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Corrigendum: Distinct mRNA expression profiles and miRNA regulators of the PI3K/AKT/mTOR pathway in breast cancer: insights into tumor progression and therapeutic targets

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KEYWORDS

breast cancer, miRNA, PI3K/Akt/mTOR pathway, molecular marker, mRNA

A Corrigendum on

Distinct mRNA expression profiles and miRNA regulators of the PI3K/AKT/mTOR pathway in breast cancer: insights into tumor progression and therapeutic targets

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In the published article, there was an error in [Figure 1](#) as published. The incorrect image was displayed. The corrected [Figure 1](#) and its caption “Venn diagram of genes differentiating breast cancer from the control. LumA, luminal A; LumB, luminal B; HER2, human epidermal growth factor receptor 2; TNBC, triple-negative breast cancer; C, control; COL1A1, collagen type I alpha 1; COL1A2, collagen type I alpha 2; COL2A1, Collagen Type II Alpha 1 Chain; COL4A1, Collagen Type IV Alpha 1 Chain; COL4A4, Collagen Type IV Alpha 4 Chain; COL4A6, Collagen Type IV Alpha 6 Chain; COL6A2, Collagen Type VI Alpha 2 Chain; PIK3CA, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha; PIK3CB, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta; PIK3CD, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Delta; PIK3CG,

Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Gamma; *PIK3R1*, Phosphoinositide-3-Kinase Regulatory Subunit 1; *PIK3R4*, Phosphoinositide-3-Kinase Regulatory Subunit 4; *MAPK1*, Mitogen-Activated Protein Kinase 1; *MAPK3*, Mitogen-Activated Protein Kinase 3; *MAP2K2*, Mitogen-Activated Protein Kinase Kinase 2; *mTOR*, Mechanistic Target of Rapamycin” appear below.

In the published article, there was an error in Figure 2 as published. The incorrect image was displayed. The corrected Figure 2 and its caption “Expression profile of selected genes determined by qRT-PCR. LumA, luminal A; LumB, luminal B; HER2, human epidermal growth factor receptor 2; TNBC, triple-negative breast cancer; C, control; COL1A1, collagen type I alpha 1; COL1A2, collagen type I alpha 2; COL2A1, Collagen Type II Alpha 1 Chain; COL4A1, Collagen Type IV Alpha 1 Chain; COL4A4, Collagen Type IV Alpha 4 Chain; COL4A6, Collagen Type IV Alpha 6 Chain; COL6A2, Collagen Type VI Alpha 2 Chain; *PIK3CA*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha; *PIK3CB*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta; *PIK3CD*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Delta; *PIK3CG*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Gamma; *PIK3R1*, Phosphoinositide-3-Kinase Regulatory Subunit 1; *PIK3R4*, Phosphoinositide-3-Kinase Regulatory Subunit 4; *MAPK1*, Mitogen-Activated Protein Kinase 1; *MAPK3*, Mitogen-Activated Protein Kinase 3; *MAP2K2*, Mitogen-Activated Protein Kinase Kinase 2; *mTOR*, Mechanistic Target of Rapamycin” appear below.

In the published article, there was an error in Figure 3 as published. The incorrect image was displayed. The corrected Figure 3 and its caption “Relationship network for the selected PI3K/AKT/mTOR pathway differentiation genes generated in the STRING database. COL1A1, collagen type I alpha 1; COL1A2, collagen type I alpha 2; COL2A1, Collagen Type II Alpha 1 Chain; COL4A1, Collagen Type IV Alpha 1 Chain; COL4A4, Collagen Type IV Alpha 4 Chain; COL4A6, Collagen Type IV Alpha 6 Chain; COL6A2, Collagen Type VI Alpha 2 Chain; *PIK3CA*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha; *PIK3CB*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta; *PIK3CD*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Delta; *PIK3CG*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Gamma; *PIK3R1*, Phosphoinositide-3-Kinase Regulatory Subunit 1; *PIK3R4*, Phosphoinositide-3-Kinase Regulatory Subunit 4; *MAPK1*, Mitogen-Activated Protein Kinase 1; *MAPK3*, Mitogen-Activated Protein Kinase 3; *MAP2K2*, Mitogen-Activated Protein Kinase Kinase 2; *mTOR*, Mechanistic Target of Rapamycin” appear below.

In the published article, there was an error in Figure 6 as published. The incorrect image was displayed. The corrected Figure 6 and its caption “Overall survival analysis for luminal B HER2+ subtype” appear below.

In the published article, there was an error in Figure 7 as published. The incorrect image was displayed. The corrected Figure 7 and its caption “Overall survival analysis for non-luminal HER2+ cancers subtype” appear below.

In the published article, there was an error in Figure 8 as published. The incorrect image was displayed. The corrected Figure 8 and its caption “Overall survival analysis for TNBC subtype” appear below.

In the published article, there was an error. The title of sub-section 3.1 was incorrect.

A correction has been made to **Section 3. Results, Sub-section 3.1**. This sentence previously stated:

“Microarray profile of histaminergic system-related genes breast cancer samples in comparison with control tissue”

The corrected sentence appears below:

“Microarray profile of PI3K/AKT/mTOR pathway-related genes breast cancer samples in comparison with control tissue”

In the published article, there was an error. The title of sub-section 3.2 was incorrect.

A correction has been made to **Section 3. Results, Sub-section 3.2**. This sentence previously stated:

“Expression pattern of histaminergic system-related genes in breast cancer samples compared to control tissue analyzed by qRT-PCR”

The corrected sentence appears below:

“Expression pattern of PI3K/AKT/mTOR pathway-related genes in breast cancer samples compared to control tissue analyzed by qRT-PCR”

The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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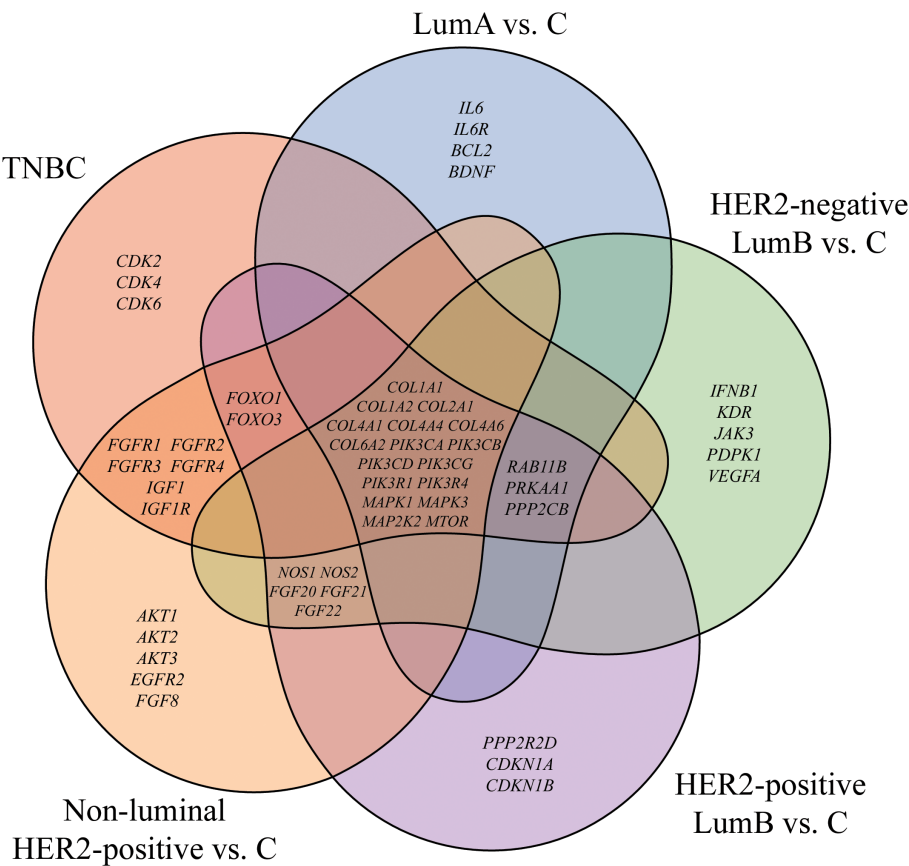


FIGURE 1
Venn diagram of genes differentiating breast cancer from the control. LumA, luminal A; LumB, luminal B; HER2, human epidermal growth factor receptor 2; TNBC, triple-negative breast cancer; C, control; *COL1A1*, collagen type I alpha 1; *COL1A2*, collagen type I alpha 2; *COL2A1*, Collagen Type II Alpha 1 Chain; *COL4A1*, Collagen Type IV Alpha 1 Chain; *COL4A4*, Collagen Type IV Alpha 4 Chain; *COL4A6*, Collagen Type IV Alpha 6 Chain; *COL6A2*, Collagen Type VI Alpha 2 Chain; *PIK3CA*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha; *PIK3CB*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta; *PIK3CD*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Delta; *PIK3CG*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Gamma; *PIK3R1*, Phosphoinositide-3-Kinase Regulatory Subunit 1; *PIK3R4*, Phosphoinositide-3-Kinase Regulatory Subunit 4; *MAPK1*, Mitogen-Activated Protein Kinase 1; *MAPK3*, Mitogen-Activated Protein Kinase 3; *MAP2K2*, Mitogen-Activated Protein Kinase Kinase 2; *mTOR*, Mechanistic Target of Rapamycin.

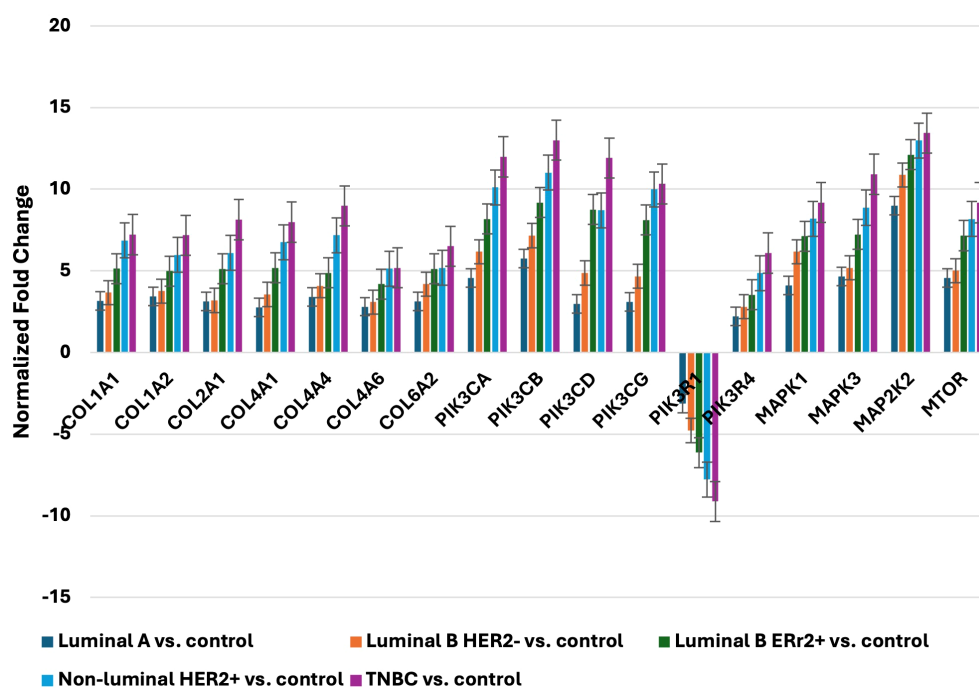


FIGURE 2

Expression profile of selected genes determined by qRT-PCR. LumA, luminal A; LumB, luminal B; HER2, human epidermal growth factor receptor 2; TNBC, triple-negative breast cancer; C, control; *COL1A1*, collagen type I alpha 1; *COL1A2*, collagen type I alpha 2; *COL2A1*, Collagen Type II Alpha 1 Chain; *COL4A1*, Collagen Type IV Alpha 1 Chain; *COL4A4*, Collagen Type IV Alpha 4 Chain; *COL4A6*, Collagen Type IV Alpha 6 Chain; *COL6A2*, Collagen Type VI Alpha 2 Chain; *PIK3CA*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Alpha; *PIK3CB*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Beta; *PIK3CD*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Delta; *PIK3CG*, Phosphatidylinositol-4,5-Bisphosphate 3-Kinase Catalytic Subunit Gamma; *PIK3R1*, Phosphoinositide-3-Kinase Regulatory Subunit 1; *PIK3R4*, Phosphoinositide-3-Kinase Regulatory Subunit 4; *MAPK1*, Mitogen-Activated Protein Kinase 1; *MAPK3*, Mitogen-Activated Protein Kinase 3; *MAP2K2*, Mitogen-Activated Protein Kinase Kinase 2; *mTOR*, Mechanistic Target of Rapamycin.

