	Baboon			Baboon			Baboon
GENE/Alias	125d gestation			125d gestation + BMZ			Effect of BMZ
	ΔCT			ΔCT			
	mean	sd		mean	sd		p<0.05
Ca++ signaling							
CACNA1G/Ca-alpha1G	a			a			⬆
CACNA1C/CaLalpha1c	-4.56	0.33		-4.62	0.36		-
CACNB2/CaLbeta2	a			a			⬆
CACNB3/CaLbeta3	a			a			-
ATP2A3/SERCA3	a			a			⬆
SLC8A1/NCX-1	a			a	0.31		⬇
RHOA	1.54	0.12		1.47	0.10		-
RHOB	-2.05	0.73		-1.71	0.52		-
ROCK1	-1.82	0.42		-2.35 §	0.56		⬇
K+ channels							
KCNA2/Kv1.2	a			a			⬆
KCNA5/Kv1.5	a			a			-
KCNB1/Kv2.1	a			a			-
KCNS3/Kv9.3	a			a			⬆
KCNAB2/Kvbeta1.2	a			a			⬆
KCNAB1/Kvbeta1.3	a			a			⬆
KCNMA1/BKCa	-1.81	0.36		-1.89	0.32		-
KCNMB1/BKCa-beta1	a			a			⬆
KCNJ8/Kir6.1	-1.64	0.99		-1.43	0.64		-
ABCC9/SUR2	a			a			-
Contractile proteins							
CNN1/Calponin	a			a			-
CALD1/Caldesmon	a			a			-
TPM1/Tropomyosin	a			a			-
MYOCD/Myocardin	-3.05	0.18		-2.09 *	0.47		⬆
Vasoactive signaling							
AGTR1/Angiotensin II receptor type 1	-2.47	1.18		-0.96 *	0.95		⬆
ECE1	a			a			-
EDN1/ET1	-2.35	0.49		-2.35	0.65		-
EDNRA/ETA-receptor	a			a			-
HIF1A/HIF1 alpha	0.89	0.14		0.48 §	0.14		⬇

HMOX1/ hemeoxygenase 1	-5.60	0.83		-4.38 *	1.09		⬆
NOS3/eNOS	-4.77	0.59		-3.86 *	0.90		⬆
PTGS1/COX1	a			a			-
PTGS2/COX2	-3.45	0.24		-1.72 *	0.54		⬆
PTGER4/EP4	1.27	0.49		1.07	0.39		-
PTGIS/PGI2-synthase	a			a			-
PDE1A	-4.76	0.63		-5.35 §	0.56		⬇
PDE1B	a			a			⬆
PDE1C	-9.61	0.75		-9.57	0.82		-
PDE3A	a			a			-
PDE3B	a			a			⬆
PDE4D	a			a			-
PDE5A	-2.18	0.17		-2.71 §	0.50		⬇
PDGFB/PDGF-B chain	a			a			⬆
VEGFA	a			a			⬇
Vascular remodeling							
ANGPT1/Angiopoietin-1	-5.41	1.24		-3.84 *	1.11		⬆
ANGPT2/Angiopoietin-2	-3.95	1.12		-2.68 *	1.16		⬆
CD14	-4.43	0.51		-4.52	0.31		-
CDH5/VE-cadherin	-2.35	0.40		-1.93 *	0.29		⬆
CSF1/MCSF	-0.1.97	0.80		-1.29	0.68		-
EPAS1/HIF2 alpha	a			a			-
EPO/Erythropoietin	-6.07	1.47		-5.73	0.87		-
EPOR/ EPO receptor	-6.59	1.81		-5.13 *	1.67		⬆
FLT1/VEGFR-1	-2.93	0.78		-2.79	0.32		-
HAS2/Hyaluron synthase 2	-5.58	0.81		-5.01	0.78		-
IFNG/IFN gamma	-4.43	1.09		-3.64	1.30		-
IL6	-4.31	1.06		-3.19 *	0.7		⬆
IL8	-1.94	0.92		-1.48	0.60		-
MMP9	-3.47	0.89		-2.56	0.97		-
TFAP2B	a			a			-
TGFB1/TGF beta1	-0.39	0.43		-3.74	0.22		-
TNF/TNF alpha	-9.51	0.50		-9.40	0.40		-
TRAF1	-4.84	0.25		-5.02	0.42		-
VCAM1	-3.72	0.65		-3.57	0.76		-
VLA4/ Integrin alpha-4 subunit	-6.10	0.49		-6.52	0.33		-

Supplemental Table S1: Effects of antenatal betamethasone exposure on Real Time polymerase chain reaction (PCR) measurements of genes involved with ductus arteriosus constriction in baboon fetuses.

We previously examined and reported the effects of BMZ on 27 genes that were developmentally regulated in the baboon (Papio papio) ductus arteriosus (19). In those studies 20 fetuses from time-dated pregnant dams were delivered by Caesarean section (at 125±2 days gestation; full term = 185 days) and euthanized at the time of delivery. Ten of the dams were treated with 6 mg of intramuscular BMZ 48 and 24 h before elective delivery. The dose of BMZ was half of that used in humans to reflect the differing body weights of pregnant baboons and humans. In the current study we used the RNA from the same animals to examine the effects of BMZ on an additional 36 developmentally regulated genes.

ΔCT represents the difference in cycle threshold (CT) between the expression of the housekeeping gene Malate dehydrogenase (MDH) and the gene of interest. Each unit of ΔCT represents a 2-fold change in a gene's mRNA. The more negative the ΔCT, the fewer the number of starting copies of a gene (mRNA). Number of separate animals used: 125 days gestation (no antenatal betamethasone) (n=10), 125 days gestation + betamethasone (BMZ) (n=10).

⬆,* = $p<0.05$, ΔCT of 125d gestation + BMZ ductus is significantly greater (in a positive direction) than ΔCT of untreated 125 day gestation ductus; ⬇,§ = $p<0.05$, ΔCT is significantly less; - = $p>0.05$, ΔCT is not significantly different.

[a], data previously published in reference (19).

	F2-IsoPs	PGF2α	6-KetoPGF1α	PGD_2	PGE_2	TxB_2
Untreated (ng/mL)	26.7±1.8	1.05±0.52	6.72±0.46	13.47±0.81	9.24±0.68	1.78±0.13
Betamethasone (ng/mL)	28.1±2.60	0.728±0.24	7.05±0.73	14.16±1.04	9.09±0.89	2.11±0.23
Fold Change (untreated/beta)	0.95	1.44	0.95	0.95	1.02	0.84
P value	0.64	0.32	0.71	0.60	0.15	0.41

Supplemental Table S2: Prostaglandin metabolite production in fetal mouse ductus.

Ductus from untreated or betamethasone-exposed fetuses were incubated for 40 min in serum-free Dulbecco's modified Eagle's medium media. The conditioned media was collected and analyzed for prostaglandin metabolite production. Fold change in the production of each metabolite was determined by dividing the untreated value by the betamethasone-treated value. There were no significant differences between the two treatment groups. A total of 18 untreated litters and 17 betamethasone treated litters were used for the analysis. Values are mean±sd. F2-IsoPs = F2-isoprostanes.