Transcriptomic study in women with trisomy 21 identifies a possible role of the GTPases of the immunity-associated proteins (GIMAP) in the protection of breast cancer.

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### Supplementary Table 2: Differential gene expression of GIMAP4, GIMAP6, GIMAP7 and GIMAP8 in 62 RNAseq libraries from 18 healthy women without BC versus 16 women with ductal carcinoma in situ (DCIS), 15 with HER2-positive (HER2+) and 13 triple-negative (TNeg). Note the significantly downregulated mRNA expression in the BC tissue, compared with the levels of expression in DCIS breast tissue. Log2FC: Logarithm of fold change.

The RNAseq libraries used were from the study of Varley et al. [14]:

**Healthy women**: SRR2040339, SRR2040340, SRR2040341, SRR2040342, SRR2040343, SRR2040344, SRR2040345, SRR2040346, SRR2040347, SRR2040348, SRR3151763, SRR1313204, SRR1313205, SRR1313206, SRR1313207, SRR1313208, ERR358485, ERR358486

**Women with DCIS**: SRR2040369, SRR2040370, SRR2040371, SRR2040372, SRR2040373, SRR1822176, SRR1822182, SRR1822177, SRR1822183, SRR1822184, SRR1822179, SRR1822185, SRR1822180, SRR1822186, SRR1822187

**Women with HER2+ BC**: SRR1538692, SRR1538693, SRR1538694, SRR1538695, SRR1538696, SRR1538697, SRR1538698, SRR1538699, SRR1538700, SRR1600265, SRR1600266, SRR1600267, SRR1600268, SRR1600270, SRR1600271

**Women TNeg BC**: SRR1313132, SRR1313133, SRR1313134, SRR1313135, SRR1313136, SRR1313137, SRR1313148, SRR1313147, SRR1313146, SRR1313145, SRR1313144, SRR1313143, SRR1313142

| Gene   | **log2FC** | **P-value** |
|--------|------------|-------------|
| **DCIS** |            |             |
| GIMAP4  | 0.953      | 0.0157      |
| GIMAP6  | 0.108      | 0.7980      |
| GIMAP7  | 1.513      | 0.0002      |
| GIMAP8  | 0.242      | 0.5002      |
| **HER2+** |            |             |
| GIMAP4  | -8.6       | 5.15E-43    |
| GIMAP6  | -11.9      | 1.25E-48    |
| GIMAP7  | -10.1      | 6.31E-43    |
| GIMAP8  | -9.56      | 2.33E-54    |
| **TNeg** |            |             |
| GIMAP4  | -0.70      | 0.1046      |
| GIMAP6  | -2.42      | 1.47E-06    |
| GIMAP7  | -0.49      | 0.2596      |
| GIMAP8  | -2.29      | 5.15E-08    |