

New International Partnership to Advance Georgia State Cancer Research

Georgia State University and the United Kingdom's University of Nottingham have partnered to initiate several innovative breast cancer studies aimed at improving the diagnosis of the disease, determining tumor aggressiveness more accurately and optimizing patient treatment.

The University of Nottingham is the birthplace of the distinguished Nottingham grading system, a widely used histologic grading system for breast cancer known for its ability to better predict clinical outcomes such as breast cancer-specific survival (BCSS) and disease-free survival (DFS).

With the help of histology, a tumor's source and likelihood of metastatic progression can be determined, allowing pathologists to develop more personalized treatment plans that may increase patients' survival rates while reducing adverse side effects.

Georgia State has also made its mark in breast cancer research and the study of cancer-related health disparities. Under the direction of biology Professor Ritu Aneja, the cancer research lab has spearheaded an unprecedented effort to build bridges with several local and international hospitals to tap into their resources and complementary expertise and advance the development of novel biomarkers and potential therapeutics.

The hospitals that Georgia State has collaborated with include Northside Hospital, Grady Hospital, Emory University Hospital, West Georgia Hospital, Cedars-Sinai in Los Angeles, Nottingham University Hospital and Poznan Hospital in Poland.

"Our laboratory is devoted to addressing the urgent unmet clinical need for novel biomarkers for prediction of metastasis risk and treatment response," said Aneja. "We are also examining the inherent genetic and cell biological differences between cancers in African-American and European-American populations. In addition, we are actively developing kinder, gentler and more efficacious chemotherapeutic modalities."

She added, "Our overarching goal is to more precisely predict the disease course for each patient and tailor-make their treatments for better outcomes."

Georgia State is pleased to add the University of Nottingham to its extensive network of partnering institutions. Emad Rakha, clinical associate professor and honorary consultant pathologist for the Department of Histopathology at the University of Nottingham, will be visiting Georgia State in March 2016 to offer a two-day course on breast molecular pathology.

Rakha, a world-renowned pathologist, has published over 180 papers in high-impact academic journals and currently serves as fellow of the Royal College of Pathologists.

Georgia State has also been given the opportunity to send graduate student Shristi Bhattarai to Nottingham to be trained in lab-related techniques that will aid in Georgia State's future research.

"This collaboration will break new ground in breast cancer research and catalyze meaningful improvements in clinical practices," said Rakha. "This is just the start of a long collaboration wherein pathology and cell biology will converge to focus on understanding in vivo growth kinetics of different breast cancer subtypes, their centrosomal profiles and how the interplay of all these traits and ancestry can shape the heterogeneity of tumors and their sensitivity to different treatments."

