**Table 3. Ingenuity® Pathway Analysis – Top Canonical Pathway Genes**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pathway** | **IPA derived pathway level pValue** | **IPA Overlap (%)** | **Gene Symbol** | **Entrez Gene Name** | **pValue** | **Odds Ratio (OR)** | **Number of Variant Positive Cases (n=278)** | **Number of Variant Positive Controls (n=973)** |
| Glucocorticoid Biosynthesis  | 0.0107 | 2/8 (25) | *CYP11B2* | cytochrome P450 family 11 subfamily B member 2 | 0.005221 | 7.1175 | 6 (2.2%) | 3 (0.3%) |
|  | *CYP17A1* | cytochrome P450 family 17 subfamily A member 1 | 0.009882 | 14.151 | 4 (1.4%) | 1 (0.1%) |
| Melatonin Signaling  | 0.0133 | 5/69 (7.2%) | *MAP2K5* | mitogen-activated protein kinase kinase 5 | 0.049244 | INF | 2 (0.7%) | 0 |
|  | *MAP2K6* | mitogen-activated protein kinase kinase 6 | 0.047244 | 4.7125 | 4 (1.4%) | 3 (0.3%) |
|  | *OPN1SW* | opsin 1 (cone pigments), short-wave-sensitive | 0.049244 | INF | 2 (0.7%) | 0 |
|  | *PLCG1* | phospholipase C gamma 1 | 0.024477 | 7.0729 | 4 (1.4%) | 2 (0.2%) |
|  | *RORC* | RAR related orphan receptor C | 0.049244 | INF | 2 (0.7%) | 0 |
| Role of IL-17A in Psoriasis  | 0.0279 | 2/13 (15.4%) | *CXCL6* | C-X-C motif chemokine ligand 6 | 0.049244 | INF | 2 (0.7%) | 0 |
|  | *IL17RA* | interleukin 17 receptor A | 0.047244 | 4.7125 | 4 (1.4%) | 3 (0.3%) |
| Sulfate Activation for Sulfonation  | 0.0404 | 1/2 (50%) | *PAPSS2* | 3'-phosphoadenosine 5'-phosphosulfate synthase 2 | 0.049244 | INF | 2 (0.7%) | 0 |
| Glycine Degradation (Creatine Biosynthesis)  | 0.0404 | 1/2 (50%) | *GAMT* | guanidinoacetate N-methyltransferase | 0.049244 | INF | 2 (0.7%) | 0 |

INF=infinite