

Immunofluorescent staining of metastatic renal carcinoma cells.

I N T R O D U C I N G
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A L D E S L E U K I N
RECOMBINANT INTERLEUKIN-2 PRODUCT

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Please see brief summary of prescribing information on following page.
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PROLEUKIN® (Adesleukin)
Brief Summary of Prescribing Information
 For full prescribing information, see Package Insert.

WARNINGS

PROLEUKIN® (adesleukin for injection) should be administered only in a hospital setting under the supervision of a qualified physician experienced in the use of anti-cancer agents. An intensive care facility and specialists skilled in cardio-pulmonary or intensive care medicine must be available.

PROLEUKIN administration has been associated with capillary leak syndrome (CLS). CLS results in hypotension and reduced organ perfusion which may be severe and can result in death.

Therapy with PROLEUKIN should be restricted to patients with normal cardiac and pulmonary functions as defined by thallium stress testing and formal pulmonary function testing. Extreme caution should be used in patients with normal thallium stress tests and pulmonary function tests who have a history of prior cardiac or pulmonary disease.

PROLEUKIN administration should be held in patients developing moderate to severe lethargy or somnolence, continued administration may result in coma.

INDICATIONS AND USAGE

PROLEUKIN (adesleukin) is indicated for the treatment of adults (≥18 years of age) with metastatic renal cell carcinoma.

Careful patient selection is mandatory prior to the administration of PROLEUKIN. See "CONTRAINDICATIONS," "WARNINGS" and "PRECAUTIONS." Sections regarding patient screening, including recommended cardiac and pulmonary function tests and laboratory studies.

Evaluation of clinical studies to date reveals that patients with more favorable ECOG performance status (ECOG PS 0) at treatment initiation respond better to PROLEUKIN with higher response rates and lower toxicity. (See "CLINICAL PHARMACOLOGY" Section, "Clinical Experience" Subsection in Package Insert). Therefore, selection of patients for treatment should include assessment of performance status, as described in Table I in Package Insert.

Experience in patients with PS >1 is extremely limited.

CONTRAINDICATIONS

PROLEUKIN (adesleukin) is contraindicated in patients with a known history of hypersensitivity to interleukin-2 or any component of the PROLEUKIN formulation.

Patients with an abnormal thallium stress test or pulmonary function tests are excluded from treatment with PROLEUKIN. Patients with organ allografts should be excluded as well. In addition, retreatment with PROLEUKIN is contraindicated in patients who experienced the following toxicities while receiving an earlier course of therapy:

- Sustained ventricular tachycardia (≥5 beats)
- Cardiac rhythm disturbances not controlled or unresponsive to management
- Recurrent chest pain with ECG changes, consistent with angina or myocardial infarction
- Intubation required >72 hours
- Pericardial tamponade
- Renal dysfunction requiring dialysis >72 hours
- Coma or toxic psychosis lasting >48 hours
- Repetitive or difficult to control seizures
- Bowel ischemia/perforation
- GI bleeding requiring surgery

WARNINGS

See boxed "WARNINGS"

PROLEUKIN (adesleukin) administration has been associated with capillary leak syndrome (CLS) which results from extravasation of plasma proteins and fluid into the extravascular space and loss of vascular tone. CLS results in hypotension and reduced organ perfusion which may be severe and can result in death. The CLS may be associated with cardiac arrhythmias (supraventricular and ventricular), angina, myocardial infarction, respiratory insufficiency requiring intubation, gastrointestinal bleeding or infarction, renal insufficiency and mental status changes.

Because of the severe adverse events which generally accompany PROLEUKIN therapy at the recommended dosages, thorough clinical evaluation should be performed to exclude from treatment patients with significant cardiac, pulmonary, renal, hepatic or CNS impairment.

Should adverse events occur, which require dose modification, dosage should be withheld rather than reduced. (See "DOSAGE AND ADMINISTRATION" Section, "Dose Modification" Subsection in Package Insert).

PROLEUKIN may exacerbate disease symptoms in patients with clinically unrecognized or untreated CNS metastases. All patients should have thorough evaluation and treatment of CNS metastases prior to receiving PROLEUKIN therapy. They should be neurologically stable and documented on CT scan. In addition, extreme caution should be exercised in treating patients with a history of seizure disorder because PROLEUKIN may cause seizures.

Intensive PROLEUKIN treatment is associated with impaired neutrophil function (reduced chemotaxis) and with an increased risk of disseminated infection, including sepsis and bacterial endocarditis, in treated patients. Consequently, pre-existing bacterial infections should be adequately treated prior to initiation of PROLEUKIN therapy. Additionally, all patients with indwelling central lines should receive antibiotic prophylaxis effective against *S. aureus*. Antibiotic prophylaxis which has been associated with a reduced incidence of staphylococcal infections in PROLEUKIN studies includes the use of: oxacillin, nafcillin, ciprofloxacin, or vancomycin. Disseminated infections acquired in the course of PROLEUKIN treatment are a major contributor to treatment morbidity and use of antibiotic prophylaxis and aggressive treatment of suspected and documented infections may reduce the morbidity of PROLEUKIN treatment. **NOTE: Prior to the use of any product mentioned in this paragraph, the physician should refer to the package insert for the respective product.**

PRECAUTIONS

General: Patients should have normal cardiac, pulmonary, hepatic and CNS function at the start of therapy. Patients who have had a nephrectomy are still eligible for treatment if they have serum creatinine levels <1.5 mg/dl.

Adverse events are frequent, often serious, and sometimes fatal. Capillary leak syndrome (CLS) begins immediately after PROLEUKIN treatment and is marked by increased capillary permeability to protein and fluids and reduced vascular tone. In most patients, this results in a concomitant drop in mean arterial blood pressure within 2 to 12 hours after the start of treatment. With continued therapy, clinically significant hypotension (defined as systolic blood pressure below 90 mm Hg or a 20 mm Hg drop from baseline systolic pressure) and hypoperfusion will occur. In addition, extravasation of protein and fluids into the extravascular space will lead to edema formation and creation of effusions.

Medical management of CLS begins with careful monitoring of the patient's fluid and organ perfusion status. This is achieved by frequent determination of blood pressure and pulse, and by monitoring organ function, which includes assessment of mental status and urine output. Hypovolemia is assessed by catheterization and central pressure monitoring.

Flexibility in fluid and pressor management is essential for maintaining organ perfusion and blood pressure. Consequently, extreme caution should be used in treating patients with fixed requirements for large volumes of fluid (e.g. patients with hypercalcemia).

Patients with hypovolemia are managed by administering IV fluids, either colloids or crystalloids. IV fluids are usually given when the central venous pressure (CVP) is below 3 to 4 mm H₂O. Correction of hypovolemia may require large volumes of IV fluids but caution is required because unrestrained fluid administration may exacerbate problems associated with edema formation or effusions.

With extravasation and associated edema is common and some patients may develop ascites or pleural effusions. Management of these events depends on a careful balancing of the effects of fluid shifts so that neither the consequences of hypovolemia (e.g. impaired organ perfusion) nor the consequences of fluid accumulations (e.g. pulmonary edema) exceeds the patient's tolerance.

Clinical experience has shown that early administration of dopamine (1 to 5 µg/kg/min) to patients manifesting capillary leak syndrome, before the onset of hypotension, can help to maintain organ perfusion, particularly in patients who do not preserve urine output. Weight and urine output should be carefully monitored. If organ perfusion and blood pressure are not sustained by dopamine therapy, clinical investigators have increased the dose of dopamine to 6 to 10 µg/kg/min or have added phenylephrine hydrochloride (1 to 5 µg/kg/min) to low dose dopamine. (See "CLINICAL PHARMACOLOGY" Section, "Clinical Experience" Subsection in Package Insert). Prolonged use of pressors, either in combination or as individual agents, at relatively high doses, may be associated with cardiac rhythm distur-

bances. **NOTE: Prior to the use of any product mentioned in this paragraph, the physician should refer to the package insert for the respective product.**

Failure to maintain organ perfusion, demonstrated by altered mental status, reduced urine output, a fall in the systolic blood pressure below 90 mm Hg or onset of cardiac arrhythmias, should lead to holding the subsequent doses until recovery of organ perfusion and a return of systolic blood pressure above 90 mm Hg are observed. (See "DOSAGE AND ADMINISTRATION" Section, "Dose Modification" Subsection in Package Insert).

Recovery from CLS begins soon after cessation of PROLEUKIN® (adesleukin) therapy. Usually, within a few hours, the blood pressure rises, organ perfusion is restored and resorption of extravasated fluid and protein begins. If there has been excessive weight gain or edema formation, particularly if associated with shortness of breath from pulmonary congestion, use of diuretics, once blood pressure has normalized, has been shown to hasten recovery.

Oxygen is given to the patient if pulmonary function monitoring confirms that P_O₂ is decreased.

PROLEUKIN administration may cause anemia and/or thrombocytopenia. Packed red blood cell transfusions have been given both for relief of anemia and to insure maximal oxygen carrying capacity. Platelet transfusions have been given to resolve absolute thrombocytopenia and to reduce the risk of GI bleeding. In addition, leukopenia and neutropenia are observed.

PROLEUKIN administration results in fever, chills, rigors, pruritus and gastrointestinal side effects in most patients treated at recommended doses. These side effects have been aggressively managed as described in the "CLINICAL PHARMACOLOGY" Section, "Clinical Experience" Subsection in Package Insert.

Renal and hepatic function is impaired during PROLEUKIN treatment. Use of concomitant medications known to be nephrotoxic or hepatotoxic may further increase toxicity to the kidney or liver. In addition, reduced kidney and liver function secondary to PROLEUKIN treatment may delay elimination of concomitant medications and increase the risk of adverse events from those drugs.

Patients may experience mental status changes including irritability, confusion, or depression while receiving PROLEUKIN. These mental status changes may be indicators of bacteremia or early bacterial sepsis. Mental status changes due solely to PROLEUKIN are generally reversible when drug administration is discontinued. However, alterations in mental status may progress for several days before recovery begins.

Impairment of thyroid function has been reported following PROLEUKIN treatment. A small number of treated patients went on to require thyroid replacement therapy. This impairment of thyroid function may be a manifestation of autoimmunity, consequently extra caution should be exercised when treating patients with known autoimmune disease.

PROLEUKIN (adesleukin) enhancement of cellular immune function may increase the risk of allograft rejection in transplant patients.

Laboratory Tests: The following clinical evaluations are recommended for all patients, prior to beginning treatment and then daily during drug administration.

- Standard hematologic tests—including CBC, differential and platelet counts
- Blood chemistries—including electrolytes, renal and hepatic function tests
- Chest x-rays

All patients should have baseline pulmonary function tests with arterial blood gases. Adequate pulmonary function should be documented (FEV₁ >2 liters or ≥75% of predicted for height and age) prior to initiating therapy. All patients should be screened with a stress thallium study. Normal ejection fraction and unimpaired wall motion should be documented. If a thallium stress test suggests minor wall motion abnormalities of questionable significance, a stress echocardiogram to document normal wall motion may be useful to exclude significant coronary artery disease.

While monitoring during therapy with PROLEUKIN should include vital signs (temperature, pulse, blood pressure and respiration rate) and weight. In a patient with a decreased blood pressure, especially less than 90 mm Hg, constant cardiac monitoring for rhythm should be conducted. If an abnormal complex or rhythm is seen an ECG should be performed. Vital signs in these hypotensive patients should be taken hourly and central venous pressure (CVP) checked.

During treatment, pulmonary function should be monitored on a regular basis by clinical examination, assessment of vital signs and pulse oximetry. Patients with dyspnea or clinical signs of respiratory impairment (tachypnea or rales) should be further assessed with arterial blood gas determination. These tests are to be repeated as often as clinically indicated.

Cardiac function is assessed daily by clinical examination and assessment of vital signs. Patients with signs or symptoms of chest pain, murmurs, gallops, irregular rhythm or palpitations should be further assessed with an ECG examination and CPK evaluation. If there is evidence of cardiac ischemia or congestive heart failure, a repeat thallium study should be done.

Drug Interactions: PROLEUKIN may affect central nervous function. Therefore, interactions could occur following concomitant administration of psychotropic drugs (e.g. narcotics, analgesics, antiemetics, sedatives, tranquilizers).

Concurrent administration of drugs possessing nephrotoxic (e.g. aminoglycosides, indomethacin), myelotoxic (e.g. cytotoxic chemotherapy, cardiotoxic (e.g. doxorubicin) or hepatotoxic (e.g. methotrexate, asparaginase) effects with PROLEUKIN may increase toxicity in these organ systems. The safety and efficacy of PROLEUKIN in combination with chemotherapies has not been established.

Although glucocorticoids have been shown to reduce PROLEUKIN-induced side effects including fever, renal insufficiency, hyperbilirubinemia, confusion and dyspnea, concomitant administration of these agents with PROLEUKIN may reduce the antitumor effectiveness of PROLEUKIN and this should be avoided.

Beta-blockers and other antihypertensives may potentiate the hypotension seen with PROLEUKIN (adesleukin).

Carcinogenesis, Mutagenesis, Impairment of Fertility: There have been no studies conducted assessing the carcinogenic or mutagenic potential of PROLEUKIN (adesleukin).

There have been no studies conducted assessing the effect of PROLEUKIN on fertility. It is recommended that this drug not be administered to fertile persons of either sex not practicing effective contraception.

Pregnancy, Pregnancy Category C: Animal reproduction studies have not been conducted with PROLEUKIN. It is also not known whether PROLEUKIN can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. In view of the known adverse effects of PROLEUKIN, it should only be given to a pregnant woman with extreme caution, weighing the potential benefit with the risks associated with therapy.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from PROLEUKIN, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness in children under 18 years of age have not been established.

ADVERSE REACTIONS

The rate of drug related deaths in the 255 metastatic renal cell carcinoma patients on study who received single-agent PROLEUKIN was 4% (1/255).

Frequency and severity of adverse reactions to PROLEUKIN have generally been shown to be dose-related and schedule-dependent. Most adverse reactions are self-limiting and are usually, but not invariably, reversible within 2 or 3 days of discontinuation of therapy.

Examples of adverse reactions with permanent sequelae include: myocardial infarction, bowel perforation/infarction, and gangrene.

The most frequently reported serious adverse reactions include hypotension, renal dysfunction with oliguria/anuria, dyspnea or pulmonary congestion, and mental status changes (i.e., lethargy, somnolence, confusion and agitation).

Other serious toxicities have included: myocardial ischemia, myocarditis, gangrene, respiratory failure leading to intubation, GI bleeding requiring surgery, intestinal perforation/ileus, coma, seizure, sepsis and renal impairment requiring dialysis. The incidence of these events has been higher in PS 1 patients than in PS 0 patients. (See "CLINICAL PHARMACOLOGY" Section, "Clinical Experience" Subsection in Package Insert).

The following data on adverse reactions are based on 373 patients (255 with renal cell cancer and 118 with other tumors) treated with the recommended every 8 hour 15-minute infusion dosing regimen. These patients had metastatic or recurrent carcinoma and were enrolled in investigational trials in the United States.

Organ systems in which reactions occurred in a significant number of the patients treated are found in the following table.

TABLE III
Incidence of Adverse Events

Events by Body System	% of Patients	Events by Body System	% of Patients
Cardiovascular		Hematologic	
Hypotension (requiring pressors)	85	Anemia	77
Sinus tachycardia	71	Thrombocytopenia	64
Arrhythmias	22	Leukopenia	34
Atrial	8	Coagulation Disorders	10
Supraventricular	5	Leukocytosis	9
Ventricular	3	Eosinophilia	6
Junctinal	1	Abnormal Laboratory Findings	
Bradycardia	7	Hypoglycemia	16
Premature Ventricular Contractions	5	Acidosis	16
Premature Atrial Contractions	4	Hypocalcemia	15
Myocardial Ischemia	4	Hypophosphatemia	11
Myocardial Infarction	2	Hypocalcemia	9
Cardiac Arrest	2	Hypoalbuminemia	9
Congestive Heart Failure	2	Hypoproteinemia	7
Myocarditis	1	Hypotatremia	4
Stroke	1	Hypokalemia	4
Gangrene	1	Alkalosis	4
Pericardial Effusion	1	Hypoglycemia	2
Endocarditis	1	Hypoglycemia	2
Thrombosis	1	Hypohyponatremia	1
Gastrointestinal		Hypercalcemia	1
Nausea and Vomiting	87	Hyperphosphatemia	1
Diarrhea	76	Renal	
Stomatitis	32	Oliguria/Anuria	76
Anorexia	27	BUN Elevation	63
GI Bleeding (requiring surgery)	13	Serum Creatinine Elevation	61
Dyspepsia	7	Proteinuria	12
Constipation	5	Hematuria	9
Intestinal Perforation/Ileus	2	Dysuria	3
Pancreatitis	<1	Renal Impairment Requiring Dialysis	
Neurologic		Urinary Retention	2
Mental Status Changes	73	Urinary Frequency	1
Dizziness	17	Dermatologic	
Sensory Dysfunction	10	Pruritus	48
Special Sensory Disorders (vision, speech, taste)	7	Erythema	41
Syncope	3	Rash	26
Motor Dysfunction	2	Dry Skin	15
Coma	1	Exfoliative Dermatitis	14
Seizure (grand mal)	1	Purpura/Petechiae	4
Pulmonary		Urticaria	2
Pulmonary Congestion	54	Alopecia	1
Dyspnea	32	Musculoskeletal	
Pulmonary Edema	10	Myalgia	6
Respiratory Failure (leading to intubation)	9	Myalgia	6
Tachypnea	8	Arthritis	1
Pleural Effusion	7	Muscle Spasm	1
Wheezing	6	Endocrine	
Apnea	1	Fever and/or Chills	89
Pneumothorax	1	Pain (all sites)	54
Hemoptysis	1	Abdominal	15
Hepatic		Edema	12
Elevated Bilirubin	64	Chest	9
Elevated Transaminase	56	Fatigue/Weakness/Malaise	53
Elevated Alkaline Phosphatase	56	Infection	47
Jaundice	11	(including urinary tract, injection site, catheter tip, phlebitis, sepsis)	23
Ascites	4	Weight Gain (≥10%)	23
Hepatomegaly	1	Headache	12
		Weight Loss (≥10%)	5
		Conjunctivitis	4
		Injection Site Reactions	3
		Allergic Reactions (non-anaphylactic)	1

Other serious adverse events were derived from trials involving more than 1,800 patients treated with PROLEUKIN-based regimens using a variety of doses and schedules. These events each occurred with a frequency of <1% and included: liver or renal failure resulting in death; duodenal ulceration; fatal intestinal perforation; bowel necrosis; fatal cardiac arrest, myocarditis, and supraventricular tachycardia; permanent or transient blindness secondary to optic neuritis; fatal malignant hyperthermia; pulmonary edema resulting in death; respiratory arrest; fatal respiratory failure; fatal stroke; transient ischemic attack; meningitis; cerebral edema; pericarditis; allergic interstitial nephritis; tracheo-esophageal fistula; fatal pulmonary emboli; severe depression leading to suicide.

OVERDOSAGE

Side effects following the use of PROLEUKIN® (adesleukin) are dose-related. Administration of more than the recommended dose has been associated with a more rapid onset of expected dose limiting toxicities. Adverse reactions generally will reverse when the drug is stopped, particularly because its serum half-life is short. (See "CLINICAL PHARMACOLOGY" Section, "Pharmacokinetics" Subsection in Package Insert). Any continuing symptoms should be treated supportively. Life threatening toxicities have been ameliorated by the intravenous administration of dexamethasone, which may result in loss of therapeutic effect from PROLEUKIN. **NOTE: Prior to the use of dexamethasone, the physician should refer to the package insert for this product.**

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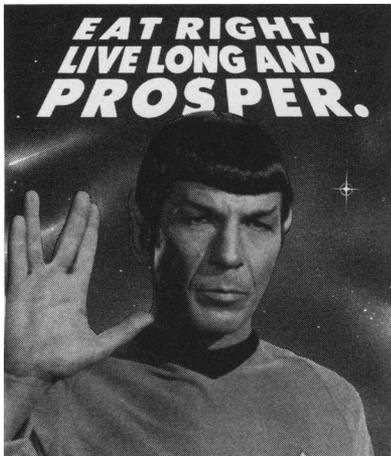
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EATING RIGHT IS HIGHLY LOGICAL.

Recommendations:

Eat high-fiber foods, such as fruits, vegetables, and whole grain products. Eat fewer high-fat foods. Maintain normal body weight. And live long and prosper.

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- CAN 209 Symposium 1: Hereditary Predisposition to Cancer (Two cassettes) \$23.00
- CAN 210 Symposium 2: Antitumor Activities of Cytokines (Two cassettes) \$23.00
- CAN 211 Minisymposium Biology 3: Metalloproteinases (Three cassettes) \$34.00
- CAN 212 Minisymposium Preclinical Pharmacology/Experimental Therapeutics 4: Protein Kinases: A Target for Therapy (Three cassettes) \$34.00
- CAN 213 Minisymposium Clinical Investigations 3: Molecular Markers of Risk and Prognosis (Three cassettes) \$34.00
- CAN 214 Minisymposium Molecular Biology/Virology 3: Oncogenes (Three cassettes) \$34.00
- CAN 215 Eleventh Bruce F. Cain Memorial Award Lecture: Taxol: Mechanisms of Action and Resistance [Susan Band Horwitz] (One cassette) \$11.50
- CAN 216 Minority Issues Committee Symposium: Careers and Opportunities in Cancer Research: Success and Survival in the 1990s (Two cassettes) \$23.00
- CAN 217 Meet the Expert Sunrise Session: Contemporary Cytogenetics (One cassette) \$11.50
- CAN 218 Meet the Expert Sunrise Session: Gene Therapy (One cassette) \$11.50
- CAN 219 Symposium 3: Molecular Genetics of Cancer (Three cassettes) \$34.50
- CAN 220 Plenary Session 3: The Role of Cell Adhesion in Invasion and Metastasis (Two cassettes) \$23.00
- CAN 221 Symposium 4: Multiple Genetic Alterations and Multiple Steps in Carcinogenesis (Two cassettes) \$23.00
- CAN 222 Minisymposium Immunology 4: Tumor Infiltrating Lymphocytes (Three cassettes) \$34.50
- CAN 223 Minisymposium Carcinogenesis 7: Molecular Alterations in Oncogenes and Tumor Suppressor Genes (Three cassettes) \$34.50
- CAN 224 Minisymposium Preclinical Pharmacology/Experimental Therapeutics 10: Reversal of Drug Resistance III (Three cassettes) \$34.50
- CAN 225 Minisymposium Clinical Investigations 7: Biologicals for Treatment (Three cassettes) \$34.50
- CAN 226 Thirty-Second G.H.A. Clowes Memorial Award Lecture: Drug Resistance: Genotype versus Phenotype [June L. Biedler] (One cassette) \$11.50
- CAN 227 Symposium 5: Genomic Fluidity (Two cassettes) \$23.00
- CAN 228 Symposium 6: Programmed Cell Death (Apoptosis) in the Etiology and Therapy of Cancer (Two cassettes) \$23.00
- CAN 229 Symposium 7: Receptor Signaling and Transduction (Two cassettes) \$23.00
- CAN 230 Minisymposium Epidemiology and Prevention 2: Epidemiology and Prevention (Two cassettes) \$23.00
- CAN 231 Minisymposium Clinical Investigations 10: Novel Therapies (Two cassettes) \$23.00
- CAN 232 Minisymposium Carcinogenesis 11: Cellular and Molecular Changes in Carcinogenesis (Two cassettes) \$23.00
- CAN 233 Minisymposium Preclinical Pharmacology/Experimental Therapeutics 16: New Mechanisms of Multidrug Resistance (Two cassettes) \$23.00
- CAN 234 Presidential Address: Transforming Growth Factors and Cancer: New Insights [Harold L. Moses] (One cassette) \$11.50
- CAN 235 Annual Business Meeting (One cassette) \$11.50
- CAN 236 Meet the Expert Sunrise Session: Proteoglycans and Cell Adhesion (One cassette) \$11.50
- CAN 237 Meet the Expert Sunrise Session: A New Therapeutic Approach for Cancer Treatment: Sequence-specific Antisense Nucleic Acid Analogs (One cassette) \$11.50
- CAN 238 Plenary Session 4: Cell Cycle Control (Two cassettes) \$23.00
- CAN 239 Symposium 8: HIV-associated Malignancies (Two cassettes) \$23.00
- CAN 240 Symposium 9: Anticancer Drug Design and Discovery (Two cassettes) \$23.00
- CAN 241 Minisymposium Endocrinology 5: Endocrine, Autocrine, and Paracrine Growth Factors (Two cassettes) \$23.00
- CAN 242 Minisymposium Biochemistry 5: Oncogenes (Two cassettes) \$23.00
- CAN 243 Minisymposium Carcinogenesis 15: Genetics of Cancer Susceptibility (Two cassettes) \$23.00
- CAN 244 Minisymposium Preclinical Pharmacology / Experimental Therapeutics 22: Antineoplastic Properties of Ether Lipids (Two cassettes) \$23.00
- CAN 245 First American Cancer Society Award Lecture: Human Gastric Carcinogenesis: A Multistep and Multifactorial Process [Pelayo Correa] (One cassette) \$11.50
- CAN 246 Eleventh Cornelius P. Rhoads Memorial Award Lecture: Analysis of Protein Function in Vivo by Targeted Gene Disruption [Elizabeth J. Robertson] (One cassette) \$11.50
- CAN 248 Symposium 10: The p53 Tumor Suppressor Gene (Two cassettes) \$23.00
- CAN 249 Symposium 11: Breast Cancer (Two cassettes) \$23.00
- CAN 250 Symposium 12: Gene Expression and Chromatin Structure (Three cassettes) \$34.50
- CAN 251 Minisymposium Biology 15: Angiogenesis (Three cassettes) \$34.50
- CAN 252 Minisymposium Preclinical Pharmacology/Experimental Therapeutics 33: Antisense (Three cassettes) \$34.50
- CAN 253 Minisymposium Molecular Biology/Virology 11: Tumor Suppressor Genes I (Two cassettes) \$23.00
- CAN 254 Minisymposium Clinical Investigations 19: Molecular Biology of Human Cancer II (Two cassettes) \$23.00
- CAN 255 Symposium 13: Molecular Mechanisms in Carcinogenesis (Two cassettes) \$23.00
- CAN 256 Symposium 14: Molecular Approaches to Diagnosis and Patient Evaluation (Two cassettes) \$23.00

CONTINUED. . . .

- CAN 257 Minisymposium Immunology 13: Cytokine Modulation of Tumor Growth**
\$34.50 (Three cassettes)
- CAN 258 Minisymposium Preclinical Pharmacology/Experimental Therapeutics 35: Liposomes in Drug Delivery**
\$34.50 (Three cassettes)
- CAN 259 Minisymposium Carcinogenesis 22: Mutational Specificity** (Three cassettes)
- CAN 260 Minisymposium Biology 16: Signal Transduction** (Three cassettes)

28th ANNUAL MEETING OF THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY

MAY 17-19, 1992

- CO 201 (S1) Pain Control in Patients With Cancer** (One cassette) \$11.50
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- CO 204 (S4) Molecular Biology** (One cassette) \$11.50
- CO 205 (S5) Clinical Pharmacology for the Non-Pharmacologist** (Two cassettes) \$23.00
- CO 206 (S6) Promising New Drugs** (One cassette) \$11.50
- CO 207 (S7) Interpreting the Results of Clinical Trials: What do the Data Mean to Me?** (One cassette) \$11.50
- CO 208 (S8) Futuristic Therapy of Breast Cancer** (One cassette) \$11.50
- CO 209 (S9) Hodgkin's Disease: An Update** (One cassette) \$11.50
- CO 210 (S10) Myelodysplasia Syndromes in Pediatric and Adult Patients** (One cassette) \$11.50
- CO 211 (S11) Organ Preservation in Multimodality Solid Tumor Therapy** (One cassette) \$11.50
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- CO 215 (SIT3) Cancer in Older Persons** (One cassette) \$11.50
- CO 216 (SIT4) Acceptance and Implementation of New Therapy** (One cassette) \$11.50
- CO 217 Breast Cancer: Adjuvant Therapies** (Three cassettes) \$34.50
- CO 218 Non-Small Cell Lung Cancer/Head and Neck Tumors** (Three cassettes) \$34.50
- CO 219 Adult Leukemia** (Three cassettes) \$34.50
- CO 220 Clinical Pharmacology** (Three cassettes) \$34.50
- CO 221 Pediatric Solid Tumors** (Three cassettes) \$34.50
- CO 222 Presidential Address and Awards Ceremony** [Martin D. Abeloff, MD] (One Cassette) \$11.50
- CO 223 Twenty-Third Annual David A. Karnofsky Memorial Lecture: Ode to Methotrexate** [Joseph Bertino, MD] (One Cassette) \$11.50
- CO 224 Plenary Session** (Two Cassettes) \$23.00
- CO 225 Breast Cancer: Advanced** (Three Cassettes) \$34.50
- CO 226 Gastrointestinal Tract Cancer** (Three Cassettes) \$34.50
- CO 227 Genitourinary Tract Cancer** (Three Cassettes) \$34.50
- CO 228 Tumor Immunology** (Three Cassettes) \$34.50
- CO 229 Pediatric Leukemia and Lymphoma** (Three Cassettes) \$34.50
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- CO 232 Melanoma/Sarcoma** (Three Cassettes) \$34.50
- CO 233 Gynecological Tumors** (Three Cassettes) \$34.50
- CO 234 Epidemiology/Cancer Prevention and Control** (Three Cassettes) \$34.50
- CO 235 Cancer Biology and Molecular Genetics** (Two Cassettes) \$23.00
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Special Offer:
Buy all 16 Symposia & Special Interest Topic Sessions
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Signature: _____ Telephone () _____



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PEZCOLLER
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1993 Pezcoller Award for oncology and related basic research 100,000 E.C.U.

Nominations should be received by 15th April, 1993.

For related forms write to:

3rd Pezcoller Award - The Pezcoller Foundation
c/o European School of Oncology
via G. Venezian 18 - 20133 Milan (Italy)
Tel: (+39 2)70635923
Fax: (39 2)2664662



European
School
of
Oncology

The Charles Rodolphe Brupbacher Foundation announces its first
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Charles Rodolphe Brupbacher Cancer Research Award 1993

***p53* in Growth Control and Neoplasia** **March 24-27, 1993 Zürich, Switzerland**

Chairmen

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Invited Speakers

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S. Hirohashi (Tokyo)
A. Levine (Princeton)
E. Newcomb (New York)
V. Rotter (Rehovot)

A. Bradley (Houston)
R. Dalla-Favera (New York)
D. Lane (Dundee)
R. Montesano (Lyon)
M. Oren (Rehovot)
K. Vousden (London)

Oral communications and Posters are welcome.

Registration fee: Swiss Francs SFr. 100.00 or U.S. \$80.00

For further details and applications, please contact
Dr. Barbara Ludeke, Institute of Neuropathology, University Hospital,
CH-8091 Zürich, Switzerland Tel. +41 (1) 255 2848 Fax +41 (1) 255 4402

AMERICAN ASSOCIATION FOR CANCER RESEARCH

1993 EMPLOYMENT REGISTER FORMS AND INSTRUCTIONS

INTRODUCTION

The AACR's Employment Register is intended to attract young scientists to the Association, increase interest in AACR programs, and provide a valuable service to all cancer researchers, both senior and junior investigators.

The AACR had operated a limited Employment Register since 1983 with a fee structure that permitted only the listing of positions and candidates at the annual meeting. Beginning in 1988, AACR Staff scheduled interviews at the annual meeting, and brief advertisements describing available candidates and positions were published in the *Proceedings of the American Association for Cancer Research* and in two issues of *Cancer Research*. These services will be continued in 1993. Registration forms for the 1993 Employment Register can be found on the following pages. Fees have been set at the following levels:

Each candidate registration

- by an AACR member \$10
- by a nonmember \$25

Each position listing

- by an AACR member from a nonprofit or governmental organization \$75
- by a nonmember from a nonprofit or governmental organization \$125
- from a commercial organization \$250

INSTRUCTIONS FOR CANDIDATES

1. Supply all information requested on the attached candidate registration form.
2. Type a short description of your background and the position you are seeking in the 5" X 1 1/4" box provided. Do not include your name; the AACR will assign identification numbers to all candidate listings. Please type carefully; this description will be reproduced as described in the section below entitled PUBLICATION OF LISTINGS.
3. Enclose the original form plus 1 copy.
4. Enclose appropriate payment:
 - a. \$10 from AACR members
 - b. \$25 from nonmembers
5. Checks should be issued in U.S. dollars, drawn on a U.S. bank, and made payable to AACR, Inc.
6. **Forms should be submitted by January 25, 1993**, to ensure publication of listings in the *Proceedings*. However, candidate registration forms will continue to be accepted in the Association Office until April 23, 1993. After that date forms should be submitted at the annual meeting.
7. Mail all candidate registration forms to:
 - Employment Register
 - American Association for Cancer Research, Inc.
 - Public Ledger Building
 - 620 Chestnut Street, Suite 816
 - Philadelphia, PA 19106-3483

INSTRUCTIONS FOR EMPLOYERS

1. Supply all information requested on the position listing form for each position available.
2. Type a short description of the position available in the 5" X 1 1/4" box provided. Please type carefully; this description will be reproduced as described in the section below entitled PUBLICATION OF LISTINGS.

3. Enclose the original form plus 1 copy.
4. Enclose appropriate payment:
 - a. \$75 from AACR members in nonprofit or governmental organizations,
 - b. \$125 from nonmembers in nonprofit or governmental organizations,
 - c. \$250 from commercial firms.
5. Checks should be issued in U.S. dollars, drawn on a U.S. bank, and made payable to AACR, Inc.
6. **Forms should be submitted by January 25, 1993**, to ensure publication of listings in the *Proceedings*. However, position listing forms will continue to be accepted in the Association Office until April 23, 1993. After that date forms should be submitted at the annual meeting.
7. Mail all position listing forms to:
 - Employment Register
 - American Association for Cancer Research, Inc.
 - Public Ledger Building
 - 620 Chestnut Street, Suite 816
 - Philadelphia, PA 19106-3483

SCHEDULING OF INTERVIEWS

The AACR will set aside space at the annual meeting for interviews which will be scheduled at mutually agreeable times during the following hours: Wednesday, Thursday, and Friday, May 19-21, from 8:00 a.m. to 5:00 p.m., and Saturday, May 22, from 9:00 a.m. to 12:00 noon. Each candidate and employer will receive an identification number. Registrants who submit their forms and fees by April 23, 1993, will receive an acknowledgment card which contains their identification number.

PUBLICATION OF LISTINGS

Short advertisements describing each candidate and position listing will be published in Volume 34 (1993) of the *Proceedings of the American Association for Cancer Research* and in the September 1, and December 1, 1993, issues of *Cancer Research*. The attached forms contain space for copy for these advertisements. Please type carefully to ensure accurate reproduction of your advertisement. Your copy must not exceed the limits of the box because space for these advertisements is limited. Advertisements for available positions should contain the name and address of the person conducting the job search, and candidates will be able to communicate with that person directly. Candidate advertisements will be anonymous. The AACR will send the candidate's complete form via first-class mail to any registered employer who requests it. The employer must bear the cost of receiving candidate forms in any manner other than first-class mail.

As noted above, because of the early publication date of the *Proceedings*, forms must be received by January 25, 1993, to ensure publication in that document. However, all advertisements submitted before or during the meeting will be published in the two issues of *Cancer Research*. Registrants wishing to withdraw their advertisements must submit written requests to that effect to the Association Office by July 1, 1993, for the September issue, and by October 1, 1993, for the December issue. All participants in the Employment Register are urged to notify the Association immediately of any change in their status so that all listings will remain current.

FURTHER INFORMATION

Questions about the Employment Register may be directed to the Association Office at 215-440-9300.

POSITION LISTING

**AMERICAN ASSOCIATION FOR CANCER RESEARCH
EMPLOYMENT REGISTER
(Please type and submit original and 1 copy)**

DESCRIPTION OF POSITION

Title _____
Nature of Work and Responsibilities (research, teaching, administration, etc.) _____

Education and Experience Required _____

Date Position Available _____ Annual Salary Range _____

Location of Position _____

Areas of Specialization
(Indicate a maximum of three in order of greatest activity)

- ____ ¹Biochemistry & Biophysics ____ ²Biostatistics ____ ³Carcinogenesis ____ ⁴Cellular Biology & Genetics
- ____ ⁵Clinical Investigations ____ ⁶Endocrinology ____ ⁷Epidemiology ____ ⁸Immunology
- ____ ⁹Molecular Biology & Genetics ____ ¹⁰Preclinical Pharmacology & Experimental Therapeutics ____ ¹¹Virology
- ____ ¹²Other: _____
(please specify)

=====

EMPLOYER'S REPRESENTATIVE(S)

Name(s) and Title(s) _____ ACR Member Number _____

Institution _____

Address _____

Telephone _____

AVAILABILITY FOR INTERVIEWS AT AACR ANNUAL MEETING

I ___ plan ___ do not plan to attend the AACR Annual Meeting in Orlando.
Dates available for interviews: ___ May 19 ___ May 20 ___ May 21 ___ May 22

=====

ADVERTISEMENT (Please type a short description of the position in the box below. If received by January 25, 1993, your advertisement will be printed in the 1993 *Proceedings*. All advertisements will appear in the September 1, and December 1, 1993, issues of *Cancer Research*.)

SAMPLE: Asst. Prof. (tenure track) in Mol. Biol. Postdoc. and teaching exp. Conduct independent res. on oncogenes, chimeric antibodies, and mol. biol. of tumor antigens. Limited medical/grad. teaching. Avail. Sept. 1993. \$30,000-\$35,000. Contact Dr. A. C. Brown, Dept. of Mol. Biol., Smith Univ., Chicago, NY.



AMERICAN ASSOCIATION FOR CANCER RESEARCH

GUIDELINES FOR APPLICATION FOR ACTIVE AND CORRESPONDING MEMBERSHIP

BENEFITS OF MEMBERSHIP

The American Association for Cancer Research (AACR) is a scientific society consisting of laboratory and clinical cancer researchers. It was founded in 1907 "to bring together active investigators of the cancer problem for presentation and discussion of new or significant observations; and to foster research in cancer and other phenomena of growth." Members of the AACR enjoy the following benefits:

1. subscriptions to the journals *Cancer Research*, *Cell Growth & Differentiation*, and *Cancer Epidemiology, Biomarkers & Prevention* at the reduced member rate;
2. the privilege of sponsoring an abstract for presentation at the AACR annual meeting;
3. an advance copy of the Program and *Proceedings* pertaining to each annual meeting;
4. a reduced registration rate at all scientific meetings;
5. early notification of events in the AACR's series of special conferences;
6. subscriptions to any future AACR journals at reduced member rates;
7. reduced rates for the AACR Employment Register;
8. the benefit of AACR's public education activities;
9. the receipt of AACR newsletters, meeting announcements, and an up-to-date membership directory.

QUALIFICATIONS FOR MEMBERSHIP

Active membership in the AACR is open to investigators who live in the Americas, and who have conducted two years of meritorious research that has resulted in publications relevant to cancer. If a candidate is working in a research area not directly related to the cancer field but has conducted research of exceptional scientific merit, he or she may also qualify for membership.

Corresponding membership is open to qualified persons who are not residents of the Americas. The requirements for corresponding membership are the same as those for active membership. Visiting scientists from outside the Americas who intend to return to their countries of origin soon after submitting their applications should apply for corresponding membership. All other individuals should apply for active membership and transfer to corresponding status at a later date if they should leave the Americas.

PROCEDURES FOR APPLICATION

There are three deadlines for receipt of a membership application: March 1, July 1, and October 1 of each year. The Membership Committee will review all complete applications for active membership that have been received by these deadlines and will submit recommendations on each candidate to the Board of Directors which formally elects all members. The same procedure is followed by the Special Memberships Committee which receives applications for corresponding membership. Candidates will be notified according to the following schedule:

<u>Receipt of Application in AACR Office</u>	<u>Notification of Candidate</u>
March 1	May
July 1	September
October 1	December

A complete application consists of the following material:

1. 6 copies of the form on the opposite side of this page, with all requested information provided.

2. 5 copies of the candidate's most current curriculum vitae and bibliography.
3. 5 copies of a letter of recommendation from a nominator who is an active, emeritus, or honorary member of the AACR (at least one copy must be a signed, original letter). This letter should describe the candidate's achievements in laboratory research, clinical investigations, or epidemiological research, and it should affirm that this research adheres to accepted ethical standards.—OR—The nominator may supply the responses requested at the bottom of the application form in the section entitled "STATEMENT OF SUPPORT" (at least one copy of the form must be the signed original).
4. 5 copies of a letter of recommendation as described in Item 3 above from a seconder who is an active, emeritus, or honorary member of the AACR (at least one copy must be a signed, original letter).—OR—The seconder may supply the responses requested at the bottom of the application form in the section entitled "STATEMENT OF SUPPORT" (at least one copy of the form must be the signed original).
5. 5 reprints of each of two publications on which the candidate appears as author.

All material should be collated into five complete sets with the original application form as a covering document and sent to the address given below. Questions regarding procedures for membership application may also be directed to the following address:

American Association for Cancer Research
Public Ledger Building
620 Chestnut St.
Suite 816
Philadelphia, PA 19106-3483
215/440-9300

RESPONSIBILITIES OF MEMBERSHIP

Candidates should be aware of the following responsibilities of membership in the AACR. Active members must pay annual dues, a major portion of which is designated for a subscription to at least one of the AACR's publications. Newly elected members of the AACR who have already purchased subscriptions to *Cancer Research*, *Cell Growth & Differentiation*, or *Cancer Epidemiology, Biomarkers & Prevention* at the higher, nonmember rate will receive reimbursement of the unused portion of those subscriptions once their first year's membership dues are paid in full.

All corresponding members elected after May 23, 1985, are required to pay an annual assessment in lieu of dues. This assessment, which is equivalent to that portion of the regular dues that pertains to support of activities other than publications, is imposed to defray the cost of sending AACR publications to members outside the Americas. Corresponding members may, if they wish, subscribe to *Cancer Research*, *Cell Growth & Differentiation*, or *Cancer Epidemiology, Biomarkers & Prevention* at the reduced member rate.

Applicants elected in May will be responsible for payment of that year's dues; applicants elected in September and December will pay dues in the following year. Applicants elected in May and September will be eligible to sponsor an abstract for the next annual meeting. Every effort will be made to afford the same opportunity to applicants elected in December.

Margaret Foti
Executive Director



AMERICAN ASSOCIATION FOR CANCER RESEARCH

GUIDELINES FOR APPLICATION FOR ASSOCIATE MEMBERSHIP

QUALIFICATIONS FOR MEMBERSHIP

Associate membership is open to graduate students, medical students, postdoctoral fellows, and physicians in training who live in the Americas and who are following a course of study or who are working in a research program relevant to cancer.

BENEFITS OF MEMBERSHIP

The American Association for Cancer Research (AACR), a scientific society consisting of laboratory and clinical cancer researchers, was founded in 1907 "to bring together active investigators of the cancer problem for presentation and discussion of new or significant observations; and to foster research in cancer and other phenomena of growth." Associate members of the AACR enjoy the following benefits:

1. the privilege of sponsoring an abstract for presentation at the AACR annual meeting provided that (a) the associate member is the presenter of the abstract and (b) an active member in good standing of the AACR also signs the abstract in support of the work (In this instance, the active member who cosigns the abstract does not lose his or her own sponsorship privilege.);
2. an advance copy of the Program and (if one has been purchased by the associate member) the *Proceedings of the American Association for Cancer Research* which contains abstracts of all papers being presented at each annual meeting;
3. the privilege of registering for the annual meeting at the low student rate (This rate is otherwise available only to predoctoral students.);
4. preferred access to the AACR Employment Register;
5. optional subscriptions to the journals *Cancer Research*, *Cell Growth & Differentiation*, and *Cancer Epidemiology, Biomarkers & Prevention* at the reduced member rate;
6. subscriptions to any future AACR journals at reduced member rates;
7. early notification of events in the AACR's new series of small scientific meetings on timely scientific topics;
8. the receipt of AACR newsletters, meeting announcements, and an up-to-date membership directory; and
9. the facilitation of informal scientific exchange with leading researchers in the cancer field.

PROCEDURES FOR APPLICATION

Persons wishing to apply for associate membership must use the official application form on the reverse side of these instructions. Each candidate for associate membership must be nominated by an active member in good standing of the AACR. Three completed copies of the form should be submitted; at least one of these copies must carry the original signatures of both the candidate and the active member nominator. The application form may be submitted to the Association Office at any time.

After review of applications for associate membership, the Executive Director will notify candidates of their election or deferral within one month of the receipt of the application form. A check in the amount of \$20, which represents one year's dues payment, must accompany the application. This fee will be refunded to any candidate deemed to be ineligible for associate membership. Checks should be in U.S. currency, made payable to AACR, Inc., and drawn on a U.S. bank. Send the three copies of the application form and the \$20 dues payment to:

American Association for Cancer Research
Public Ledger Building
620 Chestnut St.
Suite 816
Philadelphia, PA 19106-3483
215/440-9300

RESPONSIBILITIES OF MEMBERSHIP

Associate members must pay annual dues in an amount to be determined by the AACR Board of Directors. Dues for 1992 have been set at \$20 per year. If an application is submitted by August 31, the accompanying dues payment will be credited to the current year. Candidates submitting applications between September 1 and December 31 may indicate whether they wish their dues payments credited to the current or forthcoming year. Candidates should be aware, however, that associate members may sponsor an abstract for the annual meeting only if their dues for the current year are paid. For example, an associate member submitting an abstract in December 1991 for the forthcoming annual meeting must have paid dues for 1991. Any newly elected associate members of the AACR who have already purchased subscriptions to *Cancer Research*, *Cell Growth & Differentiation*, or *Cancer Epidemiology, Biomarkers & Prevention* at the higher, nonmember rate will receive a refund for the unused portion of that subscription upon receipt of their payment for a member's subscription.

Each Fall the AACR will send to current associate members an invoice for dues for the forthcoming year. Payment of this invoice must be accompanied by a statement signed by the associate member's current registrar, dean, or department head, verifying the member's current academic status. The Association's By-Laws state that dues are payable for each year in advance on or before January 1 of the year to which they should be applied. An individual may be an associate member for a maximum of five years. Each year in which an individual pays dues will count as one full year of associate membership. Thus, an associate member who pays dues for 1991 may retain associate membership until December 31, 1995. The Board of Directors may terminate the membership of an associate member whose dues are in arrears for two years.

Margaret Foti,
Executive Director

AMERICAN ASSOCIATION FOR CANCER RESEARCH EIGHTY-FOURTH ANNUAL MEETING

May 19-22, 1993
Orange County Convention Center
Orlando, Florida

ADVANCE REGISTRATION FORM

(Please print or type)

NAME: _____
Last Name First Name/Middle Initial AACR Member Number

TITLE: _____ ADDRESS: _____
Institution

Street, Building, or Post Office Box

City State or Province Zip/Postal Code Country (if not U.S.)

TELEPHONE: _____ FAX: _____

Check this box if you have a physical disability and special requirements for transportation, hotel accommodations, or other facilities connected with the meeting. A member of the Association Staff will contact you.

WHAT IS YOUR PRIMARY FIELD OF RESEARCH (Please check only one):

¹Biochemistry and Biophysics ²Biostatistics ³Carcinogenesis ⁴Cellular Biology & Genetics ⁵Clinical Investigations
 ⁶Endocrinology ⁷Epidemiology ⁸Immunology ⁹Molecular Biology
 ¹⁰Preclinical Pharmacology & Experimental Therapeutics ¹¹Virology ¹²Other (please specify): _____

ARE YOU THE PRESENTER OF AN ABSTRACT SUBMITTED FOR THE 1993 AACR MEETING? Yes No

ON WHICH DAYS WILL YOU ATTEND THE 1993 AACR ANNUAL MEETING?

Wednesday, May 19 Thursday, May 20 Friday, May 21 Saturday, May 22

WILL YOU ATTEND THE ASCO MEETING IN ORLANDO? Yes No

ON WHICH DAYS WILL YOU ATTEND THE 1993 ASCO ANNUAL MEETING?

Sunday, May 16 Monday, May 17 Tuesday, May 18

PAYMENT OF REGISTRATION

Fees may be paid by check or with a MasterCard, VISA, American Express, or Eurocard account. All payments must be made in U.S. currency, and all checks must be drawn on a U.S. bank. Payment must accompany this form; purchase orders will not be accepted as payment. Honorary and emeritus members may register gratis.

FEES	On or Before Mar. 29	After Mar. 29	METHOD OF PAYMENT
<input type="checkbox"/> Active/Corresponding Member Rate	\$ 90	\$115	<input type="checkbox"/> Check payable to AACR, Inc. in U.S. currency, drawn on a U.S. bank
<input type="checkbox"/> Honorary/Emeritus Member Rate	\$ 0	\$ 0	
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THE DEADLINE FOR REDUCED REGISTRATION FEES IS MARCH 29, 1993. Registration by mail will be accepted until April 16. Registration will also be possible at the Orange County Convention Center from May 18-22.

*Students must enclose a statement, signed by the registrar, dean, or department head of their university or college on official letterhead, confirming their status. **Postdoctoral fellows or physicians in training do not qualify for the student registration rate** unless they are associate members of the AACR. An application for associate membership may accompany this form, but these should be submitted well before the March 29 deadline as review of the associate membership application may delay registration.

+AACR members with paid-up subscriptions to an AACR journal and registrants who pay the nonmember fee receive the *Proceedings* automatically. If these members or nonmembers check this box and pay the \$35 fee, they will receive an **additional** copy of the *Proceedings*.

†Optional payment for registrants outside of the U.S. and Canada only. Registrants paying this surcharge will receive meeting publications via air mail-printed matter before the annual meeting.

Mail all advance registration forms with applicable fees to Annual Meeting Registration, American Association for Cancer Research, Inc., Public Ledger Building, 620 Chestnut Street, Suite 816, Philadelphia, PA 19106-3483. FAX: 215-440-9313. Badges and receipts will be sent to you in April or early May. AACR members in good standing will receive copies of the Program and *Proceedings* prior to the meeting. Nonmember and student registrants who meet the March 29 deadline will also receive the Program and (if they have purchased it) the *Proceedings* prior to the meeting. Nonmembers and students who do not meet the deadline must pick up publications at the meeting site.

REFUND POLICY

Refunds on registration fees will be granted on written request received in the AACR Office by May 12, 1993. Requests received after this date will not be honored. Receipts and badges (if they have been mailed) must be returned to the AACR Office with the refund request. A cancellation fee of \$25 will be deducted from all refunds to cover administrative costs.

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AMERICAN ASSOCIATION FOR CANCER RESEARCH SCIENTIFIC CONFERENCES: 1992-1994

FEBRUARY 1-6, 1993

***Oncogenes and Antioncogenes in Cell
Differentiation, Development, and
Human Cancer***

Chairperson: Carlo M. Croce, Philadelphia, PA
Big Sky Resort, Big Sky, MT

MARCH 15-20, 1993

***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
Banff Centre, Banff, Alberta, Canada

APRIL 13-17, 1993

Genetic Control of Cell Growth
Supported by a Generous Grant
from the General Motors Cancer
Research Foundation

Chairpersons: Leland H. Hartwell, Seattle, WA;
Peter K. Vogt, Los Angeles, CA; George F.
Vande Woude, Frederick, MD
San Luis Hotel, Galveston, TX

MAY 19-22, 1993

84th Annual Meeting

Chairperson: Michael B. Sporn, Bethesda, MD
Orange County Convention Center, Orlando, FL

OCTOBER 17-21, 1993

Cell Death and Cancer

Chairperson: Alan R. Eastman, Hanover, NH
Chatham Bars Inn, Chatham (Cape Cod), MA

NOVEMBER 7-11, 1993

***Molecular Approaches to
Cancer Immunotherapy***

Chairperson: Ralph A. Reisfeld, San Diego, CA
Grove Park Inn, Asheville, NC

NOVEMBER 9-13, 1993

***Interactions of Cancer Susceptibility
Genes and Environmental Carcinogenesis***

Joint Meeting with International Association
for Research on Cancer

Chairpersons: Frederick P. Li, Boston, MA, and
Ruggero Montesano, Lyon, France
IARC, Lyon, France

DECEMBER 5-9, 1993

Cell Signalling and Cancer Treatment

Joint Meeting with British Association for
Cancer Research and European
Organisation for Research and Treatment of
Cancer (PAM Group)

Chairperson: Garth Powis, Tucson, AZ
El San Juan Hotel, San Juan, PR

JANUARY 17-22, 1994

***Risk Assessment in Environmental
Carcinogenesis***

Chairpersons: Philip C. Hanawalt, Berkeley, CA;
James A. Swenberg, Chapel Hill, NC
Whistler Resort and Conference Center, Whistler,
B.C., Canada

JANUARY 31-FEBRUARY 5, 1994

***Molecular Genetics of Progression
and Metastasis***

Chairperson: Lance A. Liotta, Bethesda, MD
Big Sky Resort, Big Sky, MT

AACR members will receive brochures on the
above special conferences as soon as they are
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**Guidelines for Submitting Disks
to
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The word processing packages that we prefer are as follows:

XyWrite III Plus (for the IBM)	Microsoft Word (for the IBM)
WordPerfect 4.2, 5.0, 5.1 (for the IBM)	Microsoft Word MacIntosh
WordPerfect (for the Mac)	(Versions 1-4) 400/800K
Wordstar (for the IBM)	Wang OIS (WPS)

Also acceptable:

Apple II DOS 3.3	Display Write 4
Apple with Appleworks Software	IBM Displaywriter Word Processor 6580
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AACR SPECIAL CONFERENCE IN CANCER RESEARCH

MECHANISM OF ACTION OF RETINOIDS, VITAMIN D, AND STEROID HORMONES

March 15-20, 1993

Banff Centre, Banff, Alberta, Canada



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SCIENTIFIC PROGRAM

Keynote Address

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DNA Binding/Heterodimers

Kazuhiko Umesono / San Diego, CA
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Vitamin D

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Genetic Regulation by Retinoids and Steroids

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AMERICAN ASSOCIATION FOR CANCER RESEARCH
84th Annual Meeting

Michael B. Sporn, Program Chairperson
Orange County Civic Center, Orlando, FL
May 19-22, 1993

Plenary Sessions and Symposia: Titles and Chairpersons

**Impact of Molecular Biology on Cancer: Its
Detection, Prevention, and Treatment**
Joint AACR/ASCO Session - Stephen H. Friend

**Transgenic Mice as Models for Cancer
Pathogenesis** Owen N. Witte

**From Bench to Clinic: Concepts in the Design
and Targeting of New Chemotherapeutic
Agents** Bruce A. Chabner

Invasion, Metastasis, and Angiogenesis Robert
S. Kerbel

**Mechanisms of Action of Chemopreventive
Agents: Basic Science and Clinical
Applications** Martin Lipkin and Anita B.
Roberts

Molecular Genetics of Drug Resistance June L.
Biedler

**Advances in Molecular Epidemiology of Human
Cancer** Curtis C. Harris

Cytokines in the Immunomodulation of Cancer
Elizabeth A. Grimm

**The Biology and Therapeutic Application of
Normal Hematopoietic Stem Cells** Malcolm
A. S. Moore

**The Restoration of Normal Differentiation and
Growth to Preneoplastic and Neoplastic
Cells: Strategies for Differentiation Therapy**
Waun Ki Hong

**Nitric Oxide and Superoxide: Endogenous
Mediators of DNA Damage** Steven R.
Tannenbaum

**The Biology and Pathogenesis of Prostate
Cancer** Maarten C. Bosland

Vitamin D and Cancer Michael B. Sporn

**Stromal-Epithelial (Paracrine) Influences on
Neoplasia** Gerald R. Cunha

Proteases and Carcinogenesis Lynn M.
Matrisian

**Strategies for Utilization of Tumor-specific
Antisense Molecules or Ribozymes for the
Control of Tumor Growth** Jack S. Cohen

**Biology and Genetics of Human Preneoplastic
Lesions** Walter N. Hittelman

**Human DNA and Protein Adduct Dosimetry:
Assessment of Risk for the Development of
Primary and Secondary Cancers** Regina M.
Santella

Biology and Treatment of Pediatric Cancer
Richard J. O'Reilly

Latest Advances in Tumor Suppressor Genes
Edward E. Harlow

Immunologic Approaches to Targeted Therapy
Ira Pastan

**Molecular Basis for the Modulation of
Radiation Sensitivity** W. Gillies McKenna

Gene Rearrangements in Cancer Stanley J.
Korsmeyer

Protein Phosphatases in Carcinogenesis Claude
B. Klee

**Protein Kinase C: Modulator of the Cancer
Phenotype and Target for Chemotherapy**
Peter M. Blumberg

**The EGF and FGF Receptor Superfamilies:
Recent Advances in Ligands, Receptors, and
Signal Transduction** Andrew Baird and
Michael Klagsbrun

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