

**Table S5:** Biological pathways enriched at a FDR < 0.05 among genes in the different Cormotif patterns. The pathways are stratified by direction of transcription response in each Cormotif pattern, where up-regulated genes are indicated in **green** while down-regulated genes are indicated in **red**. For the pathways enriched among genes in the "All" and "All except V+L" patterns, **green** = genes up-regulated by 1,25D and down-regulated by LPS, **red** = genes down-regulated by 1,25D and up-regulated by LPS.

Biological Pathway	All	All except V+L	1,25D	1,25D-all	LPS
EIF2 Signaling	Green	Green			
Regulation of eIF4 and p70S6K Signaling	Green	Green			
mTOR Signaling	Green	Green			
Purine Nucleotides De Novo Biosynthesis II	Green				
tRNA Charging	Green				Red
Spermidine Biosynthesis I	Green				
Adenine and Adenosine Salvage I	Green				
Inosine-5'-phosphate Biosynthesis II	Green				
Oxidative Phosphorylation		Green	Green		
Mitochondrial Dysfunction		Green			Red
Granulocyte Adhesion and Diapedesis		Red			Green
IL-8 Signaling		Red			Green
NF-κB Signaling		Red			Green
IL-17A Signaling in Fibroblasts		Red			Green
PPAR Signaling		Red			
TNFR2 Signaling		Red			Green
Role of NFAT in Regulation of the Immune Response		Red			Green
Unfolded protein response		Red			
Mechanisms of Viral Exit from Host Cells		Red		Red	
4-1BB Signaling in T Lymphocytes		Red			Green
phagosome maturation		Red			
Induction of Apoptosis by HIV1		Red			
STAT3 Pathway		Red			
TWEAK Signaling		Red			
UDP-N-acetyl-D-glucosamine Biosynthesis II		Red			
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis		Red			Green
CXCR4 Signaling		Red			
IL-10 Signaling		Red			Green
Role of Hypercytokinemia/hyperchemokinememia in the Pathogenesis of Influenza		Red			
Apoptosis Signaling		Red			
Macropinocytosis Signaling			Green		
Adipogenesis			Green		
Role of JAK family kinases in IL-6-type Cytokine Signaling				Green	Green

RhoGDI Signaling					
B Cell Receptor Signaling					Green
Chemokine Signaling					
fMLP Signaling in Neutrophils					
Actin Nucleation by ARP-WASP Complex					
RhoA Signaling					
Integrin Signaling					
Tec Kinase Signaling					Green
Hereditary Breast Cancer Signaling					
Regulation of Actin-based Motility by Rho					
p70S6K Signaling					
Ephrin Receptor Signaling					
Role of BRCA1 in DNA Damage Response					
NRF2-mediated Oxidative Stress Response					Green
Signaling by Rho Family GTPases					
Actin Cytoskeleton Signaling					
CD28 Signaling in T Helper Cells					
Axonal Guidance Signaling					
FAK Signaling					
Non-Small Cell Lung Cancer Signaling					
N-acetylglucosamine Degradation II					
CCR3 Signaling in Eosinophils					
Remodeling of Epithelial Adherens Junctions					
Leukocyte Extravasation Signaling					Green
Fcy Receptor-mediated Phagocytosis in Macrophages and Monocytes					
Epithelial Adherens Junction Signaling					
IL-4 Signaling					
Glioma Signaling					
IL-6 Signaling					Green
Role of IL-17A in Arthritis					Green
IL-17A Signaling in Airway Cells					Green
Role of IL-17F in Allergic Inflammatory Airway Diseases					Green
TREM1 Signaling					Green
CD40 Signaling					Green
Dendritic Cell Maturation					Green
IL-17 Signaling					Green
Acute Phase Response Signaling					Green
Type II Diabetes Mellitus Signaling					Green
Glucocorticoid Receptor Signaling					Green
Role of IL-17A in Psoriasis					Green
RANK Signaling in Osteoclasts					Green
Regulation of IL-2 Expression in Activated and Anergic T Lymphocytes					Green
Agranulocyte Adhesion and Diapedesis					Green
Type I Diabetes Mellitus Signaling					Green
Amyloid Processing					Green
HGF Signaling					Green
T Helper Cell Differentiation					Green
NF-κB Activation by Viruses					Green
Toll-like Receptor Signaling					Green
IL-22 Signaling					Green
Hypoxia Signaling in the Cardiovascular System					Green



Folate Polyglutamylation						█
Ketogenesis						█
Dolichyl-diphosphooligosaccharide Biosynthesis						█