

Approval of Two Colon Cancer Therapies Triggers Debate on Trials, Reimbursement

For nearly 40 years, oncologists treated colorectal cancer with 5-fluorouracil, debating dosages, schedules, and the role of leucovorin in its administration.

Options in gastrointestinal oncology broadened in 1996, with the introduction of Camptosar (irinotecan), followed by the oral 5-FU pro-drug Xeloda (capecitabine) in 2000, and Eloxatin (oxaliplatin) in 2002.

Then, last month, came a windfall: FDA approved the monoclonal antibodies Avastin (bevacizumab) and Erbitux (cetuximab).

Illustrating the impact of the new abundance of treatments in his once
(Continued to page 2)

In Brief:

Hunter, DuBois Win AACR Landon Prizes; Spriggs Heads Solid Tumor Onc at MSKCC

AMERICAN ASSOCIATION for Cancer Research announced the 2004 recipients of the Landon prizes. **Tony Hunter**, professor of molecular and cell biology at The Salk Institute for Biological Studies is the winner of the Kirk A. Landon Prize for Basic Cancer Research. Hunter is recognized for his work on anti-cancer drugs that block the activity of tyrosine kinases. **Raymond DuBois**, the Hortense B. Ingram Professor of Molecular Oncology and associate director for cancer prevention, control and population-based research at Vanderbilt-Ingram Cancer Center, is the recipient of the Dorothy P. Landon Prize for Translational Cancer Research for his research on the COX-2 enzyme. Each will receive an unrestricted cash award of \$200,000, and present a scientific lecture at the AACR annual meeting later this month in Orlando. . . . **DAVID SPRIGGS**, known for his work on the genetic regulation of drug resistance and chemotherapy regimens for gynecologic cancers, was appointed head of the Division of Solid Tumor Oncology in the Department of Medicine at Memorial Sloan-Kettering Cancer Center. Spriggs joined the center in 1993 as chief of developmental chemotherapy and was named to the Winthrop Rockefeller Chair in Medical Oncology in 2001. "This an opportunity to enhance interactions with the translational research scientists at the Sloan-Kettering Institute across the street," said Spriggs. "I view my job as building half of the bridge while my Sloan-Kettering Institute colleagues are working to build their half. MSKCC has made a major commitment to translational research; however, the details of how each of us will define translational research will vary. I believe this will make for a healthy dynamic between clinicians and researchers." . . . **AGUSTIN**
(Continued to page 8)

Colorectal Cancer: Three More Drugs On the Horizon

. . . Page 2

U.S. Cost for Avastin Could Total \$3.2 Billion; For Erbitux, \$400 Million

. . . Page 3

Research Strategies In Colorectal Cancer Starting To Emerge

. . . Page 5

Funding Opportunities: Breast Cancer, Pancreatic Cancer Grants Available; NCI PAs Listed

. . . Page 7

Two New Agents Cause Shift In Colon Cancer Therapy, Trials

(Continued from page 1)

fallow field, Richard Goldberg, chief of the Division of Hematology and Oncology and associate director of the University of North Carolina Lineberger Comprehensive Cancer Center, notes that these treatments can be combined in as many as 48 different regimens.

Pondering this influx of therapies, many oncologists sound as elated as the jackpot winners in a state lottery.

"It's fantastic. We've gone from famine to feast," said Kenneth Foon, co-director of the biological therapeutics and hematologic malignancies programs at the University of Pittsburgh Cancer Institute and former medical director at Abgenix Inc., a company involved in development of a next-generation colorectal cancer therapy in a partnership with Amgen Inc. "We literally went from seven or eight months of survival in these patients, and within 10 years have gone up to over 21 months of median survival. If we could only see this in other diseases..."

While famines are hard to live through, feasts present challenges of a different sort. These days, doctors are adjusting to a shift in the entire range of colorectal cancer therapies, from adjuvant to second-line metastatic.

Theirs is not an isolated pursuit of the scientific truth. The shift occurs at a time when polarization

and politicization in cancer research has reached new heights, as NCI is planning to change the way it conducts clinical research, as part of Director Andrew von Eschenbach's stated goal of "eliminating suffering and death from cancer" by the year 2015.

"The bottom line is that we now have a unique and promising opportunity to study how best to move the field forward through clinical trials," said Michael O'Connell, chairman of the GI Intergroup Executive Committee, associate chairman of the National Surgical Adjuvant Breast and Bowel Project, and former chairman of the North Central Cancer Treatment Group. "That will require resources, collaboration on the part of investigators, and support from practicing oncologists and patients."

What should the next generation of colorectal cancer trials look like? Will there be enough patients willing to enroll in studies to answer research questions at a time when new therapies are available on the market?

Oncologists will have to be careful about posing scientific questions, Goldberg said. "We don't have endless patients, and, hopefully, in the next few years we are going to have Drug Seven, and Eight, and Nine," he said.

Indeed, the pipelines aren't running dry, as Novartis, Merck KGaA, and Amgen are conducting clinical trials of colorectal cancer therapies that could increase the number of available choices to nine. If all these agents reach the market, the new colorectal cancer armamentarium would include 384 possible combinations.

"The irony here is that in order to answer the question of 'Which drugs? In which combinations? In which order?' we may be overwhelming the clinical trials network with too many simultaneous, large phase III trials vying for a limited number of protocol-eligible, protocol-interested patients," said Mace Rothenberg, a medical oncologist at the Vanderbilt-Ingram Cancer Center.

"Without a substantial influx of resources and commitment, each may suffer from slow accrual, and the answers to these questions will be delayed," Rothenberg said. "The longer they are delayed, the longer we are going to wallow in our uncertainty and ignorance about how best to use these drugs. The bottom line is that it's going to end up costing society more, because people are bound to use these drugs in inefficient and arbitrary ways. It's not going to be a cost-efficient way of addressing these issues."

Last year, the Centers for Medicare and Medicaid



Editor & Publisher: Kirsten Boyd Goldberg

Editor: Paul Goldberg

Editorial Assistant: Shelley Whitmore Wolfe

Editorial: 202-362-1809 **Fax:** 202-318-4030

PO Box 9905, Washington DC 20016

E-mail: news@cancerletter.com

Customer Service: 800-513-7042

PO Box 40724, Nashville TN 37204-0724

E-mail: info@cancerletter.com

Subscription \$315 per year worldwide. ISSN 0096-3917. Published 46 times a year by The Cancer Letter Inc. Other than "fair use" as specified by U.S. copyright law, none of the content of this publication may be reproduced, stored in a retrieval system, or transmitted in any form (electronic, photocopying, or facsimile) without prior written permission of the publisher. Violators risk criminal penalties and damages. Founded Dec. 21, 1973, by Jerry D. Boyd.

Services initiated a “national coverage determination” of uses of irinotecan and oxaliplatin. If the decision comes out negative for these drugs, Medicare contractors would be prohibited to reimburse their use. Materials related to the CMS procedure are posted at www.cms.hhs.gov/mcd/viewtrackingsheet.asp?id=90.

Though the CMS process has been put on hold, the emergence of new, expensive treatments that are likely to be used with irinotecan and oxaliplatin invites renewed scrutiny from the agency.

Avastin is sold at about \$4,400 a month, Genentech said. With median progression-free survival of 10.5 months, the cost of the drug alone would add up to \$46,200 per case.

If the agent is used in front-line metastatic disease, about 70,000 U.S. patients a year would be candidates for treatment, and if all of them are treated, the cost of the drug alone would add up to over \$3.2 billion.

Now, consider Erbitux. The drug for the initial treatment costs about \$4,000, with follow-up treatments adding up to \$2,000 per month. With patients staying on the therapy for a median of 4.1 months, the cost per case would be around \$10,000. With roughly 40,000 Americans a year receiving second-line treatment, the cost of the drug alone could be as high as \$400 million.

The bill could get much higher if scientists determine that either Avastin or Erbitux increase cure rates in adjuvant therapy. “At the current time, there is no indication for the use of either Avastin or Erbitux in the adjuvant setting,” O’Connell said. “Neither the benefits nor the long term toxicities are known, and these need to be determined in clinical trials.”

With CMS expanding to cover prescription drugs, and with the economist and physician Mark McClellan moving from his job as FDA Commissioner to lead the Medicare and Medicaid programs, the agency would have the leadership and the mandate to make difficult decisions.

“This is going to be one of Dr. McClellan’s greatest challenges,” Rothenberg said. “How are they going to be able to cover this sudden substantial increase in the cost of drugs for colorectal cancer?”

Rothenberg said the Avastin approval opens a debate over limitations of information on the FDA label.

“One of the interesting things about the label indications for Avastin is that it is worded very broadly, which I am sure Genentech is very pleased with,” he said. “It’s to be used in combination with 5-FU based chemotherapy. It can be 5-FU alone. It can be

IFL, FOLFIRI, FOLFOX. However, the pivotal data were based on its use in combination with IFL, with supporting data on its use with 5-FU/leucovorin. There is really no data that’s out yet about the drug being combined with FOLFIRI or with FOLFOX.

“Speaking with some of my colleagues, that’s not going to stop them from integrating that into their standard treatment of patients, whatever the regimen,” Rothenberg said. “I feel less comfortable with that, because I don’t think we have clear and compelling data yet to show that the addition of Avastin to those other regimens adds as much to those as it does to IFL or 5-FU alone.

“I think CMS is going to be faced with the situation where they are going to have to decide whether—at least for Avastin—they will elect to reimburse based on a more narrow indication than FDA has done on the labeled indication,” Rothenberg said.

The Treatment Decisions

“When a major treatment advance—something that shifts the treatment paradigm significantly—comes along, sometimes it is clear what everybody should do, but usually it takes a long time to digest it,” said Richard Kaplan, chief of the Clinical Investigations Branch of the NCI Cancer Therapy Evaluation Program.

“Even a wildly positive result opens a lot of scientific questions about where it fits into the overall treatment portfolio,” said Kaplan, who is leaving NCI to become associate director of the UK National Cancer Research Network.

“It raises questions about extrapolating that result to slightly different settings,” Kaplan said. “And it takes a certain period of time—up to a year or more—for the scientific community to thoroughly debate the interpretation of, and gaps in, the data, and decide where its consensus will settle out on these issues.”

Years of discussions could be required for perspective to emerge, Kaplan said. “It takes a lot of collective arguing to accomplish this, unless more new data come along,” he said.

The new therapies are likely to have a profound effect survival, Kaplan said. “In advanced disease, we now have such a seemingly promising stable of agents to work with, that I think we are going to start to see some tail on the survival curves of advanced disease patients,” he said. “We are already seeing patients that we render surgically resectable, who in the past would not have been. We know that some of these patients become long-term survivors. That is a watershed difference from where we were 10 years ago. I think we are going to

see, one of these days, for the first time, patients who don't get resected who have such a good response to chemotherapy that it is durable three or four years out.

"That will change the perspective of the field," Kaplan said.

A physician's choice of therapy can be straightforward, Foon said. "The bottom line to me is that you want the therapy that would lead to the greatest survival benefit for the frontline therapy," he said.

The criteria for making a treatment decision haven't changed, agrees Richard Pazdur, director of the FDA Division of Oncology Drug Products.

"Not all the drugs are equal," Pazdur said. "Some are more equal than others. Although we have six agents, these drugs are at different levels of development, used in different settings in colorectal cancer, and have different toxicity profiles.

"The practicing physician has usually asked what is 'the best' available combination or single agent for a particular disease setting and what is the basis for making the decision. Provided an acceptable safety profile, the demonstration of 'the best' survival trumps all other endpoints in a specific disease setting.

"Do we have a clear winner in the first-line setting?"

"There are well-known dangers in cross-study comparisons, but we frequently must make clinical decisions on a less than perfect data base," Pazdur said. "Avastin in combination with IFL had a median survival of 20.3 months, response rate of 45%, and a progression-free survival of 10.6 months.

"The registration trial of infusional 5-FU plus oxaliplatin had a median survival of 19.4 months, response rate of 45%, and TTP of 8.7 months was noted. Toxicity differences and perceived patient convenience may play a role, if the efficacy differences are not obvious," he said.

In many cases, clinical evaluation of the patients will dictate treatment choices, O'Connell said.

"For example, patients with diabetic neuropathy would not be good candidates for oxaliplatin, and those with uncontrolled hypertension or bleeding problems would not be good candidates for Avastin," he said. "Single-agent capecitabine might be a good choice for an elderly, frail patient with indolent disease who would like to avoid toxicities associated with combination chemotherapy and central venous catheters. We need to avoid a 'cookbook' approach in favor of good clinical judgment."

GI oncologists shouldn't devote resources to finding small differences to establish a "gold standard,"

experts say.

"Perhaps a better use of resources would aim at moving the field forward," O'Connell said. "Avastin combined with oxaliplatin and infusional 5-FU—attempting to capitalize on each treatment's survival increment—is an obvious focus for future trials."

Even if resources weren't limited, it may not be possible to tease out the optimal regimen. "Since patients will receive most drugs in differing sequences, survival analyses may be increasingly confounded," Pazdur said. "The physician's selection of an adjuvant therapy will set a cascade of subsequent decisions for the patient.

"For example, if an oncologist selects infusional 5-FU plus oxaliplatin as adjuvant therapy, based on an improvement in disease-free survival reported at ASCO, then a logical first-line metastatic therapy would be IFL plus Avastin, followed by Erbitux plus irinotecan at disease progression," Pazdur said.

"This could change with the choice of initial therapy in the adjuvant setting."

The Question of 5-FU

Since many of the new therapies are given with 5-FU, the question of the agent's role is far from moot, experts said.

One of the questions appears to have been settled over the past couple of years, as clinical trials showed that the bolus method of administration of 5-FU, which was favored by U.S. oncologists, is associated with greater toxicity than the infusion method used by European doctors.

"At some point, the question will be legitimately asked whether 5-FU can be eliminated," Kaplan said. "But I don't think it's a proximate question. We know it's important with oxaliplatin. We suspect it's less important with irinotecan. We think it's important, probably, with Avastin. We think it's important with Erbitux, to a certain extent."

Now, the 5-FU question revolves around the role of the Hoffmann LaRoche drug Xeloda, the oral version of the agent.

Goldberg said he can't justify giving Xeloda instead of infusional 5-FU. "Some people are making all kinds of leaps of faith," Goldberg said. "Is that necessarily bad? Well, we all love evidence-based medicine, but the evidence-based medicine machine is a ponderous one. Oncologists make choices in different ways. For someone like me, who worships at the altar of evidence-based medicine, making a change in my practice is most comfortable when I have data from phase III studies on which to base my decision."

The toxicity of Xeloda makes this treatment decision easier, Goldberg said.

"Xeloda, despite being cloaked in sheep's clothing, can be a wolf, in that it has the potential to be quite toxic," he said. "It isn't always an easy drug to give. I think 5-FU by short-term infusion doesn't have a lot of toxicity. It's a little more inconvenient, but mouth sores and hand-and-foot syndrome are also inconvenient."

The emergence of new therapies makes the Xeloda question more relevant, Kaplan said.

"Everybody wants Xeloda to be equivalent, but so far it's only wishful thinking," he said. "When we were comparing Xeloda to 5-FU alone for advanced disease, Xeloda appeared to be equivalent. But now that the stakes are higher, where we are using combinations that are more effective, and where we are using adjuvant therapy which is more effective than 5-FU alone, then we don't know under those circumstances whether the substitution of Xeloda is really preserving all of the efficacy of 5-FU."

"It may require extracting this answer from a series of studies that are asking other questions simultaneously."

It may be impossible to demonstrate non-inferiority of 5-FU to Xeloda, Pazdur said. "Non-inferiority trials gobble-up huge resources and do not lead to the advances that we must make in this field," he said. "We frequently cannot perform these trials due to the lack of precision regarding the 'treatment effect' that is needed to be preserved."

"Because of the crossover in trials at the time of disease progression, a non-inferiority survival analysis may be uninterpretable," Pazdur said. "Let's not devote substantial resources to the preservation of small differences. Let's move on."

Octopus, "Monopus," Dinosaur

The clinical research strategy in colorectal cancer is starting to emerge, O'Connell said.

"From my point of view, the most important question to be asked relates to whether the improvements seen in palliative therapy of advanced colorectal cancer can translate to an improvement in cure rates when used in the surgical adjuvant setting," he said.

Cooperative group studies underway and in late planning stages include:

--An NSABP trial that will evaluate whether the addition of Avastin for a year to a modified FOLFOX6 regimen will improve long-term outcome, compared to the same chemotherapy regimen given for six months in patients with stage II and III colon cancer.

--An Intergroup trial coordinated by Eastern Cooperative Oncology Group will evaluate the addition of Avastin to 5-FU/LV for patients with high-risk stage II disease.

--An Intergroup study coordinated by NCCTG will evaluate the use of multiple active agents (FOLFOX followed by FOLFIRI, compared to FOLFOX alone or FOLFIRI alone), based on the observation that patients with advanced disease who receive multiple active agents appear to have the longest survival.

--Another Intergroup study, coordinated by Cancer and Leukemia Group B, will compare FOLFOX vs. FOLFIRI with and without Erbitux in first-line metastatic disease. It will be evaluated by the National Clinical Trials Group of Canada, compared to best supportive care in third-line treatment of metastatic disease, and may be incorporated into the NCCTG-led colon Intergroup trial in a 3X2 factorial design, O'Connell said.

--The Southwest Oncology Group is planning a phase III study comparing FOLFOX and CAPOX with or without Avastin in locally advanced, metastatic or recurrent colorectal cancer.

"The most important question in advanced colorectal cancer is how to evaluate and incorporate the many new agents being developed by the pharmaceutical industry," O'Connell said. "I favor a sequential phase III screening design, in which several promising therapies are compared initially with predefined efficacy targets (e.g. progression-free survival at one year), leading to continuation of accrual to the most promising regimens to reach a definitive conclusion."

"This could most efficiently be accomplished by a coordinated effort among the cooperative groups working on a common agenda," O'Connell said.

Debates about future trials turn on the philosophy of clinical trials. Should trials attempt to answer a series of questions about a variety of therapies? Or should they focus on simple questions?

In colorectal cancer, debates of this nature by necessity revolve around the just-completed NCCTG trial 9741. Dubbed "5C," or "the octopus," the trial compared five colorectal cancer regimens that were regarded as promising during the study's design phases in 1997 through 1999.

The study changed with the times, adding and dropping arms, making unplanned modifications.

"It became 5C, then 3C, then 2C, then 1C," said Goldberg, who was the principal investigator of the trial. "It had a total of seven different arms during its lifetime, and ended up as a one-arm study in order to permit

compassionate access for patients to get oxaliplatin till the drug was approved. So, while it started as an octopus, it ended up a monopus.”

The octopus approach would fit the rapidly changing environment of colorectal cancer treatment, Goldberg said. “I found the design powerful,” he said. “It was also painful.”

FDA’s Pazdur is less impressed with the roll-with-the-punches approach of 5C.

“Large, multi-arm ‘octopus’ studies may actually be dinosaurs,” he said. “I do not favor our past attempts to do huge, complicated studies which may be out of date before they are initiated.”

“This is especially important since the field is relatively dynamic, with multiple drugs and combinations being concurrently investigated. Subsequent trial results can render an ongoing trial obsolete,” Pazdur said.

“The seven-arm trial conducted by NCCTG had four arms closed due to either changes in the standard of care, toxicity, or simplification. These unplanned mid-course corrections should be avoided.

“I favor simple superiority trials answering a question with certainty,” Pazdur said. “They are easier for patients to understand and give real informed consent. They are usually easier to obtain consensus among individual investigators who are interested in answering the posed question.

“Less is more,” Pazdur said.

Acknowledging that a simpler design is better, Rothenberg said 5C was nonetheless a landmark trial.

“It showed how the cooperative group system can respond to changes in standards of care, how it can rapidly monitor toxicities, identify them, and take corrective action both in closing arms that were considered to be too toxic, adjusting the doses of drugs that were considered to be given at too high a dose, and rapidly reporting important survival differences identified through a planned interim analysis,” Rothenberg said. “This has really shaped the way we treat colorectal cancer, and will continue to do so for the foreseeable future.

“In this rapidly changing environment, you have to be able to be flexible and responsive to change to be able to incorporate it into your clinical trial design, or you are going to have a wonderful trial that no one will enter patients in,” Rothenberg said.

Competition for patients could end up improving the trials, as researchers become more selective about questions they ask, Pazdur said.

“Are we giving the patients and participating physicians trials that provide access to agents they want

and questions they deem important, or are we simply conducting ‘business as usual,’ comparing one mundane regimen to another?” Pazdur said.

“Rather than simply adding one active agent to another, perhaps drug combinations should have a greater degree of a biological rationale than simply stating, ‘If A works, let’s add it to B.’”

The Costs and the Patients

Competition for patient accrual in colorectal cancer trials is likely to become increasingly intense, experts say.

“We have an unprecedented number of phase III trials for the same group of patients,” Rothenberg said. “I don’t really anticipate that we are going to see a doubling or tripling of the accrual of patients onto clinical trials. So, what you are going to see is more trials vying for a limited number of patients.

“As a result, it would not surprise me if one or two of these so-called pivotal trials actually fail to reach their accrual goals and have to close without getting answers, just because there are so many competing studies now in the same group of patients,” he said.

In fact, success may create a backlash, Rothenberg said.

“With these drugs out now, the backlash may be that fewer patients will accrue to clinical trials over the next year, because these hot new drugs are now in the community,” he said. “If somebody reimburses for them, and the community physicians would be giving them, that would mean fewer patients being referred to clinical trials, especially the newly-diagnosed patients.”

Yet, a multitude of trials would be required, Pazdur said.

“There are trials that may be ideal for cooperative groups to perform,” he said. “There are trials that will be the domain of industry. There are trials that will bring government-based research together with industry. Trials that attempt to compare regimens without isolating the effect of an individual drug probably will not have registration potential.”

International cooperation would be required, too, Pazdur said.

“I hope that we could work more closely with our European and other international colleagues to perform trials and strategies for developing agents,” he said. “In the past, I have felt a definite divide in philosophy and acceptance of agents between the continents.”

Much of this discontent centered around investigators’ desires to establish ‘the gold standard.’

“For years U.S. investigators adhered to the Mayo

Clinic 5-FU regimen as this standard; whereas, our European colleagues moved toward infusional 5-FU regimens,” Pazdur said.

“This was repeated with irinotecan regimens. U.S. investigators adhered to the bolus IFL regimen—despite its toxicity—while Europeans combined irinotecan with infusional 5-FU,” Pazdur said.

“Perhaps we can agree that there is ‘a’ standard rather than ‘the’ standard. There is no regulatory problem with this approach.”

Funding Opportunities:

Advanced Clinical Research Award In Breast Cancer

Application Submission Deadline: March 29.

ASCO Foundation Advanced Clinical Research Award in Breast Cancer is a three-year grant sponsored by the Breast Cancer Research Foundation. The award would support research of an active ASCO member who holds a full-time faculty appointment at an academic medical center. Applicants should be between five and 10 years past their fellowships at the time of grant origination (July 2004) and must not be enrolled in a PhD program during the period covered by the grant. The research should have a patient-oriented focus and must include clinical trials and/or translational research involving human subjects.

Inquiries: For applications: phone ASCO Education, Science, and Career Development Department at 703-519-1426; or e-mail grants@asco.org;

Lustgarten Foundation Grants In Pancreatic Cancer Research

Letter of Intent Deadline: April 8

Application Deadline: May 14

The foundation is accepting applications from individual investigators as well as collaborating investigators. The initiative encourages, but does not require, the development of integrative and collaborative teams of investigators from within a single institution or among several institutions. Proposals that exhibit leveraging of institutional resources and the attainment of major new programs, such as a SPORE or PO1, are encouraged. A total of three two-year grants will be awarded. Each grant will provide a maximum funding of \$250,000 a year. The \$250,000 includes a maximum 10 percent for indirect costs. Funding will begin July 1, 2004.

Grants can be submitted in one of three areas: Novel technologies for pancreatic cancer genetics; Screening for the early detection of pancreatic cancer; or Novel therapies in pancreatic cancer. The application is available at the foundation Web site <http://www.lustgartenfoundation.org/>.

Inquiries: Enes Carnesecca, executive director and CEO, Lustgarten Foundation; phone 516-803-2304.

NCI Program Announcements

PAR-04-069: In Vivo Cellular and Molecular Imaging Centers

Letter of Intent: June 22, 2004; June 21, 2005

Application Receipt: July 22, 2004; July 21, 2005

NCI Cancer Imaging Program, Division of Cancer Diagnosis and Treatment, invites applications for new or competing P50 Research Center Grants. An ICMIC will provide researchers with the following resources: 1. an organizational structure designed to facilitate multi-disciplinary interactions among investigators focused on the goal of discovering, developing and translating molecular imaging technologies that will have eventual impact in the clinic. Personnel may be scientists from a variety of fields including, but not limited to: imaging sciences, chemistry, radiopharmaceutical chemistry, cell and molecular biology, pathology, pharmacology, computational sciences, and biomedical engineering; 2. funding for a minimum of three Research Components. 3. Specialized Resource Facilities and Services. 4. developmental Funds for feasibility testing of new projects. 5. career development opportunities for new and established investigators. The PAR will use the NIH P50 Specialized Centers Grant Mechanism. The PA is available at <http://grants.nih.gov/grants/guide/pa-files/PA-04-069.html>.

Inquiries: Anne Menkens, phone 301-496-9531; fax 301-480-3507; e-mail am187k@nih.gov.

PA-04-068: Development of Assays for High Throughput Drug Screening

The PA encourages high throughput small molecule screening for use in both research and drug discovery programs by funding the development of assays for automated screening. The assays would identify new tools for basic research and promising avenues for therapeutics development, especially in areas related to the missions of NIDDK, NCI and NIAID. NCI is especially interested in proposals related to cancer prevention, treatment or treatment monitoring with imaging agents. Assays pertinent to the mission of NCI should be justified as relevant to cancer and may include any physiology, cell biology or developmental process with the goal of identifying molecules that either perturb the system (e.g., drugs for cancer prevention or treatment) or yield molecular information (e.g., imaging agents). Applicants may find the NCI drug discovery and development resources helpful, such as the availability of individual and plated samples and data mining tools (<http://dtp.nci.nih.gov/>). NCI encourages collaborations with existing NCI funded projects, and especially invites participation by chemists who can provide chemical libraries on a pilot basis to assist with assay validation. The PA is available at <http://grants.nih.gov/grants/guide/pa-files/PA-04-068.html>.

Inquiries: For NCI--Ronald Dubois, Division of Cancer Treatment, phone 301-496-8783; fax 301-402-5200; e-mail rd41n@nih.gov.

In Brief:

Garcia Moves To Cedars-Sinai; Manne Promoted At Fox Chase

(Continued from page 1)

GARCIA was appointed director of breast cancer research at the Women's Cancer Research Institute at Cedars-Sinai Medical Center. Garcia was director of the Clinical Investigation Support Office at the University of Southern California Norris Comprehensive Cancer Center, where he was also visiting associate professor of medicine. . . . **SHARON MANNE** has been promoted to senior member with tenure in the Division of Population Science at Fox Chase Cancer Center. Her work in developing new cancer-related behavioral interventions has earned grant support from NIH and the Department of Defense. "Manne is considered by her peers to be an innovator and leader in psycho-oncology," said **Paul Engstrom**, senior vice president for population science. "She is one of the foremost health psychologists in the U.S." . . . **JAY MONAHAN CENTER for Gastrointestinal Health** at New York-Presbyterian Hospital/Weill Cornell Medical Center will open March 30. The Monahan Center will be dedicated to public education and the prevention, diagnosis, and treatment

of gastrointestinal cancers, including cancers of the colon, rectum, pancreas, esophagus, liver, gallbladder, and small intestine, said **Mark Pochapin**, director, Jay Monahan Center for Gastrointestinal Health and chief of GI endoscopy, New York-Presbyterian Hospital/Weill Cornell Medical Center. . . . **NATIONAL COALITION for Cancer Survivorship** is providing Spanish translations of its most frequently requested content on its Web site www.canceradvocacy.org. "Symptom management, controlling pain, and psychosocial support are all essential components of quality cancer care," said **Ellen Stovall**, president of NCCS. "That's why we've translated our evidence-based material of what we call Essential Care. We hope Spanish-speaking survivors and families will use this new resource as they work with their health care team to understand and address their individual needs during and after treatment." . . . **NATIONAL HUMAN GENOME** Research Institute said the first draft of the chicken genome sequence has been deposited into free public databases. **Richard Wilson**, of the Washington University School of Medicine, lead the team that assembled the genome of the Red Jungle Fowl, *Gallus gallus*, the ancestor of domestic chickens. The public database is available at GenBank www.ncbi.nih.gov/Genbank.



National
Comprehensive
Cancer
Network®

Save the Date!

10th Annual Conference:
**Clinical Practice
Guidelines &
Outcomes Data
in Oncology™**

March 16-20, 2005

The Westin Diplomat
Resort & Spa
Hollywood, Florida

The National Comprehensive Cancer Network (NCCN),

an alliance of 19 of the world's leading cancer centers, is an authoritative source of information to help patients and health professionals make informed decisions about cancer care. Through the collective expertise of its member institutions, the NCCN develops, updates, and disseminates a complete library of clinical practice guidelines. These guidelines are the standard for clinical policy in oncology. The NCCN's complete spectrum of programs emphasizes improving the quality, effectiveness, and efficiency of oncology practice.

- **Join more than 900 cancer care specialists** including oncologists (in both private practice and academic settings), oncology fellows, nurses, and pharmacists to get the latest information on clinical practice guidelines and outcomes.
- **Update your knowledge base** as experts in their fields present selected clinical practice guidelines updates, the data on which the guidelines are based, and new data from original research studies based on the NCCN Oncology Outcomes Project, a rich repository of information on more than 17,000 patients.
- **Learn more about promising new therapies** and gain insight through policy discussions.

**To attend or sponsor, visit www.nccn.org
or call 866-788-NCCN (6226).**

Copying Policy for The Cancer Letter Interactive

The software that comes with your issue allows you to make a printout, intended for your own personal use. Because we cannot control what you do with the printout, we would like to remind you that routine cover-to-cover photocopying of The Cancer Letter Interactive is theft of intellectual property and is a crime under U.S. and international law.

Here are guidelines we advise our subscribers to follow regarding photocopying or distribution of the copyrighted material in The Cancer Letter Inc. publications in compliance with the U.S. Copyright Act:

What you can do:

- Route the printout of the newsletter to anyone in your office.
- Copy, on an occasional basis, a single story or article and send it to colleagues.
- Consider purchasing multiple subscriptions. Contact us for information on multiple subscription discounts.

What you can't do without prior permission:

- Make copies of an entire issue of the newsletter. The law forbids cover-to-cover photocopying.
- Routinely copy and distribute portions of the newsletter.
- Republish or repackage the contents of the newsletter.

We can provide reprints for nominal fees. If you have any questions or comments regarding photocopying, please contact Publisher Kirsten Boyd Goldberg, phone: 202-362-1809, email: kirsten@cancerletter.com

We welcome the opportunity to speak to you regarding your information needs.