

1 **Table 1 suppl. Selective list from 604 gene sets enriched in hESCs treated with**
2 **DHT (DHT) and from 687 gene sets enriched in hESCs treated with vehicle**
3 **control (CON)**

Name	Size	Nominal-P	FDR (%)
List of gene sets enriched in hESCs treated with DHT (DHT)			
INTERFERON_SIGNALING	116	0	0
STEM_CELL_UP	184	0	0
STAT3_TARGETS_DN	39	0	0
ESR1_TARGETS_DN	446	0	0
ESTRADIOL_RESPONSE_24HR_DN	377	0	0.001
TEMPORAL_RESPONSE_TO_PROGESTERONE_CLUSTER_053		0	0.001
INFLAMMATORY_RESPONSE_AND_CHOLESTEROL_UP	29	0	0.002
REGULATED_BY_METHYLATION_UP	95	0	0.003
ENDMETRIUM_CANCER_DN	55	0	0.003
METASTASIS	26	0	0.004
VASCULAR_SMOOTH_MUSCLE_CONTRACTION	63	0	0.011
BREAST_CANCER_PROGRESSION_DN	56	0.002	0.013
DRUG_METABOLISM_CYTOCHROME_P450	20	0	0.015
CYTOKINE_SIGNALING_IN_IMMUNE_SYSTEM	186	0	0.016
IRS1_TARGETS_DN	96	0	0.019
UTERINE_FIBROID_DN	48	0.004	0.019
OVARIAN_CANCER_POOR_SURVIVAL_UP	26	0.008	0.024
RIG_I_LIKE_RECEPTOR_SIGNALING_PATHWAY	44	0.002	0.039
HEDGEHOG_SIGNALING_PATHWAY	29	0.002	0.045
BIOLOGICAL_OXIDATIONS	51	0.002	0.047

LYSOSOME	101	0	0.048
MAMMARY_LUMINAL_MATURE_UP	60	0.008	0.065
GLYCOLYSIS_GLUONEOGENESIS	39	0.006	0.129
CALCIUM_SIGNALING_PATHWAY	80	0.002	0.14
TRANSPORT_OF_GLUCOSE_AND_OTHER_SUGARS_BILE _SALTS_AND_ORGANIC_ACIDS_METAL_IONS _AND_AMINE_COMPOUNDS	31	0.008	0.15
FATTY_ACID_METABOLISM	29	0.033	0.21
TYROSINE_METABOLISM	19	0.049	0.224
CELL_ADHESION_MOLECULES_CAMS	52	0.031	0.229
TRYPTOPHAN_METABOLISM	21	0.041	0.235
ABC_TRANSPORTERS	19	0.073	0.241

List of gene sets enriched in in hESCs treated with vehicle control (CON)

CELL_CYCLE	111	0	0
CHROMOSOME_MAINTENANCE	77	0	0
MRNA_PROCESSING	149	0	0
CERVICAL_CANCER_PROLIFERATION_CLUSTER	134	0	0
ESTRADIOL_RESPONSE_24HR_UP	269	0	0
BREAST_CANCER_GRADE_1_VS_3_UP	140	0	0
HYPOXIA_DN	263	0	0
ADIPOGENESIS_3	94	0	0
REGULATED_BY_METHYLATION_DN	112	0	0
EMBRYONIC_STEM_CELL_CORE	317	0	0
RESPONSE_TO_PROSTAGLANDIN_E2_UP	127	0	0
METASTASIS_UP	191	0	0
ESR1_TARGETS	66	0	0

ALL_GLUCOCORTICOID_THERAPY_DN	328	0	0
PYRIMIDINE_METABOLISM	84	0	0.001
GLUCOSE_TRANSPORT	31	0	0.001
REGULATION_OF_GLUCOKINASE_BY_GLUCOKINASE_R EGULATORY_PROTEIN	24	0	0.001
TELOMERE_MAINTENANCE	41	0	0.001
ENDOTHELIUM_LYMPHATIC_VS_BLOOD_UP	93	0	0.001
TEMPORAL_RESPONSE_TO_P4_CLUSTER_14	130	0	0.004
P4_MEDIATED_OOCYTE_MATURATION	63	0	0.006
OOCYTE_MEIOSIS	87	0	0.006
ESR1_TARGETS_UP	19	0.01	0.02
CHOLESTEROL_BIOSYNTHESIS	19	0.016	0.021
EXTRACELLULAR_MATRIX_ORGANIZATION	48	0.006	0.022
MHC_CLASS_II_ANTIGEN_PRESENTATION	71	0.006	0.023
INFLAMMATORY_RESPONSE_LPS_DN	23	0.028	0.037
P53_SIGNALING_PATHWAY	59	0.004	0.054
GLUCAGON_SIGNALING_IN_METABOLIC_REGULATION	19	0.051	0.087
RNA_DEGRADATION	55	0.025	0.111
STAT3_TARGETS	22	0.091	0.151
POTASSIUM_CHANNELS	26	0.065	0.152
ENDOCRINE_THERAPY_RESISTANCE_4	206	0.022	0.171
PURINE_METABOLISM	106	0.028	0.19
INTRINSIC_PATHWAY_FOR_APOPTOSIS	27	0.092	0.203

4 *hESCs* human endometrial stromal cells, *DHT* dihydrotestosterone, *CON* control, *FDR*

5 false discovery rate