



## MMHCC Newsletter June 2009

### MouseLine

#### **NIH State-of-the-Science Conference: Diagnosis and Management of Ductal Carcinoma In Situ (DCIS)**

Ductal carcinoma in situ (DCIS) is a condition in which abnormal cells are found in the lining of a breast duct. As "in situ" means "in place," this means the abnormal cells have not spread outside the duct to other tissues in the breast. Also referred to as intraductal carcinoma and stage zero breast cancer, DCIS is the most common noninvasive tumor of the breast.



DCIS is most often discovered during routine mammograms, presenting as very small specks of calcium known as microcalcifications. However, not all microcalcifications indicate the presence of DCIS and the diagnosis must be confirmed by biopsy. Magnetic Resonance Imaging (MRI) has also been used more recently as a diagnostic tool, but questions about the impact of the test on patient outcomes remain. Since the implementation of screening mammography, the rate of new DCIS cases has increased dramatically.

DCIS currently accounts for approximately twenty percent of screening-detected breast cancer, but its true prevalence is challenging to measure because nearly all affected individuals are asymptomatic. By most reports, the risk factors associated with the development of DCIS are similar to those for invasive breast cancer: increased age, family history of breast cancer, previous biopsies, history of hormone replacement therapy, and older age at first childbirth. Tamoxifen, a hormonal drug, has demonstrated a reduction in the incidence of DCIS among high-risk women.

Although the natural course of the disease is not well understood, DCIS can become invasive cancer and spread to other tissues. It is also a marker of increased risk for developing cancer elsewhere in the same or opposite breast. However, not all DCIS will progress to invasive disease, and it is thought that DCIS can be present in some individuals without causing problems over a long period of time. Recent research suggests that DCIS is a spectrum of disease and that certain tumor characteristics may be strong or weak risk factors for subsequent invasive breast cancer. Unfortunately, it is currently not clear which lesion types are more likely to become invasive, leading to difficult treatment decisions for patients and providers.

Because of this uncertainty, DCIS patients are typically treated promptly following diagnosis and have a generally good prognosis. Standard DCIS therapies include breast conservation with or without radiation or mastectomy depending on patient and tumor characteristics. Sentinel lymph node biopsy may also be recommended to high-risk patients, since this is the area where cancer spread is often first detected. Hormone therapy may also be used in effort to prevent DCIS recurrence and to lower the risk of developing estrogen receptor positive breast tumors. However, these drugs' potential side effects must be weighed carefully.





Since the natural course of DCIS is not well understood and treatment benefit may depend on specific tumor and patient characteristics, the treatment of DCIS remains controversial. To examine these important issues, the National Cancer Institute and Office of Medical Applications of Research of the National Institutes of Health will convene a State-of-the-Science Conference from September 22-24, 2009. The conference will address the following key questions:

- What are the incidence and prevalence of DCIS and its specific pathologic subtypes, and how are incidence and prevalence influenced by mode of detection, population characteristics, and other risk factors?
- How does the use of MRI or sentinel lymph node biopsy impact important outcomes in patients diagnosed with DCIS?
- How do local control and systemic outcomes vary in DCIS based on tumor and patient characteristics?
- In patients with DCIS, what is the impact of surgery, radiation, and systemic treatment on outcomes?
- What are the most critical research questions for the diagnosis and management of DCIS?

At the conference, invited experts will present information pertinent to these questions, and a systematic literature review prepared under contract with the Agency for Healthcare Research and Quality (AHRQ) will be summarized. Conference attendees will have ample time to ask questions and provide statements during open discussion periods. After weighing the scientific evidence, an unbiased, independent panel will prepare and present a consensus statement addressing the key conference questions.

Conference website including registration: <http://consensus.nih.gov/2009/dcis.htm>

## Meetings

**July 5 – 12, 2009**

### **AACR-Pathobiology of Cancer: The Edward A. Smuckler Memorial Workshop**

Snowmass Village, Colorado

Meeting Information: <http://www.aacr.org/home/scientists/meetings--workshops/educational-workshops--special-courses/pathobiology-of-cancer.aspx>

**July 12 – 18, 2009**

### **AACR-Cancer Biostatistics Workshop**

Sonoma, California

Meeting Information: <http://www.cancerbiostatistics.org/>

**July 17 – 24, 2009**

### **AACR-Molecular Biology in Clinical Oncology**

Aspen, Colorado

Meeting Information: <http://www.aacr.org/home/scientists/meetings--workshops/educational-workshops--special-courses/molecular-biology-in-clinical-oncology.aspx>





**MMHCC**  
the Mouse Models  
of Human Cancers Consortium



**July 19 – 31, 2009**

**50th Annual Short Course in Medical and Experimental Mammalian Genetics**

Bar Harbor, Maine

Meeting Information: [http://courses.jax.org/2009/50th\\_short\\_course.html](http://courses.jax.org/2009/50th_short_course.html)

**July 31, 2009**

**Symposium: Biomedical Science and Medicine in the Next 50 Years**

Bar Harbor, Maine

Meeting Information: [http://courses.jax.org/2009/50th\\_symposium.html](http://courses.jax.org/2009/50th_symposium.html)

**August 1 – 7, 2009**

**AACR-2008 AACR/ASCO Workshop: Methods in Clinical Cancer Research**

Vail, Colorado

Meeting Information: <http://www.vailworkshop.org/>

**August 6 – 7, 2009**

**2nd Molecular Diagnostics World Congress: Lab-on-a-Chip World Congress & Microarray World Congress**

South San Francisco, California

Meeting Information: <http://www.selectbiosciences.com/conferences/MDWC2009/>

## Notices and Funding Opportunities

**Technology Development for the Detection and Evaluation of Chemical and Biological Carcinogens (SBIR) [R43/R44]**

PA-09-187

National Cancer Institute

<http://grants.nih.gov/grants/guide/pa-files/PA-09-187.html>

**Technologies and Software to Support Integrative Cancer Biology Research (SBIR) [R43/R44]**

PA-09-188

National Cancer Institute

<http://grants.nih.gov/grants/guide/pa-files/PA-09-188.html>

**Centers of Cancer Nanotechnology Excellence (CCNEs)(U54)**

RFA-CA-09-012

National Cancer Institute

<http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-09-012.html>



To unsubscribe from this newsletter please send an email to Dr. Betty Tarnowski  
[tarnowsb@mail.nih.gov](mailto:tarnowsb@mail.nih.gov) Send meeting announcements and other information you would like to  
have included in this newsletter to Ulli Wagner: [urike@mail.nih.gov](mailto:urike@mail.nih.gov)





**Cancer Nanotechnology Platform Partnerships (U01)**

RFA-CA-09-013

National Cancer Institute

<http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-09-013.html>

**Identifying Non-coding RNA Targets for Cancer Early Detection and Prevention (R01)**

PA-09-199

National Cancer Institute

<http://grants.nih.gov/grants/guide/pa-files/PA-09-199.html>

**Identifying Non-coding RNA Targets for Cancer Early Detection and Prevention (R21)**

PA-09-200

National Cancer Institute

<http://grants.nih.gov/grants/guide/pa-files/PA-09-200.html>

## Repository News

The MMHCC Mouse Repository is an NCI-supported resource for the distribution of mouse cancer models and associated strains. The Repository makes strains available to all members of the scientific community. Up to 3 breeder pairs of each available strain may be ordered.

### Newly accepted strains

The following strain has recently been accepted into the MMHCC Repository and is available for distribution (*please click on the specific link, below, for additional information*):

1. B6D2F1-Tg(WAPT121)66Tvd (WAPT121)  
<http://mouse.ncifcrf.gov/details.asp?ID=01X61>
2. C57BL/6-Tg(TG-HPV16E6E7)1Py (TG-E6/E7 )  
<http://mouse.ncifcrf.gov/details.asp?ID=01XCA>
3. FVB-Tg(MT-HGFSF)19Lmb (MH19)  
<http://mouse.ncifcrf.gov/details.asp?ID=01XFA>

More information can be found on the Mouse Repository's website: <http://mouse.ncifcrf.gov>





## What's new in caMOD

The following models have been approved for public display since May 7, 2009.  
Visit <http://cancermodels.nci.nih.gov> to learn more about these new models.

Model ID	Model Descriptor	Species
<a href="#">50061140</a>	Influence of WR 2721 on radiation response of canine soft tissue sarcomas	Dog
<a href="#">50061201</a>	Piroxicam, mitoxantrone, and coarse fraction radiotherapy for the treatment of transitional cell carcinoma of the bladder in 10 dogs	Dog
<a href="#">50061337</a>	Intratumoral injections of a bacterial superantigen with a cytokine gene in dogs with malignant melanoma	Dog
<a href="#">50061460</a>	Radiation plus local hyperthermia versus radiation plus the combination of local and whole-body hyperthermia in canine sarcomas.	Dog
<a href="#">50061295</a>	Treatment of spontaneous canine cancer with human GM-CSF-transfected tumor cell vaccines	Dog
<a href="#">50061498</a>	Therapy for osteosarcoma in dogs with intravenous injection of liposome-encapsulated muramyl tripeptide.	Dog
<a href="#">50061221</a>	Perioperative intratumoral administration of cisplatin for treatment of cutaneous tumors in horses	Horse
<a href="#">50061255</a>	Intratumoral cisplatin versus bleomycin for treatment of periocular squamous cell carcinomas in horses	Horse
<a href="#">50061275</a>	Perioperative versus postoperative intratumoral administration of cisplatin for treatment of cutaneous sarcoids and squamous cell carcinomas in horses	Horse
<a href="#">50061411</a>	EMT6 tumors in Balb/c mice treated with gadolinium (III) texaphyrin	Mouse
<a href="#">50061423</a>	SMT-F tumors in DBA/2N mice treated with gadolinium (III) texaphyrin	Mouse
<a href="#">50061434</a>	MCA tumors in C3H/He mice treated with gadolinium (III) texaphyrin	Mouse
<a href="#">50061383</a>	Response to motexafin gadolinium and ionizing radiation of experimental rat lung tumors	Rat
<a href="#">50061396</a>	Response to motexafin gadolinium and ionizing radiation of experimental rat prostate tumors	Rat





## News from the Knock Out Mouse Project (KOMP)

The KOMP Repository is the official archive and distribution center for the Knockout Mouse Project (KOMP), a major 5-year trans-NIH initiative designed to generate null alleles in C57BL/6 embryonic stem (ES) cells for most genes not already available as knockout mice. Nearly 8500 genes are targeted for deletion, most in a conditional-ready format, by mutagenesis teams at "CSD" (Childrens Hospital of Oakland Research Institute, The Sanger Institute, and UC Davis) and at Regeneron, Inc. You can obtain targeting vectors, ES cells, mice, and germplasm, as well as microinjection, genotyping, cryopreservation, breeding, and other services quickly and at reasonable cost to help you with your research project.

<http://www.komp.org>

**The following ES Cells were made available within the last month.**

Abbreviation	Gene Name	Gene Info Page
3300001P08Rik	RIKEN cDNA 3300001P08 gene	<a href="http://www.komp.org/geneinfo.php?geneid=8144">http://www.komp.org/geneinfo.php?geneid=8144</a>
Abcg8	ATP-binding cassette, sub-family G (WHITE), member 8	<a href="http://www.komp.org/geneinfo.php?geneid=17985">http://www.komp.org/geneinfo.php?geneid=17985</a>
Abi3	ABI gene family, member 3	<a href="http://www.komp.org/geneinfo.php?geneid=18018">http://www.komp.org/geneinfo.php?geneid=18018</a>
Agpat4	1-acylglycerol-3-phosphate O-acyltransferase 4 (lysophosphatidic acid acyltransferase, delta)	<a href="http://www.komp.org/geneinfo.php?geneid=18662">http://www.komp.org/geneinfo.php?geneid=18662</a>
Ano2	anoctamin 2	<a href="http://www.komp.org/geneinfo.php?geneid=84399">http://www.komp.org/geneinfo.php?geneid=84399</a>
Apc	adenomatosis polyposis coli	<a href="http://www.komp.org/geneinfo.php?geneid=23478">http://www.komp.org/geneinfo.php?geneid=23478</a>
Atp4a	ATPase, H <sup>+</sup> /K <sup>+</sup> exchanging, gastric, alpha polypeptide	<a href="http://www.komp.org/geneinfo.php?geneid=24064">http://www.komp.org/geneinfo.php?geneid=24064</a>
BC021785	cDNA sequence BC021785	<a href="http://www.komp.org/geneinfo.php?geneid=29300">http://www.komp.org/geneinfo.php?geneid=29300</a>
Bnip1	BCL2/adenovirus E1B interacting protein 1	<a href="http://www.komp.org/geneinfo.php?geneid=30388">http://www.komp.org/geneinfo.php?geneid=30388</a>
Camk1g	calcium/calmodulin-dependent protein kinase I gamma	<a href="http://www.komp.org/geneinfo.php?geneid=32989">http://www.komp.org/geneinfo.php?geneid=32989</a>
Ccnk	cyclin K	<a href="http://www.komp.org/geneinfo.php?geneid=33442">http://www.komp.org/geneinfo.php?geneid=33442</a>
cela1	chymotrypsin-like elastase family, member 1	<a href="http://www.komp.org/geneinfo.php?geneid=56615">http://www.komp.org/geneinfo.php?geneid=56615</a>
Cp	ceruloplasmin	<a href="http://www.komp.org/geneinfo.php?geneid=34835">http://www.komp.org/geneinfo.php?geneid=34835</a>
Crip3	cysteine-rich protein 3	<a href="http://www.komp.org/geneinfo.php?geneid=35032">http://www.komp.org/geneinfo.php?geneid=35032</a>
Csnk1a1	casein kinase 1, alpha 1	<a href="http://www.komp.org/geneinfo.php?geneid=35191">http://www.komp.org/geneinfo.php?geneid=35191</a>
Cybb	cytochrome b-245, beta polypeptide	<a href="http://www.komp.org/geneinfo.php?geneid=35421">http://www.komp.org/geneinfo.php?geneid=35421</a>





Cyp2c70	cytochrome P450, family 2, subfamily c, polypeptide 70	<a href="http://www.komp.org/geneinfo.php?geneid=35521">http://www.komp.org/geneinfo.php?geneid=35521</a>
F2rl2	coagulation factor II (thrombin) receptor-like 2	<a href="http://www.komp.org/geneinfo.php?geneid=57486">http://www.komp.org/geneinfo.php?geneid=57486</a>
Fabp2	fatty acid binding protein 2, intestinal	<a href="http://www.komp.org/geneinfo.php?geneid=57587">http://www.komp.org/geneinfo.php?geneid=57587</a>
Fam161b	family with sequence similarity 161, member B	<a href="http://www.komp.org/geneinfo.php?geneid=14613">http://www.komp.org/geneinfo.php?geneid=14613</a>
Fam20a	family with sequence similarity 20, member A	<a href="http://www.komp.org/geneinfo.php?geneid=29501">http://www.komp.org/geneinfo.php?geneid=29501</a>
Fcf1	FCF1 small subunit (SSU) processome component homolog ( <i>S. cerevisiae</i> )	<a href="http://www.komp.org/geneinfo.php?geneid=698">http://www.komp.org/geneinfo.php?geneid=698</a>
Fuz	fuzzy homolog ( <i>Drosophila</i> )	<a href="http://www.komp.org/geneinfo.php?geneid=58405">http://www.komp.org/geneinfo.php?geneid=58405</a>
Gabra1	gamma-aminobutyric acid (GABA) A receptor, subunit alpha 1	<a href="http://www.komp.org/geneinfo.php?geneid=58550">http://www.komp.org/geneinfo.php?geneid=58550</a>
Glg1	golgi apparatus protein 1	<a href="http://www.komp.org/geneinfo.php?geneid=59053">http://www.komp.org/geneinfo.php?geneid=59053</a>
Hk2	hexokinase 2	<a href="http://www.komp.org/geneinfo.php?geneid=62865">http://www.komp.org/geneinfo.php?geneid=62865</a>
Hmgcr	3-hydroxy-3-methylglutaryl-Coenzyme A reductase	<a href="http://www.komp.org/geneinfo.php?geneid=63083">http://www.komp.org/geneinfo.php?geneid=63083</a>
Icam2	intercellular adhesion molecule 2	<a href="http://www.komp.org/geneinfo.php?geneid=64056">http://www.komp.org/geneinfo.php?geneid=64056</a>
Ipcef1	interaction protein for cytohesin exchange factors 1	<a href="http://www.komp.org/geneinfo.php?geneid=14834">http://www.komp.org/geneinfo.php?geneid=14834</a>
Itih1	inter-alpha trypsin inhibitor, heavy chain 1	<a href="http://www.komp.org/geneinfo.php?geneid=65098">http://www.komp.org/geneinfo.php?geneid=65098</a>
Kif5b	kinesin family member 5B	<a href="http://www.komp.org/geneinfo.php?geneid=65513">http://www.komp.org/geneinfo.php?geneid=65513</a>
Kirrel2	kin of IRRE like 2 ( <i>Drosophila</i> )	<a href="http://www.komp.org/geneinfo.php?geneid=65537">http://www.komp.org/geneinfo.php?geneid=65537</a>
Lig3	ligase III, DNA, ATP-dependent	<a href="http://www.komp.org/geneinfo.php?geneid=66573">http://www.komp.org/geneinfo.php?geneid=66573</a>
Loxl4	lysyl oxidase-like 4	<a href="http://www.komp.org/geneinfo.php?geneid=66805">http://www.komp.org/geneinfo.php?geneid=66805</a>
Man2a1	mannosidase 2, alpha 1	<a href="http://www.komp.org/geneinfo.php?geneid=67582">http://www.komp.org/geneinfo.php?geneid=67582</a>
Mpo	myeloperoxidase	<a href="http://www.komp.org/geneinfo.php?geneid=69180">http://www.komp.org/geneinfo.php?geneid=69180</a>
Obfc2b	oligonucleotide/oligosaccharide-binding fold containing 2B	<a href="http://www.komp.org/geneinfo.php?geneid=71292">http://www.komp.org/geneinfo.php?geneid=71292</a>
Olfir242	olfactory receptor 242	<a href="http://www.komp.org/geneinfo.php?geneid=72188">http://www.komp.org/geneinfo.php?geneid=72188</a>
Plk4	polo-like kinase 4 ( <i>Drosophila</i> )	<a href="http://www.komp.org/geneinfo.php?geneid=74604">http://www.komp.org/geneinfo.php?geneid=74604</a>





Ppard	peroxisome proliferator activator receptor delta	<a href="http://www.komp.org/geneinfo.php?geneid=75047">http://www.komp.org/geneinfo.php?geneid=75047</a>
Prss21	protease, serine, 21	<a href="http://www.komp.org/geneinfo.php?geneid=75481">http://www.komp.org/geneinfo.php?geneid=75481</a>
Psmid13	proteasome (prosome, macropain) 26S subunit, non-ATPase, 13	<a href="http://www.komp.org/geneinfo.php?geneid=75608">http://www.komp.org/geneinfo.php?geneid=75608</a>
Pspc1	paraspeckle protein 1	<a href="http://www.komp.org/geneinfo.php?geneid=75635">http://www.komp.org/geneinfo.php?geneid=75635</a>
Pum2	pumilio 2 (Drosophila)	<a href="http://www.komp.org/geneinfo.php?geneid=75798">http://www.komp.org/geneinfo.php?geneid=75798</a>
Rab11a	RAB11a, member RAS oncogene family	<a href="http://www.komp.org/geneinfo.php?geneid=76074">http://www.komp.org/geneinfo.php?geneid=76074</a>
Racgap1	Rac GTPase-activating protein 1	<a href="http://www.komp.org/geneinfo.php?geneid=76164">http://www.komp.org/geneinfo.php?geneid=76164</a>
Rad50	RAD50 homolog (S. cerevisiae)	<a href="http://www.komp.org/geneinfo.php?geneid=76172">http://www.komp.org/geneinfo.php?geneid=76172</a>
Rgn	regucalcin	<a href="http://www.komp.org/geneinfo.php?geneid=76895">http://www.komp.org/geneinfo.php?geneid=76895</a>
Sbf2	SET binding factor 2	<a href="http://www.komp.org/geneinfo.php?geneid=78102">http://www.komp.org/geneinfo.php?geneid=78102</a>
Sdc4	syndecan 4	<a href="http://www.komp.org/geneinfo.php?geneid=78340">http://www.komp.org/geneinfo.php?geneid=78340</a>
Serinc1	serine incorporator 1	<a href="http://www.komp.org/geneinfo.php?geneid=78542">http://www.komp.org/geneinfo.php?geneid=78542</a>
Slamf1	signaling lymphocytic activation molecule family member 1	<a href="http://www.komp.org/geneinfo.php?geneid=79149">http://www.komp.org/geneinfo.php?geneid=79149</a>
Smpd4	sphingomyelin phosphodiesterase 4	<a href="http://www.komp.org/geneinfo.php?geneid=79682">http://www.komp.org/geneinfo.php?geneid=79682</a>
Srd5a1	steroid 5 alpha-reductase 1	<a href="http://www.komp.org/geneinfo.php?geneid=80198">http://www.komp.org/geneinfo.php?geneid=80198</a>
St13	suppression of tumorigenicity 13	<a href="http://www.komp.org/geneinfo.php?geneid=80363">http://www.komp.org/geneinfo.php?geneid=80363</a>
Supt5h	suppressor of Ty 5 homolog (S. cerevisiae)	<a href="http://www.komp.org/geneinfo.php?geneid=80657">http://www.komp.org/geneinfo.php?geneid=80657</a>
Ubqln4	ubiquilin 4	<a href="http://www.komp.org/geneinfo.php?geneid=85606">http://www.komp.org/geneinfo.php?geneid=85606</a>
Vldlr	very low density lipoprotein receptor	<a href="http://www.komp.org/geneinfo.php?geneid=86152">http://www.komp.org/geneinfo.php?geneid=86152</a>
Ylpm1	YLP motif containing 1	<a href="http://www.komp.org/geneinfo.php?geneid=87130">http://www.komp.org/geneinfo.php?geneid=87130</a>

#### Disclaimer

NCI does not endorse or recommend any commercial products, processes, or services described in this newsletter, or in any "off-site" external link web pages referenced in this newsletter or in the NCI emice website. The views and opinions of authors expressed in this newsletter do not necessarily state or reflect those of the United States Government and they may not be used for advertising or product endorsement purposes. Further, this newsletter is intended for informational purposes only. NCI does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed. NCI makes no warranties, either express or implied; including the warranties of merchantability or fitness for a particular purpose or that the use of this software or data will not infringe any third party patents, copyrights, trademark, or other rights.



To unsubscribe from this newsletter please send an email to Dr. Betty Tarnowski  
[tarnowsb@mail.nih.gov](mailto:tarnowsb@mail.nih.gov) Send meeting announcements and other information you would like to  
have included in this newsletter to Ulli Wagner: [urrike@mail.nih.gov](mailto:urrike@mail.nih.gov)

