

# New Medicines in Development for Cancer

Pharmaceutical Research and Manufacturers of America (PhRMA)

Drugs are listed alphabetically within disease category. Note: Selected agents have been chosen based on Phase III and IV status.

## 354 NEW WEAPONS ARE IN DEVELOPMENT FOR THE WAR ON CANCER

Can we declare victory in the war on cancer? “Wars are never won just like that – they’re a series of battles and skirmishes,” says cancer researcher Dr. Derek Raghavan of the University of California at Los Angeles. “If this were World War II, this would be 1943. We’re about three quarters of the way there.”

Pharmaceutical research, by developing formidable weapons against cancer, has played a key role in the progress against this disease. And a new survey found 354 additional medicines in development for cancer. The medicines include 63 for breast cancer, which strikes one out of every 10 American women; 58 for skin cancer including melanoma, the most serious form of skin cancer, whose incidence has grown 4 percent a year since the 1970s; 58 for lung cancer, the leading cause of cancer death in the US; and 46 for colon cancer, the second leading cancer killer of both men and women. These medicines in development should accelerate the progress that is already being made.

For the second year in a row, the Centers for Disease Control reported in 1999 that death rates from cancer are falling. Particularly notable are declining death rates from breast cancer, prostate cancer, lung cancer, colon cancer and leukemia. Better treatments, including more powerful and targeted prescription drugs, are a major factor in the decline.

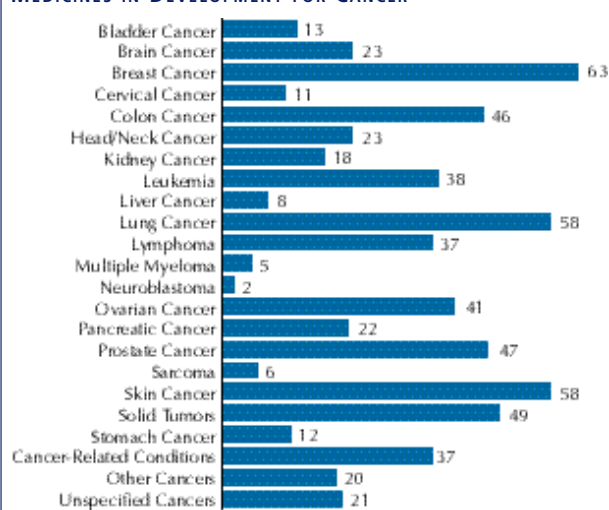
Scientists are expressing even more hope for the future, as researchers unravel the mystery of how cancer works.

“Cancer is no longer a black box. Pharmaceutical industry researchers have opened the box and are zeroing in on what makes cancer tick...and how to stop this disease in its tracks,” says Robert Kramer, PhD, pharmaceutical company researcher.

Building on the growing knowledge of how cancer works, pharmaceutical and biotechnology companies are working on a number of novel and promising ways to fight the disease. For example:

- At least a dozen drugs that strangle the blood vessels that feed tumors. Last year, Harvard University researchers made headlines by successfully shrinking tumors in mice by this method. Efforts to turn this experiment into a medicine for human cancer patients have proved difficult, but now there are clinical trials being conducted on various drugs that use this mechanism to fight multiple myeloma, lung cancer, prostate cancer, kidney cancer, melanoma and other cancers.
- A vaccine made from a patient’s own surgically removed colon tumor that is injected into the patient to

MEDICINES IN DEVELOPMENT FOR CANCER\*†



\*Some medicines are listed in more than one category.  
†Includes drugs in all phases of development.

boost the immune system to fight a recurrence of the cancer. According to a study published in *The Lancet*, a leading British medical journal, the vaccine reduced the five-year recurrence rate by 61 percent.

- A protein that may be able to inhibit the toxic effects of chemotherapy on non-cancerous cells, allowing doctors to give patients higher, more effective doses of anti-cancer drugs.

Despite all the progress made against cancer, it is still the second leading killer of Americans, surpassed only by heart disease. Cancer will claim an estimated 560,000 American lives this year. It costs \$107 billion annually. These daunting figures mean that we must escalate the war against cancer. In the words of Secretary of Health and Human Services Donna Shalala, “Our battle is far from over—we must keep fighting this disease with everything we’ve got.”

Pharmaceutical and biotechnology companies are investing billions of dollars to look for and develop new weapons against cancer. This commitment, coupled with the quickly growing knowledge of how the disease works, represents tangible hope of winning the war on cancer.

Alan F. Holmer  
President  
PhRMA

# New Medicines in Development for Cancer

Pharmaceutical Research and Manufacturers of America (PhRMA)

## BLADDER CANCER

Product Name	Company	Indication	Development Status
<b>BCI Immune Activator</b> modified keyhole limpet hemocyanin (KLH)	Intracel <i>Rockville, MD</i>		Phase III
eflornithine (DFMO)	ILEX Oncology <i>San Antonio, TX</i> National Cancer Institute <i>Bethesda, MD</i>	superficial bladder cancer	Phase III
<b>Gemzar®</b> gemcitabine	Eli Lilly <i>Indianapolis, IN</i>	(see also breast)	Phase III
<b>Radinyl®</b> ethanidazole	Roberts Pharmaceutical <i>Eatontown, NJ</i>	(see also lung, cancer/chemotherapy)	Phase III
<b>Valstar™</b> valrubicin	Anthra Pharmaceuticals <i>Princeton, NJ</i>	papillary bladder cancer (see also ovarian)	Phase III

## BRAIN CANCER

Product Name	Company	Indication	Development Status
<b>Gliadel Wafer</b> polifeprosen carmustine	Guilford Pharmaceuticals <i>Baltimore, MD</i> Rhone-Poulenc Rorer <i>Collegeville, PA</i>	primary malignant glioma at initial surgery	Phase III
mitalactol	Biopharmaceutics <i>Bellport, NY</i>	(see also cervical)	Phase III
<b>RMP-7™</b>	Alkermes <i>Cambridge, MA</i>	in patients with brain tumors to permeabilize the blood-brain barrier (in combination with carboplatin)	Phase III
RSR13	Allos Therapeutics <i>Denver, CO</i>	brain metastases, glioblastoma multiforme (see also lung)	Phase II
SU101	SUGEN <i>S. San Francisco, CA</i>	malignant glioma (see also lung, ovarian, prostate)	Phase III
<b>Temodal</b> temozolomide	Schering-Plough <i>Madison, NJ</i>	anaplastic astrocytoma, glioblastoma multiforme (see also skin, solid tumors)	application submitted
<b>RMP-7™</b>	Alkermes <i>Cambridge, MA</i>	in patients with brain tumors to permeabilize the blood-brain barrier (in combination with carboplatin)	Phase III
RSR13	Allos Therapeutics <i>Denver, CO</i>	brain metastases, glioblastoma multiforme	Phase II

## Pharmacy Practice

### BRAIN CANCER (continued)

Product Name	Company	Indication	Development Status
SU101	SUGEN <i>S. San Francisco, CA</i>	malignant glioma (see also lung, ovarian, prostate)	Phase III
<b>Temodal</b> temozolomide	Schering-Plough <i>Madison, NJ</i>	anaplastic astrocytoma, glioblastoma multiforme (see also skin, solid tumors)	application submitted

### BREAST CANCER

Product Name	Company	Indication	Development Status
<b>Arimidex</b> <sup>®</sup>	Zeneca Pharmaceuticals <i>Wilmington, DE</i>	first-line and adjuvant treatment	Phase III
<b>Aromasin</b> exemestane (aromatase inhibitor)	Pharmacia & Upjohn <i>Bridgewater, NJ</i>		Phase III/ application submitted
BMS-217380 (tesmilifene hydrochloride)	Bristol-Myers Squibb <i>Princeton, NJ</i>	(see also prostate)	Phase III
<b>Bondronate</b> ibandronate	Hoffmann-La Roche <i>Nutley, NJ</i>		Phase II/III
<b>DOXIL</b> <sup>®</sup> / <b>Caelyx</b> doxorubicin HCl Stealth <sup>®</sup> liposome injection	ALZA <i>Palo Alto, CA</i> Schering-Plough <i>Madison, NJ</i>	(see also ovarian)	Phase II/III
<b>Ethyol</b> <sup>®</sup> amifostine	U.S. Bioscience <i>W. Conshohocken, PA</i>	chemotherapy and radiation therapy protective agent to reduce toxicity (see also head/neck, lymphoma, skin)	Phase II/III
<b>EVACET</b> <sup>™</sup> liposomal doxorubicin	The Liposome Company <i>Princeton, NJ</i>	metastatic breast cancer	application submitted
<b>Evista</b> <sup>®</sup> raloxifene	Eli Lilly <i>Indianapolis, IN</i>	breast cancer prevention	Phase III
<b>Exisuland</b>	Cell Pathways <i>W. Conshohocken, PA</i>	prevention of recurrence of breast cancer (see also colon, lung, prostate, other)	Phase II/III
<b>Faslodex</b> <sup>®</sup>	AstraZeneca Pharmaceuticals <i>Wilmington, DE</i>		Phase III
<b>Femara</b> letrozole	Novartis Pharmaceuticals <i>East Hanover, NJ</i>		Phase III
<b>Gemzar</b> <sup>®</sup> gemcitabine	Eli Lilly <i>Indianapolis, IN</i>	(see also bladder)	Phase III
multitargeted antifolate	Eli Lilly <i>Indianapolis, IN</i>	(see also colon, lung)	Phase III
<b>Novantrone</b> <sup>®</sup> mitoxantrone	Immunex <i>Seattle, WA</i>	metastatic breast cancer (see also lymphoma, ovarian)	Phase II/III
<b>Oncolar</b> octreotide pamoate	Novartis Pharmaceuticals <i>East Hanover, NJ</i>		Phase III

## Pharmacy Practice

### BREAST CANCER (continued)

Product Name	Company	Indication	Development Status
<b>Panretin® Capsules</b> alitretinoin (LGD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	(see also leukemia, ovarian, prostate, skin, other)	Phase III
pure anti-estrogen	Schering-Plough <i>Madison, NJ</i>		Phase III
<b>Targretin® Capsules</b> bexarotene (LGD 1069)	Ligand Pharmaceuticals <i>San Diego, CA</i>	(see also head/neck, kidney, lung, lymphoma, ovarian, skin)	Phase III
<b>Theratope®</b> therapeutic vaccine	Biomira <i>Edmonton, Alberta</i> Chiron <i>Emeryville, CA</i>	metastatic breast cancer (see also colon, ovarian)	Phase III
<b>TriAb™</b> anti-idiotypic antibody	Titan Pharmaceuticals <i>S. San Francisco, CA</i>	metastatic breast cancer	Phase II/III
<b>Xeloda®</b> capecitabine in combination with <b>Taxol®</b>	Hoffmann-La Roche <i>Nutley, NJ</i>	(see also colon)	Phase III
MAb 17-1A	National Cancer Institute <i>Bethesda, MD</i> Glaxo Wellcome <i>Rsch. Triangle Park, NC</i>		Phase III N C I T R I A L
multitargeted antifolate	Eli Lilly <i>Indianapolis, IN</i>	(see also breast, lung)	Phase III
<b>Neutrexin™</b> trimetrexate glucuronate	U.S. Bioscience <i>W. Conshohocken, PA</i>	(see also breast, lung, prostate, stomach)	Phase III
<b>OncovAXCL®</b> autologous vaccine	Intracel <i>Rockville, MD</i>	stage II and III colon cancer	Phase III

### CERVICAL CANCER

Product Name	Company	Indication	Development Status
mitalactol	Biopharmaceutics <i>Bellport, NY</i>	(see also brain)	Phase III

### COLON CANCER

Product Name	Company	Indication	Development Status
<b>Camptosar</b> irinotecan	Pharmacia & Upjohn <i>Bridgewater, NJ</i>	first-line treatment (see also lung, lymphoma)	Phase III
<b>CeaVac™</b> anti-idiotypic antibody	Titan Pharmaceuticals <i>S. San Francisco, CA</i>	colorectal cancer-Dukes D	Phase II/III
<b>Eloxatin</b> oxaliplatin	Sanofi Pharmaceuticals <i>New York, NY</i>	colorectal cancer (primary and refractory) (see also ovarian)	Phase III

## Pharmacy Practice

### COLON CANCER (continued)

Product Name	Company	Indication	Development Status
<b>Exisuland</b>	Cell Pathways <i>W. Conshohocken, PA</i>	prevention of precancerous adenomatous polyps of the colon in patients with adenomatous polyposis coli (see also breast, lung, prostate, other)	Phase III
<b>Gastrimmune™</b> neutralize hormone G17	Aphton <i>Miami, FL</i>	colorectal cancer (see also liver, pancreatic, stomach)	Phase III
<b>HumASPECT®</b> 88BV59	Intracel <i>Rockville, MD</i>	monitoring of colon cancer (see also ovarian)	application submitted
<b>Panorex®</b> edrecolomab	Centocor <i>Malvern, PA</i> Glaxo Wellcome <i>Rsch. Triangle Park, NC</i>	adjunctive therapy for post-operative colon cancer	Phase III
recombinant interferon-beta-1a	Serono Laboratories <i>Norwell, MA</i>	colorectal cancer (see also lung)	Phase III
UFT/ORZEL	Bristol-Myers Squibb <i>Princeton, NJ</i>	colorectal cancer	application submitted
<b>Xeloda®</b> capecitabine	Hoffmann-La Roche <i>Nutley, NJ</i>	(see also breast)	Phase III

### HEAD/NECK CANCER

Product Name	Company	Indication	Development Status
Ad5CMV-p53 (adenovirus/p53)	Introgen Therapeutics <i>Austin, TX</i> Rhone-Poulenc Rorer <i>Collegeville, PA</i>	(see also lung)	Phase II completed
BUDR	National Cancer Institute <i>Bethesda, MD</i> Neopharm <i>Lake Forest, IL</i>	(see also bladder, cervical)	Phase III N C I T R I A L
C225, anti-EGFR chimeric MAb	Imclone Systems <i>Somerville, NJ</i>	(see also bladder, breast, colon, kidney, lung, ovarian, pancreatic, prostate, other)	Phase III
<b>Ethiol®</b> amifostine	U.S. Bioscience <i>W. Conshohocken, PA</i>	(see also breast, lymphoma, skin)	Phase III
<b>IntraDose™</b> <b>Injectable Gel</b> cisplatin/ epinephrine gel	Matrix Pharmaceutical <i>Fremont, CA</i>	squamous cell cancer (see also liver, solid tumors)	Phase III
<b>Photofrin®</b> porfimer sodium	QLT PhotoTherapeutics <i>Vancouver, British Columbia</i>	photodynamic therapy	Phase III
<b>Promycin™</b> porfiromycin	Boehringer Ingelheim Pharmaceuticals <i>Ridgefield, CT</i> Vion Pharmaceuticals <i>New Haven, CT</i>		Phase III

## Pharmacy Practice

### HEAD/NECK CANCER (continued)

Product Name	Company	Indication	Development Status
<b>Targretin® Capsules</b> bexarotene (LGD 1069)	Ligand Pharmaceuticals <i>San Diego, CA</i>	(see also breast, kidney, lung, lymphoma, ovarian, skin)	Phase III
<b>Taxotere®</b> docetaxel	Rhone-Poulenc Rorer <i>Collegeville, PA</i>	(see also lung, stomach)	Phase III

### KIDNEY CANCER

Product Name	Company	Indication	Development Status
<b>Catrix®</b>	Lescarden <i>New York, NY</i>	metastatic renal cell cancer	Phase II/III

### LEUKEMIA

Product Name	Company	Indication	Development Status
5-azacytidine	National Cancer Institute <i>Bethesda, MD</i>	myelodysplastic syndrome (MDS)	Phase II/III N C I T R I A L
<b>ATRAGEN®</b> tretinoin	Aronex Pharmaceuticals <i>The Woodlands, TX</i>	acute promyelocytic leukemia (APL) (see also bladder, kidney, lymphoma, prostate, skin)	application submitted
CMA 676	Wyeth-Ayerst Laboratories <i>Philadelphia, PA</i> Cell Tech <i>Slough, United Kingdom</i>	adult relapsed acute myelogenous leukemia (AML)	Phase II/III
homoharringtonine (HHT)	National Cancer Institute <i>Bethesda, MD</i> American Bioscience <i>Los Angeles, CA</i>	CML	Phase II/III N C I T R I A L
<b>Hycamtin®</b> topotecan	SmithKline Beecham <i>Philadelphia, PA</i>	MDS (see also colon, lung, ovarian)	Phase III
<b>Intron® A</b> interferon-alfa 2b (PEG-INTRON)	Enzon <i>Piscataway, NJ</i> Schering-Plough <i>Madison, NJ</i>	CML (see also skin, solid tumors)	Phase III
<b>Intron® A</b> interferon-alfa 2b in combination with Ara-C	Schering-Plough <i>Madison, NJ</i>	CML	application submitted
LDI-200	Milkhaus Laboratories <i>Boxford, MA</i>	MDS	Phase III
<b>Maxamine™</b> histamine dihydrochloride	Maxim Pharmaceuticals <i>San Diego, CA</i>	AML (see also kidney, skin)	Phase III
<b>Orapred</b> prednisolone sodium phosphate oral solution	Ascent Pediatrics <i>Wilmington, MA</i>	ALL (infants-adults)	application submitted

## Pharmacy Practice

### LEUKEMIA (continued)

Product Name	Company	Indication	Development Status
<b>Panretin® Capsules</b> alitretinoin (LGD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	(see also breast, ovarian, prostate, skin, other)	Phase III
<b>Proleukin®</b> aldesleukin, interleukin-2	Chiron <i>Emeryville, CA</i>	AML (see also lymphoma)	Phase III
<b>Rituxan®</b> rituximab	National Cancer Institute <i>Bethesda, MD</i> IDEC Pharmaceuticals <i>San Diego, CA</i>	(see also lymphoma)	Phase II/III N C I T R I A L
<b>SMART™ M195</b>	Protein Design Labs <i>Fremont, CA</i>	AML	Phase II/III

### LUNG CANCER

Product Name	Company	Indication	Development Status
13-cis-retinoic acid	National Cancer Institute <i>Bethesda, MD</i>	(see also prostate)	Phase II/III N C I T R I A L
AG3340	Agouron Pharmaceuticals <i>San Diego, CA</i>	non-small-cell lung cancer (NSCL) (see also prostate)	Phase III
BEC2, anti-idiotypic MAb	Imclone Systems <i>Somerville, NJ</i>	small-cell lung cancer (SCL) (see also skin)	Phase III
C225, anti-EGFR chimeric MAb	Imclone Systems <i>Somerville, NJ</i>	(see also bladder, breast, colon, head/neck, kidney, ovarian, pancreatic, prostate, other)	Phase III
<b>CEA-Scan®</b>	Immunomedics <i>Morris Plains, NJ</i>	(see also breast)	Phase III
<b>Hycamtin®</b> topotecan	SmithKline Beecham <i>Philadelphia, PA</i>	SCL (2nd-line treatment)	Phase III
multitargeted antifolate	Eli Lilly <i>Indianapolis, IN</i>	mesothelioma, NSCL (see also breast, colon)	Phase III
<b>NeoTect™</b> Tc-99m depreotide injection	Diatide <i>Londonderry, NH</i>	detection of lung cancer	application submitted
<b>Neovastat®</b> AE-941	AEterna Laboratories <i>Sainte-Foy, Quebec</i> National Cancer Institute <i>Bethesda, MD</i>	NSCL adjuvant treatment	Phase III
<b>ONCONASE®</b> ranpirnase	Alfacell <i>Bloomfield, NJ</i>	malignant mesothelioma (see also kidney)	Phase III
<b>Radinyl®</b> ethanidazole	Roberts Pharmaceutical <i>Eatontown, NJ</i>	(see also bladder, cancer/chemotherapy)	Phase III
recombinant interferon-beta-1a	Serono Laboratories <i>Norwell, MA</i>	NSCL (see also colon)	Phase III
SU5416	SUGEN <i>S. San Francisco, CA</i>	NSCL (see also skin, solid tumors)	Phase II/III

## Pharmacy Practice

### LUNG CANCER (continued)

Product Name	Company	Indication	Development Status
<b>Targretin® Capsules</b> bexarotene (LGD 1069)	<i>San Diego, CA</i>	Ligand Pharmaceuticals (see also breast, head/neck, kidney, lymphoma, ovarian, skin)	Phase III
<b>Taxotere®</b> docetaxel	Rhone-Poulenc Rorer <i>Collegeville, PA</i>	NSCL (see also head/neck, stomach)	application submitted
<b>Tirazone</b> tirapazamine	Sanofi Pharmaceuticals <i>New York, NY</i>	NSCL (see also breast, head/neck, pancreatic)	Phase III

### LYMPHOMA

Product Name	Company	Indication	Development Status
<b>Bexxar™</b> iodine I-131 tositumomab	Coulter Pharmaceutical <i>S. San Francisco, CA</i> SmithKline Beecham <i>Philadelphia, PA</i>	low-grade and transformed low-grade non-Hodgkin's lymphoma	Phase III
<b>DaunoXome</b> liposomal daunorubicin	NeXstar Pharmaceuticals <i>Boulder, CO</i>	non-Hodgkin's lymphoma (see also leukemia)	Phase II/III
DEC-In2B8	IDEC Pharmaceuticals <i>San Diego, CA</i>	non-Hodgkin's B-cell lymphoma	Phase III
IDEC-Y2B8	IDEC Pharmaceuticals <i>San Diego, CA</i>	non-Hodgkin's B-cell lymphoma	Phase III
<b>LymphoScan™</b>	Immunomedics <i>Morris Plains, NJ</i>	non-Hodgkin's B-cell lymphoma	Phase III
<b>Nipent®</b> pentostatin	SuperGen <i>San Ramon, CA</i>	cutaneous and peripheral lymphoma	application submitted
<b>Oncolym</b>	Techniclone <i>Tustin, CA</i> Schering AG <i>Germany</i>	intermediate to advanced non-Hodgkin's B-cell lymphoma	Phase II/III
<b>ONTAK™</b> denileukin diftitox (DAB 389 IL-2)	Seragen/ Ligand Pharmaceuticals <i>San Diego, CA</i>	cutaneous T-cell lymphoma, non-Hodgkin's lymphoma	application submitted
<b>Rituxan®</b> rituximab	National Cancer Institute <i>Bethesda, MD</i> IDEC Pharmaceuticals <i>San Diego, CA</i>	(see also leukemia)	Phase II/III N C I T R I A L
<b>Targretin® Capsules</b> bexarotene (LGD 1069)	<i>San Diego, CA</i>	Ligand Pharmaceuticals cutaneous T-cell lymphoma non-Hodgkin's lymphoma (see also breast, head/neck, kidney, lung, ovarian, skin)	Phase III
<b>Targretin® Gel</b> (topical) bexarotene (LGD 1069)	Ligand Pharmaceuticals <i>San Diego, CA</i>	cutaneous T-cell lymphoma (see also skin)	Phase III



## OVARIAN CANCER

Product Name	Company	Indication	Development Status
<b>DOXIL®/Caelyx</b> doxorubicin HCl Stealth® liposome injection	ALZA <i>Palo Alto, CA</i> Schering-Plough <i>Madison, NJ</i>	refractory ovarian cancer (see also breast)	application submitted
<b>Panretin® Capsules</b> alitretinoin (LCD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	(see also breast, leukemia, prostate, skin, other)	Phase III
<b>Valstar™</b> valrubicin	Anthra Pharmaceuticals <i>Princeton, NJ</i>	refractory ovarian cancer (see also bladder)	Phase III

## PANCREATIC CANCER

Product Name	Company	Indication	Development Status
776C85 5-fluorouracil (FU) enhancer	Glaxo Wellcome <i>Rsch. Triangle Park, NC</i>	(see also breast, colon)	Phase III
<b>Camptogen</b> rubitecan (RFS 2000, 9-nitro- camptothecin)	SuperGen <i>San Ramon, CA</i>	(see also brain, breast, cervical, colon, head/neck, leukemia, liver, lung, lymphoma, ovarian, prostate, skin, stomach, other)	Phase III
<b>Gastrimmune™</b> neutralize hormone G17	Aphton <i>Miami, FL</i>	(see also colon, liver, stomach)	Phase III
<b>Mitoextra™</b> mitomycin	SuperGen <i>San Ramon, CA</i>	(see also stomach)	application submitted

## PROSTATE CANCER

Product Name	Company	Indication	Development Status
13-cis-retinoic acid	National Cancer Institute <i>Bethesda, MD</i>	(see also lung)	Phase II/III N C I T R I A L
AG3340	Agouron Pharmaceuticals <i>San Diego, CA</i>	hormone refractory prostate cancer (see also lung)	Phase III
APC 8015	Dendreon <i>Seattle, WA</i>		Phase II completed
BMS-217380 (tesmilifene hydrochloride)	Bristol-Myers Squibb <i>Princeton, NJ</i>	(see also breast)	Phase III
CI-1003 (suramin)	Warner-Lambert <i>Morris Plains, NJ</i>		application submitted
<b>DUROS™</b> leuprolide	ALZA <i>Palo Alto, CA</i> Cor Therapeutics <i>Palo Alto, CA</i>	palliative treatment of advanced prostate cancer	Phase III
<b>Exisuland</b>	Cell Pathways <i>W. Conshohocken, PA</i>	prevention of recurrence of prostate cancer (see also breast, colon, lung, other)	Phase II/III

## Pharmacy Practice

### PROSTATE CANCER (continued)

Product Name	Company	Indication	Development Status
<b>Panretin® Capsules</b> alitretinoin (LGD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	(see also breast, leukemia, ovarian, skin, other)	Phase III
RL 0903	Roberts Pharmaceutical <i>Eatontown, NJ</i>		Phase III

### SKIN CANCER

Product Name	Company	Indication	Development Status
<b>Allovetin-7</b> HLA-B7 plasmid DNA/lipid complex	Vical <i>San Diego, CA</i>	metastatic melanoma (see also head/neck)	Phase III
BMS 248479 (GMK vaccine)	Bristol-Myers Squibb <i>Princeton, NJ</i>	melanoma	Phase III
GMK vaccine (therapeutic)	Progenics Pharmaceuticals <i>Tarrytown, NY</i>	melanoma	Phase III
<b>Intron® A</b> interferon-alfa 2b (PEG-INTRON)	Enzon <i>Piscataway, NJ</i> Schering-Plough <i>Madison, NJ</i>	malignant melanoma (see also leukemia, solid tumors)	Phase III
<b>Levulan® PD</b>	DUSA Pharmaceuticals <i>Valhalla, NY</i>	actinic keratoses (see also bladder)	application submitted
<b>Maxamine™</b> histamine dihydrochloride	Maxim Pharmaceuticals <i>San Diego, CA</i>	metastatic melanoma (see also kidney, leukemia)	Phase III
<b>Melacine™</b> melanoma theraccine	Ribi ImmunoChem <i>Hamilton, MT</i> Schering-Plough <i>Madison, NJ</i>	disseminated stage IV melanoma	Phase III completed
	Ribi ImmunoChem <i>Hamilton, MT</i> Schering-Plough <i>Madison, NJ</i> Southwest Oncology Group <i>Houston, TX</i>	adjuvant therapy after surgical resection of stage II melanoma	Phase III
<b>Melacine™</b> melanoma theraccine and <b>Intron® A</b> interferon alfa-2b	Ribi ImmunoChem <i>Hamilton, MT</i> Schering-Plough <i>Madison, NJ</i>	combination therapy of disseminated melanoma (stage IV disease)	Phase III
<b>Panretin® Capsules</b> alitretinoin (LGD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	Kaposi's sarcoma (see also breast, leukemia, ovarian, prostate, other)	Phase III
<b>Panretin® Gel</b> (topical) alitretinoin (LGD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	cutaneous Kaposi's sarcoma	application submitted

## Pharmacy Practice

### SKIN CANCER (continued)

Product Name	Company	Indication	Development Status
<b>Roferon®-A</b> interferon alfa-2a, recombinant	Hoffmann-La Roche <i>Nutley, NJ</i>	malignant melanoma	application submitted
<b>Solarase™</b> diclofenac gel, 3%	Hyal Pharmaceutical <i>Mississauga, Ontario</i>	actinic keratosis	application submitted
SU5416	SUGEN <i>S. San Francisco, CA</i>	Kaposi's sarcoma (see also lung, solid tumors)	Phase II/III
<b>T4N5 Liposome Lotion</b> T4 endonuclease V encapsulated in liposomes	Applied Genetics <i>Freeport, NY</i>	treatment of photosensitivity to ultraviolet rays in patients with xeroderma pigmentosa	Phase III
<b>Targretin® Capsules</b> bexarotene (LGD 1069)	Ligand Pharmaceuticals <i>San Diego, CA</i>	Kaposi's sarcoma (see also breast, head/neck, kidney, lung, lymphoma, ovarian)	Phase III
<b>Targretin® Gel</b> (topical) bexarotene (LGD 1069)	Ligand Pharmaceuticals <i>San Diego, CA</i>	actinic keratosis (see also lymphoma)	Phase III
<b>Temodal</b> temozolomide	Schering-Plough <i>Madison, NJ</i>	malignant melanoma (see also brain, solid tumors)	application submitted
tumor necrosis factor-alpha	National Cancer Institute <i>Bethesda, MD</i> Boehringer Ingelheim Pharmaceuticals <i>Ridgefield, CT</i>	melanoma	Phase III N C I T R I A L

### SOLID TUMORS

Product Name	Company	Indication	Development Status
<b>IntraDose™</b> <b>Injectable Gel</b> cisplatin/ epinephrine gel	Matrix Pharmaceutical <i>Fremont, CA</i>	accessible tumors (see also head/neck, liver)	Phase III
SU5416	SUGEN <i>S. San Francisco, CA</i>	(see also lung, skin)	Phase II/III

### STOMACH CANCER

Product Name	Company	Indication	Development Status
<b>Gastrimmune™</b> neutralize hormone G17	Aphton <i>Miami, FL</i>	(see also colon, liver, pancreatic)	Phase III
<b>Taxotere®</b> docetaxel	Rhone-Poulenc Rorer <i>Collegetown, PA</i>	gastric cancer (see also head/neck, lung)	Phase III

## Pharmacy Practice

### CANCER/CHEMOTHERAPY-RELATED CONDITIONS

Product Name	Company	Indication	Development Status
<b>Bonefos</b> <sup>®</sup> clodronate tetrahydrate	Anthra Pharmaceuticals <i>Princeton, NJ</i>	hypercalcemia of malignancy	Phase III
<b>Dirame</b> propiram fumarate	Roberts Pharmaceutical <i>Eatontown, NJ</i>	cancer pain	Phase III
<b>Emitasol</b> <sup>®</sup> metoclopramide (intranasal spray)	RiboGene <i>Hayward, CA</i> Roberts Pharmaceutical <i>Eatontown, NJ</i>	acute and delayed emesis in patients undergoing chemotherapy	Phase III
gadolinium- texaphryn for XRT	Pharmacyclics <i>Sunnyvale, CA</i>	radiosensitizer for cancer radiotherapy	Phase III
<b>Isolex</b> <sup>®</sup> 300 magnetic cell selection system	Nexell Therapeutics <i>Irvine, CA</i>	autologous stem cell transplant following high-dose chemotherapy	application submitted
itasetron B emesis (Amp)	Boehringer Ingelheim Pharmaceuticals <i>Ridgefield, CT</i>	emesis	Phase III
itasetron B emesis (Tab)	Boehringer Ingelheim Pharmaceuticals <i>Ridgefield, CT</i>	emesis	Phase III
leridistim	Searle (Monsanto) <i>Skokie, IL</i>	prevention of chemotherapy- induced neutropenia	Phase III
<b>Leukine</b> <sup>®</sup> sargramostim	Immunex	chemotherapy-induced neutropenia in all tumors (see also skin)	application submitted
<b>LSF</b> <sup>™</sup> lisofylline	Cell Therapeutics <i>Seattle, WA</i>	reduce infections, mucositis and mortality resulting from high-dose chemotherapy or radiation	Phase III
<b>NYOTRAN</b> <sup>®</sup> nystatin (IV)	Aronex Pharmaceuticals <i>The Woodlands, TX</i>	presumed fungal infections and identified systemic fungal infections caused by candida and aspergillus in patients undergoing chemotherapy	Phase III completed
<b>Radinyl</b> <sup>®</sup> ethanidazole	Roberts Pharmaceutical <i>Eatontown, NJ</i>	chemosensitizer, radiosensitizer (see also bladder, lung)	Phase III
SNX-111	Elan Pharmaceuticals <i>S. San Francisco, CA</i>	cancer pain	application submitted
SR29142 urate oxidase	Sanofi Pharmaceuticals <i>New York, NY</i>	reduction of uric acid levels associated with chemotherapy	Phase III
stem cell factor	Amgen <i>Thousand Oaks, CA</i>	adjunct to chemotherapy	application submitted
<b>Tantum</b> <sup>®</sup> benzydamine hydrochloride	Angelini Pharmaceuticals <i>River Edge, NJ</i>	radiation oral mucositis	Phase III completed

## Pharmacy Practice

### CANCER/CHEMOTHERAPY-RELATED CONDITIONS (continued)

Product Name	Company	Indication	Development Status
<b>Zinecard</b> <sup>®</sup> dexrazoxane	National Cancer Institute <i>Bethesda, MD</i> Pharmacia & Upjohn <i>Bridgewater, NJ</i>	prevention of cardiotoxicity induced by chemotherapy in leukemia and lymphoma patients	Phase III N C I T R I A L
zoledronate	Novartis Pharmaceuticals <i>East Hanover, NJ</i>	tumor-induced hypercalcemia (see also other)	Phase III

### OTHER CANCERS

Product Name	Company	Indication	Development Status
<b>Amdray</b> valsopodar	Novartis Pharmaceuticals <i>East Hanover, NJ</i>	multi-drug resistance	Phase III
celecoxib	Searle (Monsanto) <i>Skokie, IL</i>	familial adenomatous polyposis	Phase III
<b>Detox</b> <sup>™</sup>	Ribi ImmunoChem <i>Hamilton, MT</i>	adjuvant with Melacine <sup>®</sup> melanoma theraccine and Theratope <sup>®</sup> cancer vaccine	Phase III
<b>Panretin</b> <sup>®</sup> Capsules alitretinoin (LGD 1057)	Ligand Pharmaceuticals <i>San Diego, CA</i>	bronchial metaplasia (reversal), pediatric cancers (see also breast, leukemia, ovarian, prostate, skin)	Phase III
zoledronate	Novartis Pharmaceuticals <i>East Hanover, NJ</i>	treatment and prevention of bone metastases (see also cancer/chemotherapy)	Phase III

### UNSPECIFIED CANCERS (DRUGS THAT HAVE POTENTIAL FOR ONE OR MORE OF THE PREVIOUS CANCERS)

Product Name	Company	Indication	Development Status
BAY 12-9566	Bayer, Pharmaceutical Division <i>West Haven, CT</i>		Phase III
<b>Taxol</b> <sup>®</sup> paclitaxel	Bristol-Myers Squibb <i>Princeton, NJ</i>		Phase III

The content of this survey has been obtained through government and industry sources based on the latest information. Survey current as of **April 30, 1999**. The information may not be comprehensive. For more specific information about a particular product, contact the individual company directly. The entire series of *New Medicines in Development* is available on PhRMA's web site.

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