**Supplementary Figure 1.** Immunohistochemistry for COX2 in the chorioamniotic membranes. Representative images (**A**) and semi-quantification (**B**) of COX2 in the chorioamniotic membranes from women who underwent spontaneous preterm labor (n = 7) or labor at term (n = 8). Gestational age-matched non-labor controls were also included (n = 7-8 each). 20x magnification.

**Supplementary Figure 2.** Validation of relative telomere length in peripheral blood mononuclear cells. Relative telomere length in peripheral blood mononuclear cells using two sets of primers (primer set #1 and primer set #2) from two individuals (a 25 year old and a 52 year old).

## Supplementary Table 1: List of genes used in the RT-qPCR validation

Symbol	Gene Name	Assay ID	Lot
TP53	Tumor Protein p53	HS01034249_m1	1366180
CDKN1A (P21)	Cyclin-Dependent Kinase Inhibitor 1A	HS00355782_m1	1347306
CDK2	Cyclin-Dependent Kinase 2	HS01548894_m1	1356790
CCNA2	Cyclin A2	HS00996788_m1	1351631
CCNB1	Cyclin B1	HS01030099_m1	1323891
CCNE1	Cyclin E1	HS01026536_m1	1320002
ACTB	Beta-Actin	Hs99999903_m1	1086982



