted or Pending:
(Cont'd)***

U.S. Patent	US 6,664,107	CD45 Disrupted Nucleic Acid - Issued December 16, 2003
U.S. Patent		Lymphocyte specific tyrosine phosphatase HePTP (Pending)
U.S. Patent	US 60/825,992	IL-7 potently enhances immune responses to facilitate tumor killing and prolong survival. - Appl. Date: September 18, 2006 (Provisional)
U.S. Patent	US 60/893,649	Induction of apoptosis and inhibition of cell proliferation through modulation of carnitine palmitoyltransferase 1 C activity. - Appl. Date: March 8, 2007 (Provisional)
European Patent		Lymphocyte specific tyrosine phosphatase HePTP (Pending)

Teaching Assignments:

2000 – Present

Undergraduate: IMM 450 Y
 IMM 430 H

Graduate: IMM 1017 H

PUBLICATIONS:

1. Mak, T., O'Callaghan, D.J. and Colter, J.S. (1970) Studies of the pH inactivation of three variants of memento encephalomyelitis virus. *Virology* 40: 565-571.
2. O'Callaghan, D.J., Mak, T. and Colter, J.S. (1970) The structural proteins of virus variants. *Virology* 40: 572-578.
3. O'Callaghan, D.J., Mak, T. and Colter, J.S. (1970) Studies on the protein subunit of pH-inactivated mengo virus variants. I. Structural polypeptides. *Virology* 42:229-233.
4. Mak, T., O'Callaghan, D.J. and Colter, J.S. (1970) The attachment penetration and uncoating of mengo virus variants in cultured mammalian cells. *Virology* 42: 1087-1096.
5. Mak, T.W., O'Callaghan, D.J., Kay, C.M. and Colter, J.S. (1971) Studies of the protein subunit of pH-inactivated mengo virus variants: II. Physiocochemical properties. *Virology* 43: 579-587.
6. Mak, T.W., Colter, J.S. & Scraba, D.G. (1974) Structure of the mengo virion: II. Physiocochemical and electron microscopic analysis of degraded virus. *Virology* 57: 543-553.
7. Mak, T.W., Aye, M.T., Messner, H., Sheinin, R., Till, J.E. and McCulloch, E.A. (1974) Reverse transcriptase activity: Increase in culture from patients in relapse and remission. *Brit. J. Cancer* 29: 433-437.
8. Mak, T.W., Manaster, J., Howatson, A.F., McCulloch, E.A. and Till, J.E. (1974) Particles with characteristics of leukoviruses in cultures of marrow cells from leukemic patients in remission and relapse. *Proc. Natl. Acad. Sci. USA* 71: 4334-4340.
9. McCulloch, E.A., Mak, T.W., Price, G.B. and Till, J.E. (1974) Organization and communication in populations of normal and leukemic hemopoietic cells. *Biochem. Biophys. Acta* 355: 260-299.
10. Mak, T.W. and Rueckert, R.R. (1974) Inactivation of ME-virus by periodate. *Intervirology* 4: 129-139.
11. Till, J.E., Mak, T.W., Price, G.B., Seen, J.S. and McCulloch, E.A. (1975) Cellular and molecular approaches to the study of myeloproliferative disorders. *Advances in the Biosciences* 16: 57-76.

12. Mak, T.W., Kurtz, S., Manaster, J. and Housman, D. (1975) Viral related information in oncornavirus-like particles isolated from cultures of marrow cells from leukemic patients in relapse and remission. *Proc. Natl. Acad. Sci. USA* 72: 623-627.
13. Till, J.E., Price, G.B., Mak, T.W. and McCulloch, E.A. (1975) Regulation of blood cell differentiation. *Federation Proc.* 34: 2279-2284.
14. Mak, T.W., Kurtz, S., Manaster, J. and Housman, D. (1976) Viral-related information in oncornavirus-like particles isolated from cultures of marrow cells from leukemic patients. *Cancer Year Book 1976*. University of Texas Press (ed. Cumley, R.W.).
15. Till, J.E., Mak, T.W., Price, G.B., Senn, J.S. and McCulloch, E.A. (1976) Cellular subclasses in human leukemic hemopoiesis. *In: Modern Trends in Human Leukemia II*. (R. Neth, R.C. Gallo, K. Mannweiler and W.C. Moloney, eds.) J.F. Lehmanns Verlag, Munich, W. Germany, pp. 33-45.
16. Mak, T.W., Rutledge, G. and Sutherland, D.J.A. (1976) Androgen-dependent fibrinolytic activity in a murine mammary carcinoma (Shinonogi SC-115 cells) *in vitro*. *Cell* 7: 223-226.
17. Senn, J.S., Pinkerton, P.H., Price, G.B., Mak, T.W. and McCulloch, E.A. (1976) Human preleukemia cell culture studies in sideroblastic anemia. *Brit. J. Cancer* 33: 299-306.
18. Senn, J.S., Price, G.B., Mak, T.W. and McCulloch, E.A. (1976) An approach to human preleukemia using cell culture studies. *Blood Cells* 2: 161-166.
19. Bernstein, A., Hunt, D.M., Crichley, V. and Mak, T.W. (1976) Induction by ouabain of hemoglobin synthesis in cultured Friend erythroleukemic cells. *Cell* 9: 375-381.
20. Bernstein, A., Mak, T.W. and Stephenson, J.R. (1977) The Friend virus genome: Evidence for the stable association of MuLV sequences and sequences involved in erythroleukemic transformation. *Cell* 12: 287-294.
21. Mak, T.W., Penrose, D., Gamble, C. and Bernstein, A. (1978) The Friend spleen focus forming virus (SFFV) genome: Fractionation and analysis of SFFV and helper virus-related sequences. *Virology* 87: 73-80.
22. Okaura, S., Crane, F. and Mak, T.W. (1978) Purification of terminal deoxynucleotidyl transferase by oligonucleotide affinity chromatography. *J. Biol. Chem.* 253: 3765-3767.
23. Wan, C.W. and Mak, T.W. (1978) Deoxycytidine kinase and cytosine nucleoside deaminase activities in synchronized cultures of rat kidney (NRK) cells. *Cancer Research* 38: 2768-2772.

24. Mak, T.W., Penrose, D., Gamble, C. and Bernstein, A. (1979) The Friend spleen focus-forming virus genome. *In: Oncogenic Viruses and Host Cell Genes.* (Y. Ikawa and T. Odaka, eds.) Academic Press, New York, pp. 183-193.
25. Wan, C.W. and Mak, T.W. (1979) Inhibition of murine sarcoma virus induced foci formation by cytidine analogues and other drugs chemotherapeutically effective in human malignancies. *Internvirology* 11: 291-299.
26. McCool, D., Mak, T.W. and Bernstein, A. (1979) Cellular regulation in Friend virus induced erythroleukemia: Studies using anemic mice of genotype S1/S1{d}. *J. Exp. Med.* 149: 837-846.
27. Bernstein, A., Gamble, C., Penrose, D. and Mak, T.W. (1979) Presence and expression of Friend erythroleukemia virus related sequences in normal and leukemic mouse tissues. *Proc. Natl. Acad. Sci. USA* 76: 4455-4459.
28. Wan, C.W. and Mak, T.W. (1979) Effect of tetrahydrouridine on the action of 1-beta-D-arabinofuranosylcytosine in synchronized cultures of normal rat kidney cells. *Cancer Res.* 39: 3981-3985.
29. Mak, T.W., Axelrad, A.A. and Bernstein, A. (1979) Fv-2 locus controls expression of Friend spleen focus forming virus-specific sequences in normal and infected mice. *Proc. Natl. Acad. Sci. USA* 76: 5809-5812.
30. Bernstein, A., MacDonald, M.E., Mager, D. and Mak, T.W. (1980) Host and viral genes in Friend leukemia. *In: In Vivo and In Vitro Erythropoiesis: The Friend System.* (G.B. Rossi, ed.) Elsevier/North-Holland Biomedical Press, Amsterdam, pp. 323-331.
31. Okamura, S., Crane, F., Jamal, N., Messner, H.A. and Mak, T.W. (1980) Single-cell immunofluorescence assay for terminal transferase: human leukemic cells and non-leukemic cells. *Br. J. Cancer* 41: 159-167.
32. Mak, T.W., Gamble, C.L., MacDonald, M.E. and Bernstein, A. (1980) Host control of sequences specific to Friend erythroleukemia virus in normal and leukemic mice. *Cold Spring Harbor Symposium on Quantitative Biology* 44: 893-899.
33. Nagasawa, K. and Mak, T.W. (1980) Phorbol esters induce differentiation in human malignant T lymphoblasts. *Proc. Natl. Acad. Sci. USA* 77: 2964-2968.
34. MacDonald, M.E., Reynolds, F.H. Jr., Van de Ven, W.J.M., Stephenson, J.R., Mak, T.W. and Bernstein, A. (1980) Anemia- and polycythemia- inducing isolates of Friend spleen focus-forming virus. Biological and molecular evidence for two distinct viral genomes. *J. Exp. Med.* 151: 1477-1492.

35. MacDonald, M.E., Mak, T.W. and Bernstein, A. (1980) Erythroleukemia induction by replication-competent type C viruses cloned from the anemia-and polycythemia-inducing isolates of Friend leukemia virus. *J. Exp. Med.* 151: 1493-1503.
36. Mager, D., Mak, T.W. and Bernstein, A. (1980) Friend leukaemia virus-transformed cells, unlike normal stem cells, form spleen colonies in S1/S1^d mice. *Nature* 288: 592-594.
37. Mager, D.L., Mak, T.W. and Bernstein, A. (1981) Quantitative colony method for tumorigenic cells transformed by two distinct strains of Friend leukemia virus. *Proc. Natl. Acad. Sci. USA* 78: 1703-1707.
38. Ho, J.C., Wu, P.C., Mak, T.K. (1981) Liver cell dysplasia in association with hepatocellular carcinoma, cirrhosis and hepatitis B surface antigen in Hong Kong. *Int-J-Cancer*. 28: 571-574.
39. Okamura, S., Chechik, B.E., Lee, C., Gelfand, E.W. and Mak, T.W. (1981) Heterogeneity of human thymocytes and a malignant T-lymphoblast cell line MOLT-3. *Cancer Res.* 41: 1664-1668.
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