

## Supplementary Material

- **1** Supplementary Figures and Tables
- **1.1 Supplementary Tables**

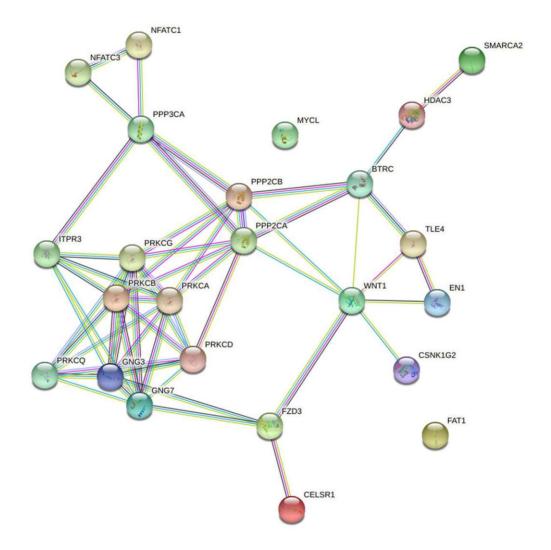
Supplementary Table 1. List of primers used for the methylation analysis of WNT1 by ddPCR.

Assay	Primers/Probe	5'-Sequence-3'
	Forward	GAGGGGTAGTTTTTTT
WNT1-M	Reverse	ТСТААСТТТААСААСССТААА
	Probe (FAM)	GATCGCGAGTTATGTTGT
	Forward	GAGGGGTAGTTTTTTTT
WNT1-U	Reverse	ТСТААСТТТААСААСССТААА
	Probe (HEX)	GGATTGTGAGTTATGTTGTT

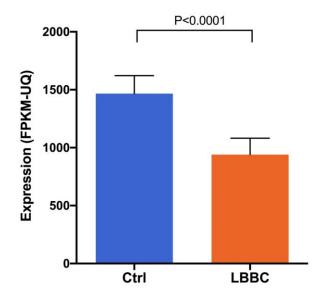
Characteristics	Patients (n=9)		
	No.	%	
Age (years)			
<65	3	33	
65-75	3	33	
>75	3	33	
Immunohistochemistry			
PR+	8	89	
ER+	9	100	
HER2+	2	22	
Ki-67 ≥ 20%	9	100	
Histology			
Ductal	9	100	
Stage			
IV	9	100	
Metastatic sites			
1	4	44	
2	2	22	
3	3	33	
Metastatic location			
Visceral	6	66	
Bone	4	44	

**Supplementary Table 2.** Clinical characteristics of metastatic patients with luminal B breast cancer included in the study.

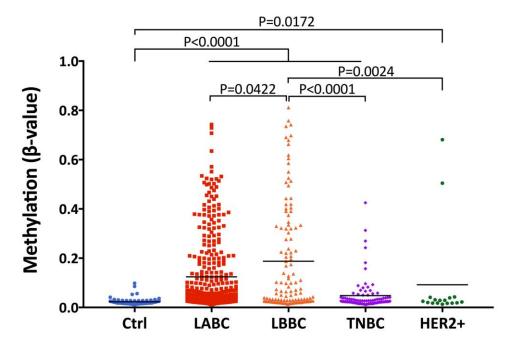
## **1.2 Supplementary Figures**



**Supplementary Figure 1.** The genes of the 34 DMCpGs related to the Wnt signaling pathway belong to a functional network significantly enriched in protein interactions (P<0.001).



**Supplementary Figure 2.** Expression of *WNT1* in primary luminal B breast tumors. Gene expression levels of *WNT1* available in primary tumors of luminal B breast cancer patients (n=122) and nontumor controls (n=67) obtained by RNA-seq from TCGA. Expression levels are represented as the mean  $\pm$  SEM.



**Supplementary Figure 3.** Methylation status of *WNT1* in primary tumors of breast cancer subtypes (LABC, n=358; LBBC, n=122; TNBC, n=87; HER2+, n=17) and nontumor controls (n=79) from TCGA. Methylation data have been obtained from EPIC array analysis considering all TNM stages together (stages I-IV). Ctrl, control; P, p-value. LABC, luminal A breast cancer; LBBC, Luminal B breast cancer; TNBC, triple negative breast cancer; HER2+, HER2-positive.