NCI STUDY FINDS INCREASES IN RISKS OF CERTAIN LEUKEMIAS RELATED TO TREATMENT

A new study describes the pattern of risk for one form of cancer, acute myeloid leukemia (AML), that has risen over the past three decades for adults who have previously been treated with chemotherapy for other forms of cancer, notably non-Hodgkin’s lymphoma.

The findings, from researchers at the NCI, part of NIH, and colleagues, appeared online in Blood on Feb. 14, 2013. Although these findings were based on small numbers of patients, they are intriguing in light of recent changes in treatment practices for these cancer patients.

The researchers noted that chemotherapy is often a very effective treatment for cancer, and the subsequent risk of leukemia is generally low for an individual patient. The authors indicated that the increased risk among NHL survivors could be due to prolonged survival in recent years for some lymphoma subtypes that are associated with multiple courses of chemotherapy. Over the study time period, the researchers observed declining risk among patients treated for ovarian cancer, myeloma, and possibly lung cancer. The decreased risk among patients with ovarian cancer is consistent with a shift from use of an alkylating agent called melphalan to platinum-based chemotherapy in the early 1980s.

“It has long been known that some types of chemotherapy are associated with a high risk of developing subsequent leukemia, particularly when treatments include certain alkylating agents,” said lead author Lindsay Morton, Ph.D., in NCI’s Radiation Epidemiology Branch in the Division of Cancer Epidemiology and Genetics. “The goal of this study was to better understand how cancer patients’ risk of developing leukemia has changed over time.”

The authors also found evidence that the risk of treatment-related AML has increased since 2000 among patients treated for esophageal, prostate, and cervical cancer and since the 1990s among patients treated for cancers of the bones and joints and of the endometrium.

Morton and colleagues used data from NCI’s Surveillance Epidemiology and End Results (SEER) cancer registries to evaluate the risk of leukemia in more than 426,000 adults who had been diagnosed with cancer between 1975 and 2008 and who had received chemotherapy as part of their initial cancer treatment. Among these patients, the authors identified 801 people who subsequently developed AML. Because the data came from SEER cancer registries, information on specific drugs used to treat each individual patient was not available. A unique feature of the study was the ability to evaluate leukemia risks in a large number of patients treated with chemotherapy in the current treatment era (2001-2008).

The researchers say it is important to identify patient groups that have the highest risks of treatment-related leukemia, particularly for patients with cancers that have favorable survival potential, so that efforts to prevent a return of the disease can be implemented where possible.

For more information on this article, please click here.
On May 2, 2013, the Oncologic Drugs Advisory Committee will meet to discuss the new drug application (NDA) 204408, with the established name tivozanib capsules, submitted by AVEO Pharmaceuticals, Inc. The proposed indication (use) for this product is for the treatment of advanced renal (kidney) cell carcinoma.

During the afternoon session, the committee will discuss NDA 201848, a drug/device combination product with the proposed trade name Melblez Kit (Melblez melphalan) for Injection for use with the Delcath Hepatic Delivery System, submitted by Delcath Systems, Inc. The proposed indication (use) for this product is for the treatment of patients with unresectable ocular melanoma that is metastatic to the liver.

CDER plans to provide a live webcast of the May 2 meeting of the Oncologic Drugs Advisory Committee.

To find out more information on this meeting, including a draft agenda, please click here.

On May 3, 2013, the Oncologic Drugs Advisory Committee and Cures Acceleration Network (CAN) Review Board. In his director’s report, Austin commented on NCATS initiatives, programs, and policies. He summarized the Center’s accomplishments over the last three months, shared budget and staff updates, and emphasized research advances. For more information or a complete video cast of the meeting, please click here.

On December 11, 2012, NCATS partnered with stakeholders in the regulatory, academic, nonprofit, and private sectors to prioritize policy goals and issues and gain perspective on how policy research and analysis can inform translational research. The purpose of the meeting was to gather thought leaders who could provide advice to NCATS leadership on proactively integrating a policy research and analysis agenda in the Center’s mission. By expanding knowledge of relevant policy issues, NCATS leadership hope to build an agenda that can more productively impact the development of cures and treatments.

Discussion sessions focused on informing regulatory science, navigating intellectual property challenges, streamlining clinical research, and forming effective strategic alliances. For more information on this meeting, please click here.

On January 23, 2013, NCATS Director Chris Austin, M.D., led his first joint meeting of the NCATS Advisory Council and Cures Acceleration Network (CAN) Review Board. In his director’s report, Austin commented on NCATS initiatives, programs, and policies. He summarized the Center’s accomplishments over the last three months, shared budget and staff updates, and emphasized research advances. For more information or a complete video cast of the meeting, please click here.

On May 3, 2013, the Medical Imaging Drugs Advisory Committee and Oncologic Drugs Advisory Committee will hold a joint meeting to discuss the safety and efficacy of currently approved leukocyte growth factors (LGFs) as potential treatments for radiation-induced myelosuppression associated with a radiological/nuclear incident. (Myelosuppression is a reduction of blood cell production, which can be caused by radiation exposure.) Currently approved LGFs are licensed under biological license applications (BLAs): 103353, NEUPOGEN (filgrastim, Amgen, Inc.), 125031, NEULASTA (pegfilgrastim, Amgen, Inc.), 103362, LEUKINE (sargramostim, Genzyme, Inc.), and 125294, TBO-FILGRASTIM (tbo-filgrastim, Sicor Biotech, UAB). The National Institute of Allergy and Infectious Diseases (NIAID) has submitted efficacy data for filgrastim, based on treatment in an animal model of radiation-induced myelosuppression. Safety and other supportive information are currently described in the labeling for LGFs.

For more information on this meeting, please go here.
NCI FUNDING ANNOUNCEMENTS

PAR13-081 Bridging the Gap Between Cancer Mechanism and Population Science (U01) – November 5, 2015
PAR13-068 Feasibility Studies to Build Collaborative Partnerships in Cancer Research (P20) – March 20, 2015
PAR13-036 Utilizing the PLCO Biospecimens Resource to Bridge Gaps in Cancer Etiology and Early Detection Research (U01) – June 20, 2015
TPA12-626 Identifying Non-coding RNA Targets for Early Detection of Cancer (R01) – September 8, 2015
TPA12-606 Cancer Center Support Grants (CCSGs) for NCI-designated Cancer Centers (P30) – January 8, 2016
PAR12-095 Basic Cancer Research in Cancer Health Disparities (U01) – November 21, 2014

For more information or to find more funding opportunities, please click here.

NEW TECHNOLOGIES AVAILABLE FOR LICENSING FROM THE NIH TECHNOLOGY TRANSFER OFFICE

High-Affinity Rabbit Monoclonal Antibodies To Mesothelin for Treatment of Cancer
Mesothelin is a cell surface protein that is highly expressed in aggressive cancers, such as malignant mesothelioma, ovarian cancer and pancreatic cancer. Current anti-mesothelin therapeutic mAb candidates bind to an epitope in Region I of mesothelin. Unfortunately, Region I contains the interaction site MUC16/CA125, a mesothelin-interacting protein that is present in the serum of patients with mesothelin-related cancers. Because the current therapeutic mAb candidates must compete with MUC16/CA125 for binding to mesothelin, they may not reach their full therapeutic potential due to interference.

In order to address this concern, NIH inventors generated several mAbs that recognize unique epitopes of mesothelin: (1) YP223, which recognizes region II; (2) YYP218, which recognizes region III; and (3) YP3 which recognizes a native conformation epitope of mesothelin. These mAbs bind to mesothelin with sub-nanomolar affinity and are not out-competed for binding by the current anti-mesothelin therapeutic mAb candidates or MUC16/CA125. This strong binding affinity for an alternative binding site on mesothelin suggests that these mAbs are excellent therapeutic candidates.

Mutations in G Protein Coupled Receptor (GPCR) Gene Family in Melanoma
Using exon capture and next generation sequencing approaches to analyze the entire G protein coupled receptor (GPCR) gene family in melanoma, the researchers at the NIH have identified several novel somatic (e.g., tumor-specific) alterations. Many of the GPCR gene mutations identified by the NIH researchers were mutated in a large portion of melanoma patients and already have inhibitors, the most notable being the Glutamate Receptor Metabotropic 3 (GRM3) mutation which could be functionally signification for melanoma tumorigenesis. Therefore, this technology could aid in the development of specific inhibitors of GRM3 as well as the pathway it activates, mitogen-activated protein kinase (MEK), for the treatment of melanoma patients with these mutations.

To learn more about this technology and to find others available for licensing, please click here.

PATIENT ORGANIZATION EVENTS

American Association for Cancer Research
Annual Meeting
April 6-10, 2013
Washington, DC
Click here for more details.

American Society for Radiation Oncology
Annual Meeting
September 22-25, 2013
Atlanta, Georgia
Click here for more details.

Association of Community Cancer Centers
National Oncology Conference
October 2-5, 2013
Boston, MA
Click here for more details.
**PANDEMIC AND ALL-HAZARDS PREPAREDNESS (PAHPA) REAUTHORIZATION ACT UPDATES**

On March 14, 2013, President Obama signed into law the Pandemic and All-Hazards Preparedness (PAHPA) Reauthorization Act, which reauthorizes the Project BioShield and Special Reserve Fund provisions of PAHPA. The legislation also requires the FDA to develop a formal process for regulatory management plans through which companies can obtain scientific feedback on the development and regulatory review of eligible medical countermeasures (MCMs). In addition, it expanded MCMs to include noninfectious agents, opening the door for biotech companies pursuing products that could be used in national emergencies.

Congress established Project BioShield in 2004 and provided it with 10 years of guaranteed funding. PAHPA was first passed in 2006, and it granted further authority to facilitate BioShield implementation. This legislation established the Biomedical Advanced Research and Development Authority (BARDA) within HHS to coordinate and fund the acceleration of MCM advanced research and development. Since that time, the government has strategically invested in a diverse set of products to treat, diagnose, or prevent a range of pathogens and toxins identified as significant national threats. BARDA awards grants and contracts to develop and purchase medical countermeasures (MCMs), and Project BioShield provides incentives for companies to develop those countermeasures.

The reauthorization of PAHPA demonstrates our nation’s commitment to prioritizing health preparedness and response when confronted by national security issues.

For more information on this legislation, please click [here](#).

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**FINANCIAL SERVICES LEGISLATION UPDATES**

On February 14, Representative Patrick McHenry (R-NC) introduced H.R. 701, a bill to speed the implementation of Regulation A, a key provision in the Jumpstart Our Business Startups (JOBS) Act that will increase access to capital for growing companies, such as biotech innovators.

BIO supports expeditious and effective implementation of the JOBS Act and efforts to incentivize and encourage capital formation for emerging biotech companies.

Before the JOBS Act was enacted, Regulation A allowed companies to conduct direct public offerings of up to $5 million; the JOBS Act increased the offering limit to $50 million. Once these changes are implemented, Regulation A will spur fundraising for emerging biotech companies, for which a $50 million capital influx could support groundbreaking research and stimulate job creation.

Eight of the eleven biotech IPOs since the JOBS Act was signed into law were undertaken by emerging growth companies using the IPO On-Ramp. Other provisions of the JOBS Act, including a new crowdfunding pathway and reforms to SEC Regulations A and D, are still awaiting rulemaking at the SEC.

The JOBS Act provided implementation deadlines for Regulation D (July 4, 2012) and crowdfunding (December 31, 2012). Rep. McHenry’s legislation would add an implementation deadline of October 31, 2013 for the Regulation A reforms. Companies cannot take advantage of these capital formation provisions until the SEC Acts.

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**R&D TAX CREDIT EXTENSION**

On January 1, 2013, Congress passed fiscal cliff legislation which included a year-end tax extenders package that extended the R&D credit through the end of 2013. BIO strongly supports the provisions of this credit and has continued to work to make the credit permanent. To read BIO’s press release, click [here](#).
BIO ENGAGES WITH FEDERAL AGENCIES

BIO Comments on Final SBIR Rule
On December 31, 2011, President Obama signed into law a bill reauthorizing the SBIR program through 2017. Included in the reauthorization was an end to the eligibility ban on venture-backed companies. Now, venture-backed companies will be able to compete for 25% of SBIR funds at NIH, NSF, and the Department of Energy and 15% of funds at all other agencies.

When BIO began its advocacy to reform the SBIR program, it had two primary goals: 1) Allow majority venture-backed companies to once again be able to participate in the SBIR program; and 2) Reform the affiliation rules so that SBIR applicants are not affiliated with their investors’ portfolio companies simply on the basis of shared investors and not on any actual mutual control or shared businesses practices.

The SBA published a proposed rule on changes to ownership and affiliation eligibility rules pursuant to the reauthorization and also released a policy directive to agencies participating in the SBIR program. BIO submitted comments to SBA regarding the policy directive, which can be read here.

On December 27, 2012, SBA published a final rule for determining ownership, affiliation, and size standards. SBA adopted many of BIO’s recommendations on exception for portfolio companies, calculation of stock ownership, identify of interest, and newly organized concerns.

The final rule was effective January 28, 2013, and can be viewed here.

BIO Comments on Nasdaq Internal Audit Function Proposal
On March 4, Nasdaq filed a proposed rule change with the SEC that would require listed companies to have an internal audit function. The stated goal of the rule is to ensure that listed companies have a mechanism in place to assess their system of internal controls. BIO submitted comments asking the SEC to disapprove the proposed rule, as this requirement would be extremely costly and duplicative with SOX 404(a) and 404(b) for growing biotech companies. To read BIO’s comment letter, please click here.

ONCOLOGY-FOCUSED LEGISLATION

H.R. 80 - Triple-Negative Breast Cancer Research and Education Act of 2013
This bill would require the Director of the NIH to expand, intensify, and coordinate programs for the conduct and support of research on triple-negative breast cancer.

Sponsor: Rep. Sheila Jackson Lee (TX-18)
Status: Referred to the House Committee on Energy and Commerce

H.R. 991 - CT Colonography Screening for Colorectal Cancer Act of 2013
This bill would amend title XVII of the Social Security Act to: 1) provide Medicare coverage for screening computed tomography (CTC) as a colorectal cancer screening test, and 2) exclude screening CTC from the meaning of "imaging services" for which there is a special rule regarding outpatient services department fee schedule payments.

Sponsor: Rep. Ralph Hall (TX-4)
Status: Referred to the House Committees on Energy and Commerce and Ways and Means

H.RES. 50 – Expressing support for designation of February 4, 2013, as National Cancer Prevention Day
This bill would express support for the designation of National Cancer Prevention Day.

Sponsor: Rep. Steve Israel (NY-3)
Status: Referred to the House Committee on Energy and Commerce

H.R.1293 – To amend the Internal Revenue Code of 1986 to establish and provide a checkoff for a Breast and Prostate Cancer Research Fund, and for other purposes

Sponsor: Rep. Peter King (NY-2)
Status: Referred to the Committee on Ways and Means and the Committee on Energy and Commerce
MICHAEL J. FOX FOUNDATION FUNDING OPPORTUNITIES

On February 20, 2013, The Michael J. Fox Foundation for Parkinson’s Research (MJFF) launched a series of new funding programs. All programs are open to both academic and industry researchers and the Foundation estimates allocating $55 million in 2013 to research programs.

MJFF seeks projects promoting drug development for Parkinson’s disease around exciting therapeutic pathways and targets, including but not limited to programs on alpha-synuclein and LRRK2. Access to MJFF’s growing inventory of pre-clinical and clinical tissues and resources to address promising Parkinson’s ideas will also be made available.

More information and application instructions can be found at https://www.michaeljfox.org/research/apply-for-grant. For questions about how MJFF works with industry, please contact Tracey Mumford, Senior Associate Director of Research Partnerships at tmumford@michaeljfox.org.

To receive email updates about MJFF research programs and other news, write to research@michaeljfox.org.

SEQUESTRATION AND CONTINUING RESOLUTION

Beginning March 1, a series of automatic spending cuts known as sequestration took effect. Of the $1.2 trillion slated to take effect over the next 10 years, $85 billion is scheduled for this year. Across the board cuts for 2013 include the calculated equivalent of a 5.8% cut from the NIH budget and an 8.2% reduction from the FDA budget.

On March 21, the House gave final approval to a continuing funding resolution that outlines spending through the end of the fiscal year, September 30. It ensures that government agencies will stay open after the current funding measure expired on March 27. A broader battle over taxes and spending for the year is still a central topic in Washington and will continue throughout the year.