**Supplementary Table 5.** GO Pathway Analysis for candidate bovine mastitis genes.

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| **Pathway** | **Gene(s)** | **P-Value** |
| Malaria | CXCL8, CCL2, ICAM1, IFNG, IL-10, IL-18, IL-6, MYD88, TLR2, TLR4, TNF | 9.20E-19 |
| African trypanosomiasis | ICAM1, IFNG, IL-10, IL-18, IL-6, MYD88, TNF | 7.00E-11 |
| Legionellosis | CXCL8, CD14, IL-18, IL-6, MYD88, TLR2, TLR4, TNF | 1.00E-11 |
| Rheumatoid arthritis | CXCL8, CD86, CCL2, CSF2, ICAM1, IFNG, IL-18, IL-6, TLR2, TLR4, TNF | 4.60E-16 |
| Inflammatory bowel disease (IBD) | IFNG, IL10, IL-18, IL-4, IL-6, TLR2, TLR4, TNF | 4.60E-11 |
| Allograft rejection | CD86, IFNG, IL-10, IL-4, TNF | 2.70E-06 |
| Leishmaniasis | IFNG, IL-10, IL-4, MYD88, TLR2, TLR4, TNF | 4.10E-09 |
| NOD-like receptor signaling pathway | CXCL8, CCL2, IL-18, IL-6, TNF | 3.20E-06 |
| Salmonella infection | CXCL8, CD14, CSF2, IFNG, IL-18, IL-6, MYD88, TLR4 | 1.60E-10 |
| Graft-versus-host disease | CD86, IFNG, IL-6, TNF | 8.50E-05 |