

## Cancer genetics the focus of UNC Lineberger symposium

UNC Lineberger's 39th annual scientific symposium was held April 8-9 at the William and Ida Friday Center for Continuing Education in Chapel Hill.

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Researchers working to uncover the genetic causes of cancer convened at UNC Lineberger Comprehensive Cancer Center's 39th annual symposium April 8-9, sharing strides made to translate those findings into the clinic.

More than 400 people attended the 39th annual event held April 8-9 at the William and Ida Friday Center for Continuing Education in Chapel Hill. Researchers from institutions around the country and from the United Kingdom presented findings of genomic abnormalities in a variety of cancers including acute myeloid leukemia, breast cancer, kidney cancer, bladder cancer, melanoma, lymphoma and lung cancer.

Co-organizer Charles M. Perou, PhD, a UNC Lineberger member and professor of genetics, pathology and laboratory medicine at the UNC School of Medicine, argued that we now know the genetic cause of a particularly aggressive form of breast cancer known as triple negative breast cancer. Triple negative breast cancer would be tied for fifth in deaths of U.S. women per year if it were its own disease, Perou said. A national effort to characterize the molecular alterations in cancer known as The Cancer Genome Atlas project found that for the basal-like breast cancer subtype, there is a surprisingly short list of significantly mutated genes, but a high rate of mutations in the TP53 gene, he said.

"I'll argue that we know the genetic causes of triple negative cancer," Perou said. However, even with this knowledge in hand, "there's still a great need to come up with therapies for the triple negative type of breast cancer."

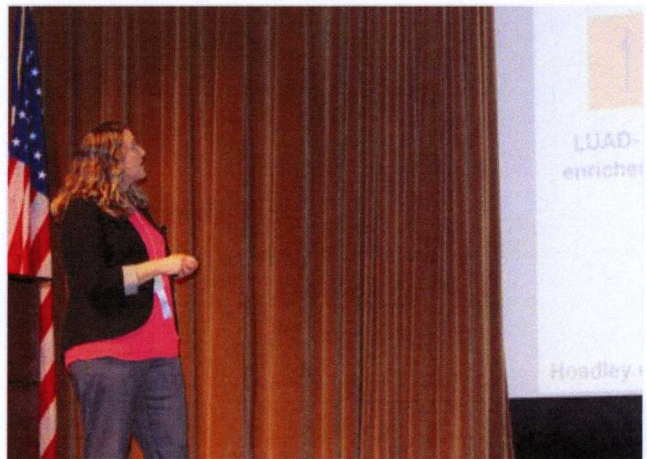
A number of the symposium speakers are actively involved in The Cancer Genome Atlas project (TCGA), which is a joint effort of the National Cancer Institute and National Human Genome Research Institute. Research institutions, including UNC, worked collaboratively as part of the project to map out the molecular characteristics of about 30 cancer types.

"(We) have generated this astounding resource, really, for cancer genomics, genetics, and now our challenge is to translate this into changes and improvements in clinical care," Perou said of the results of TCGA so far. While he said the production side of the effort is largely finished, the analysis of the data generated from it is ongoing.



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William Kim, MD, a UNC Lineberger member and an associate professor of medicine and genetics at the UNC School of Medicine, spoke on UNC's findings of molecular subtypes of bladder cancer at UNC Lineberger's 39th annual symposium.



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Katherine Hoadley, PhD, a UNC Lineberger member and research assistant professor in genetics, spoke at UNC Lineberger's 39th annual symposium about the findings of a pan-cancer molecular analysis of 12 different tissue types.

