Charles M. Perou, PhD
The May Goldman Shaw Distinguished Professor of Molecular Oncology
Professor of Genetics, and of Pathology & Laboratory Medicine
Member of the Lineberger Comprehensive Cancer Center
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Dr. Perou's research crosses the disciplines of genomics, cancer biology, bioinformatics, epidemiology, and clinical trials. A major contribution of his has been in the characterization of the diversity of breast tumors, which resulted in the discovery of the Basal-like/Triple-Negative Breast Cancer subtype. This genomics-based classification, known as the "intrinsic subtypes" of breast cancer, is now being used to improve risk stratification for breast cancer patients and to help physicians better understand why some cancers do or do not respond to standard therapies including endocrine and chemotherapy.

He and his colleagues demonstrated that breast tumors can be classified into at least five molecular subtypes, with his lab focusing particular attention on the Basal-like subtype. He is also elucidating the genetic causes that give rise to each subtype, modeling these events in genetically engineered mouse models, and then using these animal models to investigate the efficacy of new drugs and new drug combinations. Dr. Perou has also translated these molecular finding into human population-based studies; using the North Carolina-based epidemiological study (Carolina Breast Cancer Study), he and his colleagues found that pre-menopausal African American women were diagnosed with Basal-like tumors approximately twice as often as their Caucasian counterparts, thus providing insight into racial outcomes disparities differences seen in the USA.

Dr. Perou has authored more than 230 peer reviewed articles, and he is an inventor on 2 USA and 1 European patents. His lab has received support from the NIH/NCI, Breast Cancer Research Foundation, Susan G. Komen, and V Foundation for Cancer Research. He has been a faculty member at UNC-CH since 2000, where he is now the holder of an endowed professorship. He is the Faculty Director of the Lineberger Comprehensive Cancer Center (LCCC) Bioinformatics Group, and Co-Director of the LCCC Breast Cancer Research Program. He is a member of the ALLIANCE/CALGB Breast Committee, and Co-Chair of the Triple-Negative Working Group of the Translational Breast Cancer Research Consortium. He is also the co-founder of two genomics-based biotechnology companies (Bioclassifier LLC and GeneCentric Diagnostics), both of which are focused on developing genomic signatures into routine cancer diagnostics.

He earned his Bachelor's degree in Biology from Bates College, his PhD in Cell Biology from the University of Utah, and performed his postdoctoral work in the laboratory of David Botstein (then at Stanford University). Lastly, he was the recipient of the 2009 AACR Outstanding Investigator Award for Breast Cancer Research, the 2011 Danaher Scientific and Medical Award that is a Susan G. Komen Award for Scientific Distinction, the 2012 European Institute of Oncology Breast Cancer Therapy Award, the 2013 Hyman L. Battle Distinguished Cancer Research Award from UNC, and in 2014 he was named a Thomson Reuters Most Highly Cited Researcher.