**Figure S1.** Effect of BMP15 administration during IVM on expression of *INHBA* (A), *MAPK1* (B), *PTGS2* (C), *PTX3* (D), *EGFR* (E) and *CYCB2* (F) in cumulus cells. The expression level of β-ACTIN was used as an internal control. Data are compared to BMP15 0 ng/ml and shown as mean ± SEM (one-way ANOVA; Tukey’s post-hoc test; *n* = 3; small letters indicate *P* < 0.05; capital letter *P* < 0.01).



**Figure S2.** Effect of BMP15 administration during IVM on expression of *STAR* (A) and *CYP11A1* (B) mRNA in cumulus cells. The expression level of β-ACTIN was used as internal control for mRNA expression analysis. Data are compared to BMP15 0 ng/ml and shown as mean ± SEM (one-way ANOVA; Tukey’s post-hoc test; *n* = 3; small letters indicate *P* < 0.05; capital letter *P* < 0.01).



**Figure S3.** Effect of miR-20a mimic and *BMPR2* siRNA transfection during IVM on expression of *INHBA* (A), *MAPK1* (B), *PTGS2* (C), *PTX3* (D), *EGFR* (E) and *CYCB2* (F) in cumulus cells. The expression level of β-ACTIN was used as an internal control. Data are compared to their corresponding controls and shown as mean ± SEM (two-tailed *t*-test; *n* = 3; \**P* < 0.05; \*\**P* < 0.01; \*\*\**P* < 0.001).



**Figure S4.** Effect of miR-20a mimic and *BMPR2* siRNA transfection during IVM on expression of *CYP11A1* (A) and *STAR* mRNA level (B) in cumulus cells. The expression level of β-ACTIN was used as internal control for mRNA expression analysis. Data are compared to their corresponding controls and shown as mean ± SEM (two-tailed *t*-test; *n* = 3; \**P* < 0.05; \*\**P* < 0.01).