Monoclonal Anti-MEK1

MEK (MAP kinase or ERK Kinase) is also known as MAP kinase kinase (MAPKK). MEK1 is a dual tyrosine/threonine kinase that phosphorylates and activates MAP kinase (ERK1 and ERK2).\(^1\) It has been shown that MEK1 is phosphorylated and activated by several serine/threonine kinases, these include; c-ras-1, v-ras-1, c-Mos, and MEKK. MEKK shares homology with yeast kinases Slt1 and byr2. It appears that MEK is activated via 2 different pathways.\(^2\) MEK1 differs from MEK2 in the amino terminal region and between the conserved kinase subdomains 9 and 10.\(^3\) This antibody is specific for MEK1 and does not cross react with MEK2; it reacts with MEK1 protein from human, mouse, rat, and xenopus on immunoblots. MEK activity can be immunoprecipitated and assayed using inactive GST:ERK1 as a substrate.\(^4\)

3. Breit, R.K. et al; MEK2 is a kinase related to MEK1 and is differentially expressed in marine tissues (In Press).

Excellent for:
\[\checkmark\] Western Blots
\[\checkmark\] Immunoprecipitation of active enzyme activity

Catalog # 13-3500  Purified  100 \(\mu\)g

Next day delivery!

ALSO AVAILABLE:
\[\checkmark\] PY20 anti-Phosphotyrosine
\[\checkmark\] Mouse anti-MAP Kinase
\[\checkmark\] Mouse anti-EGFr
\[\checkmark\] Protein A-Agarose
\[\checkmark\] Anti-Mouse Agarose
\[\checkmark\] Immunoblot kits
\[\checkmark\] Secondary antibody
HERBERT J. BLOCK MEMORIAL LECTURESHIP FOR DISTINGUISHED ACHIEVEMENT IN CANCER AWARD

The Ohio State University Comprehensive Cancer Center- Arthur G. James Cancer Hospital and Research Institute announces the opening of nominations for the third annual Herbert J. Block Memorial Lectureship for Distinguished Achievement in Cancer. The $15,000 prize and commemoration will be awarded in late fall 1994.

The awardee will present the Herbert J. Block Memorial Lecture of The Ohio State University Comprehensive Cancer Center, a lecture open to the public. If possible the awardee will conduct an informal discussion with health professional students, residents and graduate students.

Members of cancer centers, medical schools, freestanding hospitals and research institutes are invited to submit nominees. The letter of nomination should include a description of the candidate's contributions to cancer research and education. Nominators of finalists will be asked to submit three (3) letters of support, the candidate's curriculum vitae, and copies of the candidates three most significant publications. The purpose of this honorary award is to identify an individual whose contributions to cancer research, patient care or cancer education have received international recognition.

Letters of nomination should be sent to the:

Block Memorial Award Committee
The Ohio State University Comprehensive Cancer Center
Arthur G. James Cancer Hospital and Research Institute
300 W. 10th Avenue, Suite 1132
Columbus, OH 43210

The deadline for submission is August 1, 1994.
The American Association for Cancer Research Presents

Molecular Biology in Clinical Oncology: A Workshop

An intensive, one-week summer workshop on molecular biology designed for clinical oncologists in training or in their early academic careers.

July 1-7, 1994
The Given Institute Aspen, Colorado

ORGANIZERS

STEPHEN H. FRIEND Massachusetts General Hospital Charlestown, MA
L. MICHAEL GLODÉ University of Colorado School of Medicine Denver, CO

- Lectures by leading experts on molecular biology concepts and the latest developments in molecular oncology such as gene therapy, oncogenes and growth factors, tumor suppressor genes, fusion proteins, genetic mutations, antisense, metastasis, and drug resistance.
- Small group laboratory sessions to demonstrate the important experimental techniques utilized in molecular biology.
- A workshop syllabus containing relevant published papers, references to key articles in the literature, and details on important laboratory procedures.
- Financial support for participants who are physicians in training or oncology fellows.
- Category I CME credits through the University of Colorado School of Medicine.

Faculty

Lectures

STEPHEN H. FRIEND/ Charlestown, MA
MICHAEL B. KASTAN/ Baltimore, MD
ANDRÉ BERNARDS/ Charlestown, MA
HAROLD L. MOSES/ Nashville, TN
TYLER JACKS/ Cambridge, MA
ROBERT EISENMAN/ Seattle, WA
A. THOMAS LOOK/ Memphis, TN
MASAAKI TERADA/ Tokyo, Japan
ALLEN I. OLIFF/ West Point, PA
NADIA ROSENTHAL/ Charlestown, MA
ERIC R. FEARON/ Baltimore, MD
L. MICHAEL GLODÉ/Denver, CO
PATRICIA S. STEEG/ Bethesda, MD
MARC E. LIPPMAN/ Washington, DC
JOHN R. MURPHY/ Boston, MA
JACQUELINE LEES/Charlestown, MA

Additional Speakers to be Announced

Laboratory Rotations

MARK S. BOGUSKI/ Bethesda, MD. "Computer Searching in Molecular Biology."
GAIL HARRISON and L. MICHAEL GLODÉ/ Denver, CO. "Polymerase Chain Reaction Technology."
JAMES P. HOEFFLER/ Denver, CO. "Transfer of Nucleic Acids and Proteins."
CORI M. GORMAN/ San Carlos, CA. "Gene Expression Systems."
LEILE GARCIA/ Denver, CO. "Practical Cytogenetics."

Application Deadline April 5, 1994

For further information, contact
American Association for Cancer Research
Public Ledger Building
620 Chestnut Street, Suite 816
Philadelphia, PA 19106-3483
Telephone: (215) 440-9300 • FAX: (215) 440-9313
INTERFERONS AND INTERACTING CYTOKINES: 
CELLULAR AND CLINICAL RESPONSE AND RESISTANCE

Sponsored by Serono Symposia, USA

June 23-26, 1994

The Wigwam Resort
Litchfield Park, Arizona

Topics to be addressed include: viral evasion, gene regulation, modulation of immune function, and cellular response as it relates to cytokines. Molecular mechanisms and applications for a variety of human diseases will be discussed.

Faculty:

Ernest C. Borden, M.D., Chair
Barry Amason
Adrian DiBisceglie
Isaiah Fidler
Dhan Kalvakolanu
Scott Lippman
Howard Ozer
Robert Ricciardi
Robert Silverman
Howard Thomas
Brian Williams

Natale Cacinelli
Albert Deisseroth
Judah Folkman
Elliott Kieff
Bernard Mach
Sidney Pestka
Kenneth Rock
George Stark
Catherine Verfaillie
George Yancopoulos

John Cumutte
Zee Estrov
Steve Holland
Susan Krown
Tak Mak
Paula Pitta-Rowe
Robert Schreiber
Moshe Talpaz
Jan Vilcek

Submission of abstracts for posters is encouraged. For further information regarding brochures, registration, and abstract forms, please contact:

Leslie Nies, Serono Symposia, USA 
100 Longwater Circle, Norwell, MA 02161
Tel: 800-283-8088/Fax: 617-982-9481

---

EACR XIII
The Thirteenth Meeting of the European Association for Cancer Research
Berlin, Germany
September 25-28, 1994

The EACR invites members and non-members to attend its next major meeting in Berlin. The meeting will cover theoretical and experimental approaches in cancer research as well as new aspects of clinical significance. Molecular and cell biology will be the main focus of the meeting.

Issues and Speakers to include:

Mühlbock Memorial Lecture: Charles Weissmann - Zurich
Transgenic technology in medical research

Plenary Lectures
Genetic epidemiology of breast cancer - T. Bishop, Leeds
Cell adhesion molecules and cytoskeletal elements in normal and neoplastic cells - W. Franke, Heidelberg
Apoptosis - G. Evan, London
Cell signalling in cancer treatment - H. Gruenich, Innsbruck
Suicide gene transfer and cancer therapy - M. Blaese, Bethesda
Parallel Symposia and Chairpersons
Tumor suppressors in growth control and neoplasia - W. Deppert, Hamburg
Carrier systems for drug targeting - T.A. Connors, Belmont

Orthologous carcinogen-metabolizing enzymes: Confusion and progress - R. Wolf, Dundee
Molecular aspects of invasion and metastasis - W. Birchmeier, Berlin
DNA repair deficiency syndromes and cancer - D. Bootsma, Rotterdam
Minimal residual disease: risk factors and detection M.I. Colnaghi, Milano
Significance of mutation spectra for carcinogenesis - E. W. Vogel, Leiden
Immunotherapy: The new challenges - G. Riethmueller, Munchen
Recent results in occupational carcinogenesis - S. Hembreg, Helsinki
Cancer gene identification and gene therapy - M. Schwab, Heidelberg

Poster sessions will be organized. Interested participants are invited to submit poster abstracts on Symposium related topics. Deadline for abstract submission is June 15th, 1994.

For registration and abstract forms, contact the EACR XIII Secretariat:

Prof. Dr. G. Pasternak, Max Delbruck Center for Molecular Medicine
Robert-Rosse-Str. 10, D-13122 Berlin, Germany
Tel: +49-30/9406 2308 or 3740
Fax: +49-30/9404161

Reduced registration fees are available to members of the EACR. For further details and application form, please contact: Dr. M.R. Price, EACR Secretariat, Cancer Research Laboratory, University of Nottingham, Nottingham NG7 2RD, U.K. Tel: (0602) 515418, Fax: (0602) 515115.
THE AMERICAN ASSOCIATION FOR CANCER RESEARCH PRESENTS

An Important Educational Opportunity for Predoctoral and Postdoctoral Fellows
Contemplating Careers in Basic Cancer Research

HISTOPATHOBIOLOGY OF NEOPLASIA

The Edward A. Smuckler Memorial Workshop
Supported by a Generous Grant from the National Cancer Institute

Keystone Conference Center
Keystone, Colorado
July 17 - July 24, 1994

• Intensive training in the histopathology and biology of neoplasia.

• Twenty-eight hours of hands-on laboratory exercises directed by distinguished pathologists.

• An outstanding series of lectures on rapidly developing areas of cancer research by laboratory directors and other prominent investigators.

• Extensive written course materials that will serve as valuable references in the future.

• Full funding of participants' lodging and subsistence expenses during the workshop.

LABORATORY AND LECTURING FACULTY

Michael W. Lieberman*, Baylor College of Medicine, Houston, TX, Course Director
Stephen Baird*, VA Medical Center, San Diego, CA
Helen Feiner*, New York University School of Medicine, New York, NY
Isaiah J. Fidler, UT M.D. Anderson Cancer Center, Houston, TX
Peter M. Howley, National Cancer Institute, Bethesda, MD
Mary-Claire King, University of California, Berkeley, CA
Margaret L. Kripke, UT M.D. Anderson Cancer Center, Houston, TX
John H. Lehman*, Albany College of Medicine, Albany, NY

Robert Low, University of Colorado School of Medicine, Denver, CO
Gary Miller*, University of Colorado School of Medicine, Denver, CO
Harold L. Moses, Vanderbilt University School of Medicine, Nashville, TN
Sharon B. Murphy, Children's Hospital, Chicago, IL
G. Barry Pierce, University of Colorado School of Medicine, Denver, CO
Michael Prystowsky, University of Pennsylvania School of Medicine, Philadelphia, PA
Stewart Sell, University of Texas Medical School, Houston, TX
Saraswati Sukumar, The Salk Institute, La Jolla, CA
Frederick Waldman, University of California, San Francisco, CA
Sandra R. Wolman, Oncor, Inc., Gaithersburg, MD

*Member of the Workshop Executive Committee

APPLICATION DEADLINE: APRIL 29, 1994

Further Information: American Association for Cancer Research • Public Ledger Building
620 Chestnut Street • Suite 816 • Philadelphia, PA 19106-3483
Telephone: (215) 440-9300 • FAX: (215) 440-9313
GENETIC PREDISPOSITION TO CANCER
Special Conference Sponsored by
The General Motors Cancer Research Foundation
June 14 & 15, 1994
National Cancer Institute
Bethesda, Maryland

June 14, 1994:
Keynote Address: Characteristics of Genetic Predisposition Syndromes - Raymond L. White

The Genetics of Breast Cancer - Mary Claire King; Genetics of Esophageal Cancer - Brian J. Reid; Genetics of Brain Cancer Progression - Webster K. Cavenee; Clinical & Molecular Genetics of MEM II - Bruce A. J. Ponder; The Genetics of Colorectal Cancer - Sir Walter F. Bodmer; Abrogation of Cell Cycle Checkpoint Control in Preneoplastic Cells - Thea Tlsty; Genome Instability & Its Relationship to Development of Cancer - Richard Fishel; Triplet Repeat Diseases - C. Thomas Caskey; Genetic & Environmental Interactions in the Development of Multiple Primary Tumors - Louise C. Strong; Molecular Basis of Hepatitis-Hepatoma Correlation - Christian Brechot; Mechanistic Role of Human Papilloma Viruses in Human Cancer - Peter Howley; Chemoprevention in Patients at Genetic Risk for Developing Invasive Cancer & Metastases - Lance Liotta; From Gene Defect to Therapy - Ron Evans; Social & Ethical Considerations - Francis Collins.

June 15, 1994:
Li-Fraumen Syndrome - Stephen H. Friend; Transgenic Approaches to the Analysis of Multistage Carcinogenesis in Mice - Alan Balmaint; Tumor Suppressor Gene Mutations in Mice - Tyler Jacks; Molecular Basis for Secondary Leukemia - Carlo Croce; Radiation-Genetic Interactions in the Development of Cancer - John Little.

Conference Summary - Robert A. Weinberg
1:30 P.M. - Lectures by the 1994 Prize winners of the General Motors Cancer Research Foundation Awards

Please preregister by contacting the General Motors Cancer Research Foundation - 767 Fifth Avenue, New York, NY 10153. Telephone (212) 418-6229, Fax (212) 418-6388. Additional information is available; no registration fee; attendance open.

AMERICAN CANCER SOCIETY
CLINICAL ONCOLOGY FELLOWSHIPS

The American Cancer Society is pleased to announce the 1995 Clinical Oncology Fellowships (COF). The COF is intended to support a multidisciplinary training experience for physicians and dentists preparing for a leadership career in academic oncology. The program may include training in cancer control, prevention, detection, diagnosis, therapy, rehabilitation, and research. The Fellowship is expected to provide unique training in addition to that which is normally provided in postgraduate training programs designed to fulfill requirements of specialty boards, and is available to citizens or permanent residents of the United States only.

Applications are to be submitted by institutions (not prospective fellows) by July 1, 1994 for fellowships to begin July 1, 1995. The stipend for this one-year award is $10,000.

To request further information or application materials, please contact the office of:
Virginia Krawiec, MPA
Clinical Awards Program
American Cancer Society, Inc.
1599 Clifton Road, N.E.
Atlanta, GA 30329-4251
Telephone: 404-329-5734
Fax: 404-325-2548

ASSISTANT OR ASSOCIATE PROFESSOR OF MEDICINE (ONCOLOGY)
STANFORD UNIVERSITY SCHOOL OF MEDICINE

One full-time position at Stanford University Medical Center. Candidates should be fully trained in medicine and the subspecialty of oncology. They should be prepared to establish an independent laboratory program in some area of cancer research. Applicants with interest in cell biology, molecular biology, immunology, or genetics and in the translation of scientific methods and discoveries to problems in clinical oncology are especially encouraged. Salary support, laboratory space and startup funds are available for this position, but there should be evidence of ability of the candidate eventually to obtain peer reviewed research funding. Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates.

Please send curriculum vitae, a statement of career plans, and three names of references to:
Ronald Levy, M.D.
Chief, Division of Oncology
Stanford University School of Medicine
SUMC M211
Stanford, CA 94305-5306
Keep up with the latest developments in

Cancer Research

The Official Journal of the American Association for Cancer Research

Carlo M. Croce, M.D., Editor-in-Chief

Subscribe to Cancer Research—the leading citation source of original studies in cancer research and cancer-related biomedical science. Issued semimonthly, Cancer Research publishes 7,000 pages of important research each year, including the following regular features:

- The most up-to-date articles in basic research and clinical and epidemiological investigations by authors from the United States and more than 30 countries
- Perspectives in Cancer Research, in which leading investigators explore contemporary and at times controversial topics
- Advances in Brief, a rapid communication category for short but definitive, highly significant reports
- Supplemental issues developed from symposia or relevant subjects
- Proceedings of the American Association for Cancer Research, a special annual issue that offers stimulating new research ideas in abstract form

Order Now!

[Subscription details and order form]

Cancer Research
The Most Highly Cited Journal In Its Field
JULY 1-8, 1994
Molecular Biology in Clinical Oncology
A Workshop for Clinical Oncologists in Training
Supported by a Generous Grant from the National Cancer Institute
Chairpersons: Stephen H. Friend, Charlestown, MA; L. Michael Glode, Denver, CO
The Given Institute, Aspen, CO

JULY 17-24, 1994
Histopathobiology of Neoplasia
The Edward A. Smuckler Memorial Workshop for Predoctoral and Postdoctoral Fellows Contemplating Careers in Basic Cancer Research
Supported by a Generous Grant from the National Cancer Institute
Chairperson: Michael W. Lieberman, Houston, TX
Keystone Conference Center, Keystone, CO

OCTOBER 16-20, 1994
Transcriptional Control of Cell Growth and Differentiation
Chairpersons: Eric N. Olson, Houston, TX; Bruce M. Spiegelman, Boston, MA
Chatham Bars Inn, Chatham (Cape Cod), MA

NOVEMBER 7-11, 1994
Modern Developments in Cancer Therapeutics
Joint Meeting with Academia Sinica
Chairperson: Yung-chi Cheng, New Haven, CT
Academia Sinica, Taipei, Taiwan, R.O.C.

NOVEMBER 29-DECEMBER 4, 1994
Translational Research in Cancer
Chairperson: Carlo M. Croce, Philadelphia, PA
Grove Park Inn, Asheville, NC

DECEMBER 8-13, 1994
Basic and Clinical Aspects of Prostate Cancer
Chairperson: Donald S. Coffey, Baltimore, MD
Marriott's Rancho Las Palmas Resort, Rancho Mirage (Palm Springs), CA

JANUARY 14-19, 1995
Mechanism of Action of Retinoids, Vitamin D, and Steroid Hormones
Chairpersons: Michael B. Sporn, Bethesda, MD; Ronald M. Evans, San Diego, CA; David Mangelsdorf, San Diego, CA
Whistler Resort and Conference Center, Whistler, B.C., Canada

FEBRUARY 13-18, 1995
Molecular Biology of Cancer: Implications for Prevention and Therapy
Joint Meeting with Japanese Cancer Association
Chairpersons: Lee W. Wattenberg, Minneapolis, MN; Masaaki Terada, Tokyo, Japan
Maul Marriott Hotel, Maui, HI

MARCH 19-22, 1995
86th Annual Meeting
Chairperson: Donald S. Coffey, Baltimore, MD
Metro Toronto Convention Centre, Toronto, Ontario, Canada
(Abstract Deadline: October 14, 1994)

AACR members will receive brochures on the above special conferences as soon as they are available. Nonmembers should call or write:
American Association for Cancer Research
Public Ledger Building
620 Chestnut Street, Suite 816
Philadelphia, PA 19106-3483
215-440-9300 • 215-440-9313 (FAX)
Cancer Research is pleased to feature on its cover James F. Holland, a longtime friend and very influential member of the American Association for Cancer Research, who has recently been honored by his appointment to the rank of Distinguished Professor of Neoplastic Diseases at the Mount Sinai Center, New York. He formerly occupied the Jane B. and Jack R. Aron Chair of Neoplastic Diseases and directed the Derald H. Ruttenberg Cancer Center. He has had an illustrious career in clinical cancer research and management, beginning in 1947, after receiving the M.D. from Columbia University College of Physicians and Surgeons. After house staff training at the Presbyterian Hospital, New York, service in the Army Medical Corps, and 2 years under the tutelage of Alfred Gellhorn at Columbia’s Francis Delafield Hospital, he joined the National Cancer Institute at the time of the opening of the Clinical Center in 1953. Based on Lloyd Law’s observation of the curative effect of combination chemotherapy of leukemia L1210 in mice, he inaugurated the first National Cancer Institute program of combination chemotherapy in humans.


In other studies, he led programs discovering the effect of Adriamycin in osteogenic sarcoma (N. Engl. J. Med., 291: 998–1000, 1974); first showed effects of cisplatin in testicular cancer (J. Urol., 112: 100–104, 1974); and led advances in combination treatment of acute leukemia with cytarabine and daunorubicin [Cancer (Phila.), 36: 1560–1566, 1975]. Following a year in the Soviet Union as a representative of the National Cancer Institute to the USSR Cancer Institute, he returned to Mt. Sinai Hospital in New York, where he studied, among other topics, a succession of treatments of node-positive breast cancer, resulting in disease-free survival for over 5 years of 86% of those under observation (Cancer Invest., 11: 6–9, 1993; Cancer Invest., 12: 270–272, 1994).

Despite an exhaustive investigative career, he has participated in a multitude of outside activities, including service in 1970 on the panel of consultants that provided the legislative rationale for the National Cancer Act of 1971.

He was awarded the Lasker Prize, the American Cancer Society Annual Award (now the Medal of Honor), the David Karnofsky Award, the Gold Medal of the Association of the Alumni of the College of Physicians and Surgeons, the Cancer Research Award of the Milken Family Medical Foundation, and the Distinguished Scientific Award of the American Society of Clinical Oncology. With Dr. Frei, he coedited the text Cancer Medicine, now in its third edition.

Dr. Holland served as President of the American Association for Cancer Research in 1970 and of the American Society of Clinical Oncology in 1976. He continues his vigorous work for the AACR as Chairperson of two subcommittees of the Development Committee and has the special affection of the AACR staff, who is inspired by his unflagging enthusiasm and effectiveness.

His wife, Dr. Jimmie Holland, is Chief of Psychiatry at Memorial Sloan-Kettering Cancer Center and is a pioneer authority on psycho-oncology. They are the parents of six children.

We are indebted to Dr. Holland’s office for information and photographs.

Sidney Weinhouse