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## Kaiso roles in racial disparity of TNBC prevalence and outcomes

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Breast cancer (BC) is the most frequent female cancer and 2<sup>nd</sup> leading cause of female deaths worldwide. However although BC death rates have significantly declined globally in the past 20 years, women of African ancestry (WAA) still have a disproportionately high BC mortality rate despite a lower overall BC incidence rate than Caucasian women. Intriguingly, the aggressive and often fatal BC subtype, triple negative breast cancer (TNBC), is most common in young WAA but the reason for this racial disparity in TNBC prevalence and mortality is currently unknown. Nonetheless, mounting evidence hints at genetic risk factors rather than socio-economic status as a cause for this racial disparity. Recently, increased expression of the unique transcription factor Kaiso was found to correlate with basal/TNBCs, suggesting that Kaiso may play a role in TNBC aggressiveness and racial disparity in WAA. Using tissue microarray and immunohistochemistry, we investigated Kaiso expression in a cohort of WAA TNBC patient tissues from Barbados and Nigeria, and a multi-ethnic cohort from the USA. We found a significant correlation between high Kaiso expression, the degree of African ancestry, and shorter metastasis-free survival in WAA. Notably, when Kaiso is depleted in BC cells, the cells exhibit decreased TGF $\beta$  signalling (a known promoter of metastasis), and did not metastasize to lungs or liver in a mouse model of breast cancer. Collectively these data implicate Kaiso in TNBC aggressiveness and racial disparity.

### Biography

Juliet M Daniel obtained her PhD in 1994 from the University of British Columbia, Vancouver, and conducted her Post-doctoral studies at St. Jude Children's Research Hospital (Memphis) and Vanderbilt University (Nashville) in Tennessee, USA. She is a Professor and Cancer Biologist in the Dept. of Biology at McMaster University in Hamilton, Ontario, Canada. He has mentored over 20 graduate students and postdoctoral fellows, and published more than 30 articles in reputed journals such as PLoS ONE, Oncotarget and Oncogenesis.

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