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NIH Electronic Grant Coding System Worse Than NCI's Manual Method, Advocates Say

By Kirsten Boyd Goldberg

Congress recently told NIH to develop a coding system to keep track of spending on research on specific diseases.

NIH carried out the orders contained in the 2006 reauthorization bill, but has triggered objections from NCI officials and cancer patient advocacy groups, who contend that the coding system provides inaccurate and misleading estimates of funding allocated to various categories of cancer research.

The system uses word recognition software to search through the NIH grant portfolio and determine the categories applicable to every grant. If a grant covers multiple topics, its dollars will be counted 100 percent toward

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ESA Marketing:

Amgen Replaces "Bundling" Contract With Three Separate Contracts For Growth Factors

By Paul Goldberg

Amgen Inc. has relaxed its system of incentives for marketing red and white blood cell growth factors.

The new schema, scheduled to go in effect Oct. 1, abandons the interlocking incentives the company used to induce oncologists to meet aggressive sales targets for supportive care agents for treating anemia and neutropenia.

"Amgen is unbundling its multi-product Oncology Clinic Contract, and is offering oncology clinics separate contracts for Aranesp (darbepoetin alfa), Neulasta (pegfilgrastim) and Neupogen (filgrastim)," company spokesman Kelley Davenport said in a statement sent in response to questions from several reporters.

Davenport said the existing arrangement, called the Amgen Portfolio Contract, would be replaced with three contracts, which would cover the three agents separately.

According to the company, the move was prompted by "changing marketplace conditions, including recent labeling changes for erythropoiesis-stimulating agents, and stakeholder feedback, among other considerations."

However, the company said that critics who argue that the bundling arrangement was designed to induce oncologists to prescribe more Aranesp and to keep increasing its dose in cancer patients, were guilty of a "misperception"

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NIH Grant Coding Under Fire From Cancer Patient Groups

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all of the categories. Thus, the total will add up to greater than the NIH budget.

NCI's own portfolio coding system, developed over the past 25 years, uses trained personnel to determine how much of each research project should be counted toward types of cancer and areas of research. Under NCI's system, a grant could be coded as pertaining partially to several kinds of cancer.

Patient advocates are concerned that the NIH system will initially report only 14 cancer categories. Thus, the system may greatly overstate the amount of funding in some areas, while providing no information about others. This, in turn, could mislead Congress and advocacy groups and result in setting of unrealistic priorities, critics say.

NCI Director John Niederhuber has publicly expressed concern about the new NIH system, called the Research, Condition and Disease Categorization Initiative, or RCDC. "It has been a bit of a problem for me, and has gotten me into a little bit of hot water with the NIH leadership," he said to the NCI Board of Scientific Advisors at a June 23 meeting.

"This is a puzzlement to me," Niederhuber said to the BSA. "I just don't understand [why] you develop a system based on word recognition, and it doesn't do what our system has done for 20-some years, in terms of individuals who are trained and who don't do anything else but go through our grants and assign a portion of the grant to an appropriate area of disease."

The RCDC system is scheduled to debut in spring 2009, with the release of the President's budget request, and will report on research funded in fiscal 2008. According to an example from the RCDC website, "an imaginary project whose title is 'Depression in older men with diabetes' could be sorted into four categories: 1) Depression, 2) Aging, 3) Mental health, and 4) Diabetes."

"We've stood up our results [to the RCDC coding] and we are told it's not a matter of what's right or wrong, it's just different—but the good news is that it's consistently different," Niederhuber said. "I have a hard time with that. I can't imagine that the community and Congress doesn't want our best effort to review what we are doing and how we are investing the dollars that are given to us."

The NCI system was developed as a result of a Congressional mandate about 25 years ago. The NCI system is "very robust" and allows the institute to answer questions posed by members of Congress and advocacy groups, Larry Ray, NCI deputy director for management, said to the National Cancer Advisory Board at a June 17 meeting.

"Without this analysis, we would not be able to answer the inquiries that come in," Ray said. "It is critical to the mission of the organization and critical to keeping the public and Congress informed. NCI is a leader. We have gotten into a very robust process of coding science over 25 years."

However, the NCI system only tracks the institute's dollars, not all cancer-related funding at NIH, Ray said. The new RCDC system will include all cancer spending and would eliminate some of the differences in coding methodologies used across all of the NIH institutes, he said.

NCI staff has been involved in 14 NIH working groups developing the RCDC system, said Lisa Krueger, of the Research Analysis and Evaluation Branch in the NCI Division of Extramural Activities.

The NCI Thesaurus has been folded into the system, and about 90 NCI subject matter experts are participating to help develop the coding "fingerprints," the word recognition patterns. As these fingerprints are developed, a list of grants is generated and sent to the groups of experts, who are asked to agree or disagree that a grant applies. "We are also given the opportunity to supply RCDC with projects that haven't been pulled in by the fingerprint, but that we think should be there," Krueger said. "So far, over two fiscal year data sets that

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we have done validations on, NCI has returned back about 35,000 comments to RCDC."

The RCDC initiative is scheduled to finish these fingerprint sessions by November, Ray said. "NCI is working with [NIH] to anticipate questions and develop a communications plan, because there will be questions," he said.

"There will be differences in what we have reported in the past in a given area, and there will be new differences associated with the new methodology, and it will be broader than the NCI portfolio," Ray said. "So we will have some communications challenges."

At the NCAB meeting, board members seemed puzzled by the 14 cancer categories. "There are more than 14 cancers," said Jean deKernion, chairman of urology at the David Geffen School of Medicine at University of California, Los Angeles.

"That's correct," Ray said. "There are plans for RCDC to incorporate more cancer categories in the future."

"So there are two coding systems, one for all of NIH and one for cancer, but obviously, cancer is best qualified to address the cancer questions," said Donald Coffey, professor of urology at Johns Hopkins University School of Medicine.

"There are two different methodologies used to code the research grants," said Paulette Gray, director of the NCI Division of Extramural Activities. "The one that is being developed that is legislatively mandated by NIH and is supposed to be an electronic system, as opposed to [the NCI system of] manual coding.

"The specific issue that we have a major concern about is the accuracy of the data that may be reported by the NIH," Gray said. "NCI and NIH are currently trying to work towards ameliorating the inaccuracies that may result from the two methodologies."

RCDC also will not be able to code subprojects in grants, such as laboratory studies conducted in conjunction with clinical trials. That will be addressed in a second phase, NIH officials said during a web-based seminar held June 11. A video of the presentation is posted at http://www.rcdc.nih.gov/webinar/.

AIDS and biodefense research were specifically exempted from inclusion in RCDC.

Categorizing Research

The cancer categories include one category titled simply "cancer."

The others are: brain cancer, breast cancer, cervical cancer, childhood leukemia, colorectal cancer, fibroid tumors, liver cancer, lung cancer, ovarian cancer, prostate cancer, and uterine cancer.

Cancer research also could be included in many other categories, including clinical research and clinical trials, diagnostic radiology, genetic testing, genetics, health disparities, hematology, HPV and cervical cancer vaccines, mind and body, nanotechnology, orphan drug, pediatric, prevention, smoking and health, tobacco, and women's health.

Joe Arite, director of policy for the C3: Colorectal Cancer Coalition, said his group is concerned about the accuracy of the new system and the potential effect on Congressional appropriations.

Arite sent a letter to NIH Director Elias Zerhouni seeking further information. "RCDC could overstate how much research is being done in the separate areas of cancer," he said. "That's one of our biggest concerns right now. Grants are being stated at 100 percent [relevant to specific areas] when it could actually be only 50 percent.

"We are working with NIH to learn more about the system," Arite said. "They are willing to talk with us and better educate us on the system. I definitely think it's an issue the cancer community should be aware of."

Zerhouni is hosting an "NIH Director's Open House" on Sept. 25 to demonstrate RCDC and take questions from the advocates.

Letter To Zerhouni

Besides C3, the letter to Zerhouni was signed by the following organizations: Alliance for Prostate Cancer Prevention, American Association for Cancer Research, American Cancer Society Cancer Action Network, Breast Cancer Network of Strength, Friends of Cancer Research, Intercultureal Cancer Council Caucus, International Myeloma Foundation, Men's Health Network, Out With Cancer Inc., Ovarian Cancer National Alliance, Pancreatic Cancer Network, Pennsylvania Prostate Cancer Coalition, Sarcoma Foundation of America, and Us TOO International.

The text of the letter follows:

The undersigned organizations are writing because of concerns about the National Institutes of Health implementation of the Research, Condition, and Disease Categorization system. We have read the minutes from the November 15, 2007 NIH presentation to the National Cancer Institute Board of Scientific Advisors. In addition, some of us attended the June 11 webinar presented by NIH.

In 2006, Congress passed the NIH Reauthorization Act, which included a provision that directed NIH to create a centralized coding system for all grant activities,

across all institutes and centers. The NIH responded by developing the Research, Condition, and Disease Categorization system.

It is our understanding, based on the above mentioned presentation and webinar that data from the new RCDC system has been compared to the data NCI generates using their current system. We have learned that few cancer categories are specified in RCDC, which means that reports for categories such as pancreas cancer, childhood cancers and multiple myeloma will be generated from non-RCDC data, making it impossible to fully analyze NIH's cancer research portfolio. This will also make it impossible to compare categories being reported by NIH vs. NCI as well as develop investment trends. During the June 11 webinar, the presenter was asked about the process for adding new categories. He responded that, "All of that will take place once NIH has established a process to handle the numerous requests that we're already starting to get." His answer concerned us for obvious reasons. We are very interested in getting specific information regarding when new cancer categories will be added and exactly who and how this will be decided. Additionally, we are very interested in specific examples of how the reports from these two systems compare for the cancer categories that will be tracked using RCDC.

It should be noted that the National Cancer Institute has historically provided information about grant activities for most cancers in the form of annual "Snapshots" that are made available online. These reports are far from perfect—for example, it is very difficult to secure a detailed explanation of the grants (including a quantifiable measure as to the relevancy of the grants to each cancer) that are counted toward the total funding level reported in the Snapshots. Many cancer groups have had to resort to asking Members of Congress to request these detailed reports, which are critical to NCI transparency and accountability. The NCI has pledged to work with us to address this issue, but we are now deeply concerned that this problem will not only not be improved by the new RCDC system, but will be exacerbated as a result of the following issues:

1. Implementation testing has shown that there are significant differences between the project lists that are generated in the RCDC system compared to the NCI system.

2. While the NCI system proportionately counts all grants according to their relevancy (e.g., only 25% of the funding is counted towards pancreatic cancer for a project that is 25% relevant to pancreatic cancer), the NIH system will count all projects as 100% relevant, grossly overstating the amount of research that is being done for each category.

3. Our understanding is that once a category has been added to RCDC, NCI will no longer be able to provide their more detailed reports. Therefore, we will no longer have visibility to how relevant the grant projects are that are being counted in the total.

4. Many types of cancer—such as pancreas cancer, childhood cancers and multiple myeloma—will be left out of the initial implementation of RCDC and as of yet, no plan exists for how or when to include them.

5. Bringing the various cancers into the RCDC program at different times will create serious problems with analyzing the NIH and NCI portfolios.

Our goal has always been to have publicly available, accurate and transparent reports that include a break-down of the relevancy of individual grants counted towards the research done for a specific cancer. We want to ensure that once RCDC is implemented, the cancer community and Congress can count on the accuracy and robustness of the reports. In addition, as we reach out to Congress in support of NIH and NCI, we must be able to speak clearly and confidently about the implementation of the new system. Thus, we urgently request that NCI and NIH provide us with information that addresses the issues outlined above, identifies any other differences between NCI and RCDC systems, and explains how these differences will be handled during the implementation phase of RCDC.

ESA Marketing:

"Market Conditions" Forced Contract Change, Amgen Says

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and adherence to an unproven hypothesis.

"Questions about the previous Amgen Portfolio Contract raised the misperception that Amgen's contract structures could have created incentives for physicians to prescribe more ESAs," the statement read. "From multiple data sources presented to the FDA at the most recent ODAC hearing, Amgen did not find evidence to support the hypothesis. Nevertheless, we believe these contracting changes, along with other modifications, help to clear up those possible misperceptions and ensure that discussion of our products continues to be focused on their clinical profiles and what is in the best interest of patients."

The contract instituted in 2005 used a system of rebates, which doctors received only when they used Amgen products in a manner prescribed by the company.

The contract was essentially a grid of targets for use of the three products.

Meeting the dollar targets for Aranesp sales qualified doctors to earn discounts on that drug as well as Neulasta. Leaving little to chance, the contract set a limit on the amount of Neupogen that could be counted toward the discounts, in effect driving doctors toward Neulasta. Critics said that Neulasta ends up being more expensive than Neupogen. Moreover, doctors who attempted to control costs typically used Neupogen with the competing ESA Procrit (erythropoietin), marketed by Amgen's competitor Johnson & Johnson.

Observers say this aggressive schema became unworkable over the past year and a half, as safety concerns drove down the market for ESAs. Sales of both Aranesp and Procrit declined by more than a third and utilization dropped by half, and will likely slip further as a result of ongoing revisions of the label by the US and European regulatory authorities.

The change in the contract is Amgen's second effort this year to adapt to the decline in the ESA market.

In February, the company loosened the terms of the Portfolio contract to drop the requirement that physicians meet dollar targets on the sales of Aranesp in order to qualify for rebates. This change in the contract requires doctors to meet percentage quotas, which were aimed to protect the Aranesp market from competition by Procrit.

Drug marketing experts said the change was significant, since dollar targets in that setting gave doctors incentives to increase the dose. By contrast, the percentage quotas induced them to push the market share (The Cancer Letter, July 18).

The significance of the latest change is difficult to assess conclusively since it appears that oncology practices are yet to receive the three contracts that would replace the Portfolio agreement.

However, based on a brief description given to practices, it appears that the new contract seeks to preserve the market share of Neulasta, offering steep discounts on the agent and lowering the discounts on Neupogen. Also, the company hasn't abandoned reliance on rebates, which are paid out quarterly, as opposed to discounts, which are paid out immediately.

At least in the case of Neulasta, practices would receive both discounts and rebates for meeting targets.

For example, one practice has been told that it would be able to get a 15 percent discount and an 8.4 percent rebate on Neulasta.

This price break appears to be more aggressive by comparison with the current version of the contract. Now, Amgen's rebates on Neulasta vary from14 percent to 17 percent, depending on the volume of purchases.

The same practice has been told that its discount on Neupogen has been set at 6 percent. This appears to be smaller than the price break in the current contract. Now, the Neupogen price break varies between 10 percent and 16 percent.

Practices would get a far steeper discount on Aranesp—38 percent, provided they keep the Aranesp market share at over 50 percent. This exceeds the current rebate of 18 percent to 21 percent and appears to support the view of the company's critics, who contend that Aranesp has always been more expensive to use than Procrit.

Some of the changes in the Portfolio contract were described to patients at a conference call Aug. 27, and a day later, a story about the new contracts appeared in The New York Times.

The Cancer Letter asked Amgen to discuss the changes in greater detail, but no response was received by deadline.

Amgen's bundling contract was extraordinarily effective in increasing the sales of Aranesp. The agent's sales jumped by a third—from $2.1 billion to $2.8 billion—in 2005. At the same time, Aranesp's market share rose from 48 percent in 2005 to 57 percent the following year.

This caused J&J to cry foul—and file a lawsuit claiming that bundling constituted a violation of antitrust laws (The Cancer Letter, Oct. 14, 2005). As a result of the lawsuit, some key provisions of the bundling scheme became public.

In July, the two companies settled the suit. Under the settlement agreement, Amgen paid J&J $200 million, but didn't admit wrongdoing (The Cancer Letter, July 18).

The bundling contract still appears to be under investigation by state attorneys general. Last spring, Amgen announced that the New York Attorney General had subpoenaed documents related to the company's marketing practices.

Also, the House Committee on Energy & Commerce and the office of Sen. Chuck Grassley (R-Iowa) are conducting investigations of the marketing of ESAs.

Last month, FDA ordered additional changes in the ESA label to state that the agents are "not indicated for patients receiving myelosuppressive therapy when the anticipated outcome is cure" (The Cancer Letter, Aug. 8).

In the Cancer Centers:

BARBARA ANN KARMANOS Cancer Institute National Oncogenomics and Molecular Imaging Center will receive $4.672 million from the U.S. Army Medical Research and Materiel Command. Spearheaded and supported by **Sen. Carl Levin** (D-Mich.), **Sen. Debbie Stabenow** (D-Mich.), and **Rep. Joe Knollenberg** (R-Oakland County, Mich.), the award will be allocated over the next two years, with $2.127 million to be released over the next year and $2.545 million the following year. NOMIC is developing molecular diagnostic methods to create specific and personalized cancer treatments. "This is a new frontier in cancer biology and brings with it the possibility of patient-specific treatments, with greater effectiveness and reduced toxicity," said **John Ruckdeschel**, president, CEO of Barbara Ann Karmanos Cancer Institute and principal investigator. **Stephen Ethier**, associate center director, basic research and deputy director, is project director. **Anthony Shields**, associate center director, clinical research, is co-investigator.

STANFORD CANCER CENTER announced that **Beverly Mitchell**, deputy director, was named director and principal investigator of the center on Aug. 1. She succeeded **Irving Weissman**, who requested that he step down so that he could focus his energy on his work as director of both the Stanford Stem Cell Biology and Regenerative Medicine Institute and the Ludwig Center at Stanford. Weissman, the Virginia and D.K. Ludwig Professor, will remain a senior scientific advisor to the cancer center and continue to be involved in fundraising. He had recommended that Mitchell assume the role as director, said **Philip Pizzo**, dean of Stanford School of Medicine. Mitchell, the George E. Becker Professor of Medicine, has been instrumental in moving forward the cancer center's agenda, Pizzo said, and "has won wide respect and admiration throughout Stanford as well as nationally."

CITY OF HOPE received a $1 million gift to establish the Markel/Friedman Peritoneal Ovarian Cancer Research Fund from **Tony Markel**, vice chairman of the Markel Corp., in memory of his late wife, Susan. The gift, which was augmented by $250,000 in personal donations, will support multiple research programs for early detection and treatment. The fund also recognizes **Michael Friedman**, president and CEO of City of Hope, for the support he provided the family. Initially, a two-year study led by City of Hope investigators **Robert Morgan Jr.**, co-director, Gynecologic Oncology and Peritoneal Malignancy Program, and **Mark Wakabayashi**, director, Department of Gynecologic Oncology, on the use of chemotherapy in advanced ovarian and peritoneal carcinoma. A second, preclinical study led by **Richard Jove**, director, Beckman Research Institute, City of Hope, will focus on development of drugs for ovarian cancer. A third, two-year study led by **Jeffrey Weitzel**, director of the Department of Clinical Cancer Genetics and the Cancer Screening and Prevention Program, will examine the genetic roots of the disease. In another development, City of Hope opened a Prostate Cancer Survivorship Clinic, part of the Center for Cancer Survivorship. Also, City of Hope received a three-year, $900,000 grant from the Archstone Foundation for the End-of-Life Nursing Education Consortium project, a national initiative to improve end-of-life care in the U.S. The project, administered by City of Hope and the American Association of Colleges of Nursing in Washington, D.C., provides training for undergraduate and graduate nursing faculty, staff development educators and specialty nurses in pediatrics, oncology, critical care and geriatrics to teach nursing students and practicing nurses, said **Betty Ferrell**, professor of nursing research and education at City of Hope.

VANDERBILT-INGRAM Cancer Center named **Beth Price** to the newly created position of CEO. Price has been oncology operations strategist for Vanderbilt-Ingram and Vanderbilt Medical Group since June 2007 as well as interim business officer for the Cancer Center. As CEO she will expand cancer services in the Middle Tennessee market and the Southeastern region. Price will report to **Jennifer Pietenpol**, director, Vanderbilt-Ingram and to **David Posch**, CEO, Vanderbilt Clinic. In another development, the center received a two-year, $125,000 research grant from the Aptium Oncology GI Consortium for ongoing clinical translational programs in gastrointestinal cancer research. The first treatment protocol will test the AstraZeneca PARP inhibitor, 2281 with irinotecan for stage IV colorectal cancer resistant to irinotecan. **Jordan Berlin**, associate professor of medicine, is the principal investigator. In addition to VICC, the consortium includes University of Southern California, Colorado University, Fox Chase Cancer Center, New York University, Swedish Cancer Center in Seattle, Helen F. Graham Cancer Center in Newark, and the University of North Carolina.

INDIANA UNIVERSITY Melvin and Bren

Simon Cancer Center patient care building opened Aug. 27 in Indianapolis. The $150 million, 405,000-square-foot, five-story building combines inpatient and outpatient cancer care under one roof. The facility was made possible by a gift of $25 million for the building and $25 million for research from the Simon family. The building's opening coincides with NCI renewal of cancer center designation for the IU Simon Cancer Center. NCI awarded the center a five-year, $6 million Cancer Center Support Grant. In recognition of these efforts, **Stephen Williams**, director of the cancer center since 1992, received the Indiana University President's Medal for Excellence by IU President **Michael McRobbie**.

CRAIG JORDAN, director of Translational Research for Hematologic Malignancies of the James P. Wilmot Cancer Center and associate professor of biomedical genetics at the University of Rochester Medical Center, was named a Stohlman Scholar by The Leukemia & Lymphoma Society. Jordan was honored for his stem cell research and will be recognized during the Stohlman Scholar Scientific Symposium of the society in November.

JOHN BUATTI, professor and head of the Department of Radiation Oncology at the University of Iowa Carver College of Medicine and University of Iowa Hospitals and Clinics, has been appointed deputy director of clinical cancer care for Holden Comprehensive Cancer Center at UI. Buatti's appointment advances the integration between the college and the hospitals and clinics, said **George Weiner**, director of the cancer center. Buatti will continue to serve as professor and head of radiation oncology.

MARE COOLEY was appointed nurse scientist and assistant professor in the Dana-Farber Cancer Institute Phyllis F. Cantor Center for Research in Nursing and Patient Care Services and the University of Massachusetts Boston School of Nursing and Health Sciences. Cooley will continue her research at Dana-Farber and will teach doctoral nursing students in the accelerated Bachelor of Science-to-PhD program at UMass Boston. The program, which began admitting students in 2007, is co-directed by the College of Nursing and Health Sciences and the Dana-Farber/Harvard Cancer Center.

Funding Opportunities:

RFA-GM-09-008: Exceptional, Unconventional Research Enabling Knowledge Acceleration. R01. Letters of Intent Receipt Date: Sept. 29. Application Due Date: Oct. 28. Full text: http://www.grants.nih.gov/grants/guide/rfa-files/RFA-GM-09-008.html. Inquiries: Judy Mietz, 301-496-9326; mietzj@mail.nih.gov.

RFA-CA-08-018: Integration of Mouse Models into Human Cancer Research. U01. Letters of Intent Receipt Date: Oct. 14. Application Receipt Date: Nov. 14. Full text: http://www.grants.nih.gov/grants/guide/rfa-files/RFA-CA-08-018.html. Inquiries: Cheryl Marks, 301-594-8778; marksc@mail.nih.gov.

PA-08-239: Impact of Health Communication Strategies on Dietary Behaviors. R01. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-239.html. Inquiries: Amy Yaroch301-402-8425; yarocha@mail.nih.gov.

PA-08-240: Impact of Health Communication Strategies on Dietary Behaviors. R21. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-240.html.

PA-08-241: Reducing Risk Behaviors by Promoting Positive Youth Development. R01. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-241.html. Inquiries: Frank Perna, 301-451-9477; pernafm@mail.nih.gov.

PA-08-242: Reducing Risk Behaviors by Promoting Positive Youth Development. R03. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-242.html.

PAR-08-237: Small Grants Program for Cancer Epidemiology. R03. Application Due Date: March 19, July 17, Nov. 19; March 19, 2010; July 23, Nov. 19; March 18, 2011; July 22; Nov. 18. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PAR-08-237.html. Inquiries: Mukesh Verma, 301-594-7344; vermam@mail.nih.gov.

PA-08-243: Etiology, Prevention, and Treatment of Hepatocellular Carcinoma. R01. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-243.html. Inquiries: Elizabeth Read-Connole, 301-496-6085, bconnole@mail.nih.gov.

PA-08-244: Etiology, Prevention, and Treatment of Hepatocellular Carcinoma. R21. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-244.html.

PAR-08-245: Etiology, Prevention, and Treatment of Hepatocellular Carcinoma. P01. Letters of Intent Receipt Date: Sept. 22, Dec. 28; April 28, 2009, Aug. 29, Dec. 28; April 28, 2010, Aug. 28, Dec. 28; April 30, 2011. Application Due Date: Oct. 20; Jan 28, 2009, May 28, Sep 29; Jan 28, 2010, May 28, Sep 28; Jan 28, 2011, May 31. Inquiries: Elizabeth Read-Connole, 301-496-6085; bconnole@mail.nih.gov.

PA-08-251: Metals in Medicine. R01. Full text: http://www.grants.nih.gov/grants/guide/pa-files/PA-08-251.html. Inquiries: Cindy Davis, 301-594-9692; Davisci@mail.nih.gov.

RFQ-NCI-80108-NG-01: Ghana Prostate Cancer Survey. Full text: http://www.fbodaily.com/archive/2008/08-August/16-Aug-2008/FBO-01640810.htm. Inquiries: Malinda Holdcraft, 301-402-4509, holdcram@exchange.nih.gov. and Caren Rasmussen, 301-402-4509, cr214i@nih.gov.

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