Short Communication

iMedPub Journals
http://www.imedpub.com

Cancer Biology and Therapeutic Oncology

2022
Vol 6. No. 2

Clinical values of two novel estrogen receptor signaling targeted lncRNAs in invasive ductal breast carcinoma

Shahrazad Ilbeigi

School of Medicine Shiraz University of Medical Science, Shiraz, Iran

Abstract

Invasive ductal carcinoma (IDC) is the most frequent type of breast cancer (BC) in women, with a high clinical burden due to its high invasive properties. Despite new data regarding the molecular heterogeneity of invasive cancers is quickly emerging; far less is known about the molecular patterns among cases of IDC. An expanding body of evidence has demonstrated that dysregulation of long noncoding RNAs (lncRNAs) is involved in the heterogeneity feature of the BC and with great potential as the prognosis, diagnosis, and therapeutic targets. In this study, we analyzed the expression levels of two novel lncRNAs LOC100288637 and RP11-48B3 in 51 IDC tissues in comparison with adjacent non-cancerous tissues (ANCTs). The qPCR results showed that LOC100288637 and RP11-48B3 were significantly overexpressed in tumor tissues compared to normal samples (P= 0.0085 and P= 0.0002, respectively). Also, the two lncRNAs were overexpressed in both MDA-MB-231 and MCF-7 BC cell lines, nevertheless, with a higher expression pattern in MDA-MB-231 than MCF7 cell line. Furthermore, LOC100288637 had an elevated expression level in HER-2 positive tumors compared to HER-2 negative tumors (P= 0.031). Interestingly, the lncRNA RP11-48B3.4 was upregulated in IDC subjects with age at menarche <14 compared to patients with age at menarche ≥14 (P= 0.041). It was observed in another result that lncRNA RP11-48B3.4 is significantly upregulated in tumors with a lower histological grade compared to tumor samples with higher grades (P= 0.047). And finally, using bioinformatic evaluation, we found a predicted interaction between RP11-48B3.4 and mRNA Zinc Finger and BTB Domain Containing 10 (ZBTB10). Altogether, our findings suggest that these lncRNAs with potential oncogenic roles involved in the pathogenesis of IDC with clinical significance, and thus, they may serve as novel markers for diagnosis and treatment of IDC.

Biography

Shahrazad Ilbeigi has completed his MSc of Human Genetics at the age of 28 years from Department of Medical Genetics, School of Medicine Shiraz University of Medical Science, Shiraz, Iran. she is Chief technician (Nov. 2019 _ ongoing) at Nanomedicine and Nanobiology Research Centre, Mohammad Rasool Allah Research Tower, Shiraz University of Medical Sciences, Shiraz, Iran.and she is also Research assistant (Mar.2018-Sep.2019) at Medical Genetic Department, Shiraz University of Medical Sciences, Shiraz, Iran.

Received Date: March 4, 2022 **Accepted Date:** March 16, 2022 **Published Date:** March 27, 2022