Figure S3

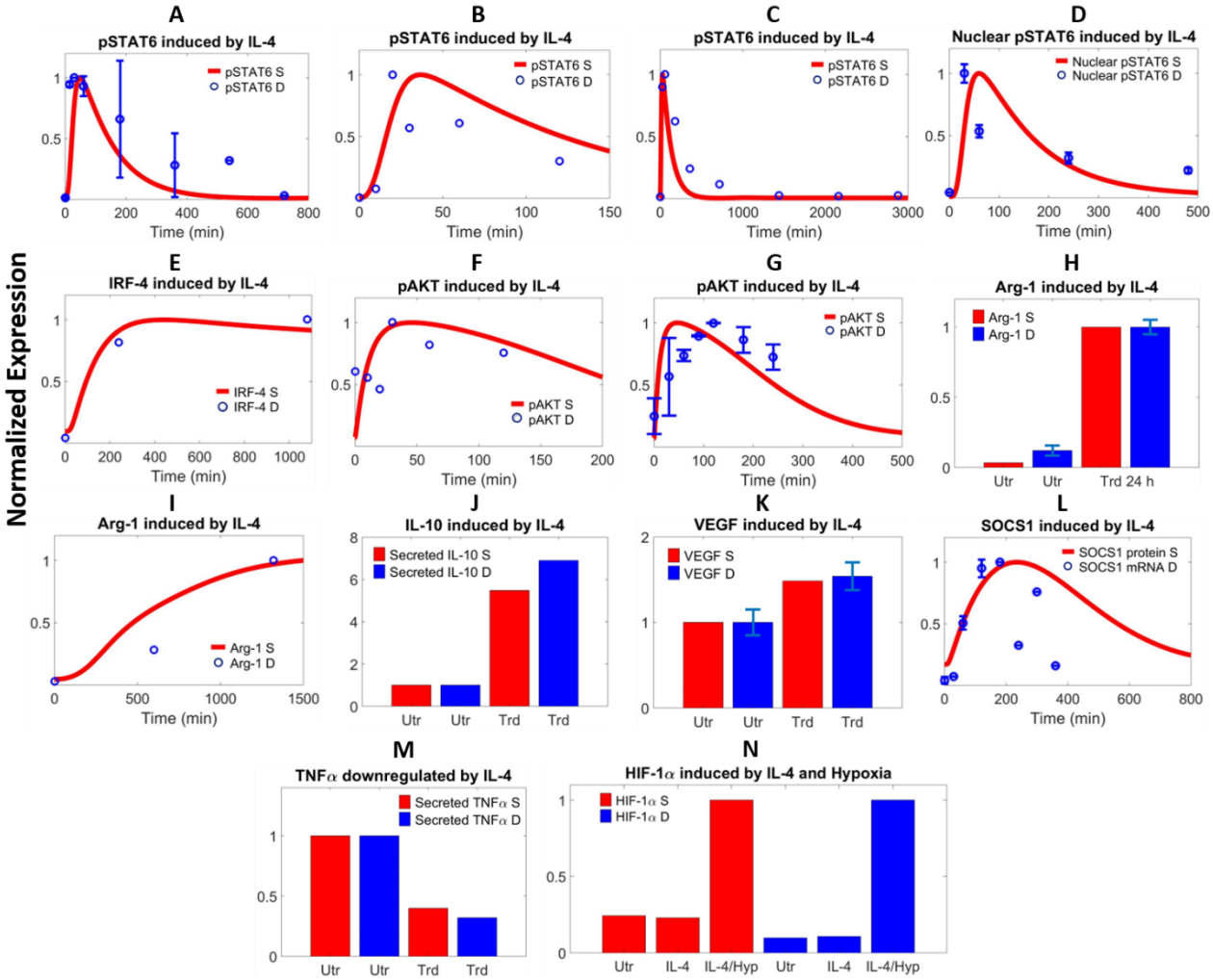

Figure S3. Additional model calibration data of IL-4-driven pathway. Comparisons between model simulations and published experimental data of IL-4-induced (A-C) STAT6 activation at 10 ng/ml (1-3), 50 ng/ml (4) and 100 nM IL-4 (5), (D) phosphorylated STAT6 in nucleus (6), (E) increase in IRF-4 expression (7), (F-G) AKT activation at 50 ng/ml (8) and 20 ng/ml IL-4 (9), (H-I) increase in Arg-1 production (6, 10), (J) increase in IL-10 production at 24 h (11), (K) increase in VEGF production (12), (L) SOCS1 induction (2), and (M) inhibition of TNFα production at 24 h (11). (N) Simulation and data show that hypoxia can stabilize HIF-1α protein while IL-4 stimulation has no effect (13). (A-N) All experimental data are measured in macrophage cell lines and values are for protein levels unless noted otherwise. Y-axes show normalized expression respectively (A-G, I, L: simulations and data are normalized to the maximum expression; J, K, M: normalized to the no-treatment/time 0 expression; H: normalized to the expression at 24 h; N: normalized to the expression under IL-4 treatment with hypoxia). (H) For Arg-1 production, data in terms of Arg-1 activity (formation of urea from arginine) is compared with simulation (Arg-1 protein level). (K) For VEGF production, data in terms of intracellular VEGF level is compared with simulation (secreted VEGF level). (L) For SOCS1 induction, data in terms of

SOCS1 mRNA level is compared with simulation (SOCS1 protein level), given the reasoning stated in Figures S2D-E. S – simulation, D – literature data, Utr – untreated, Trd – IL-4 treated, Hyp – hypoxia.

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