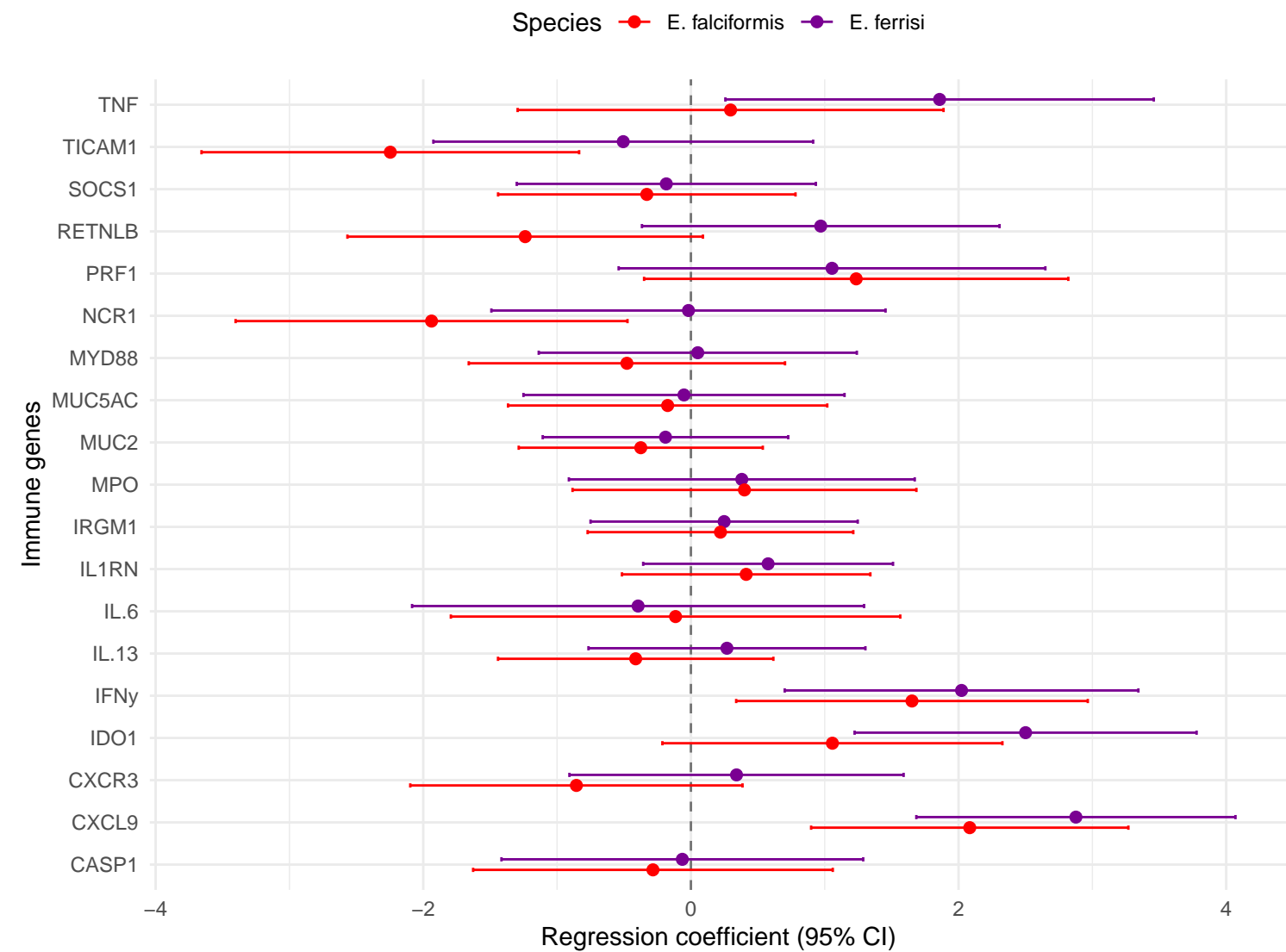
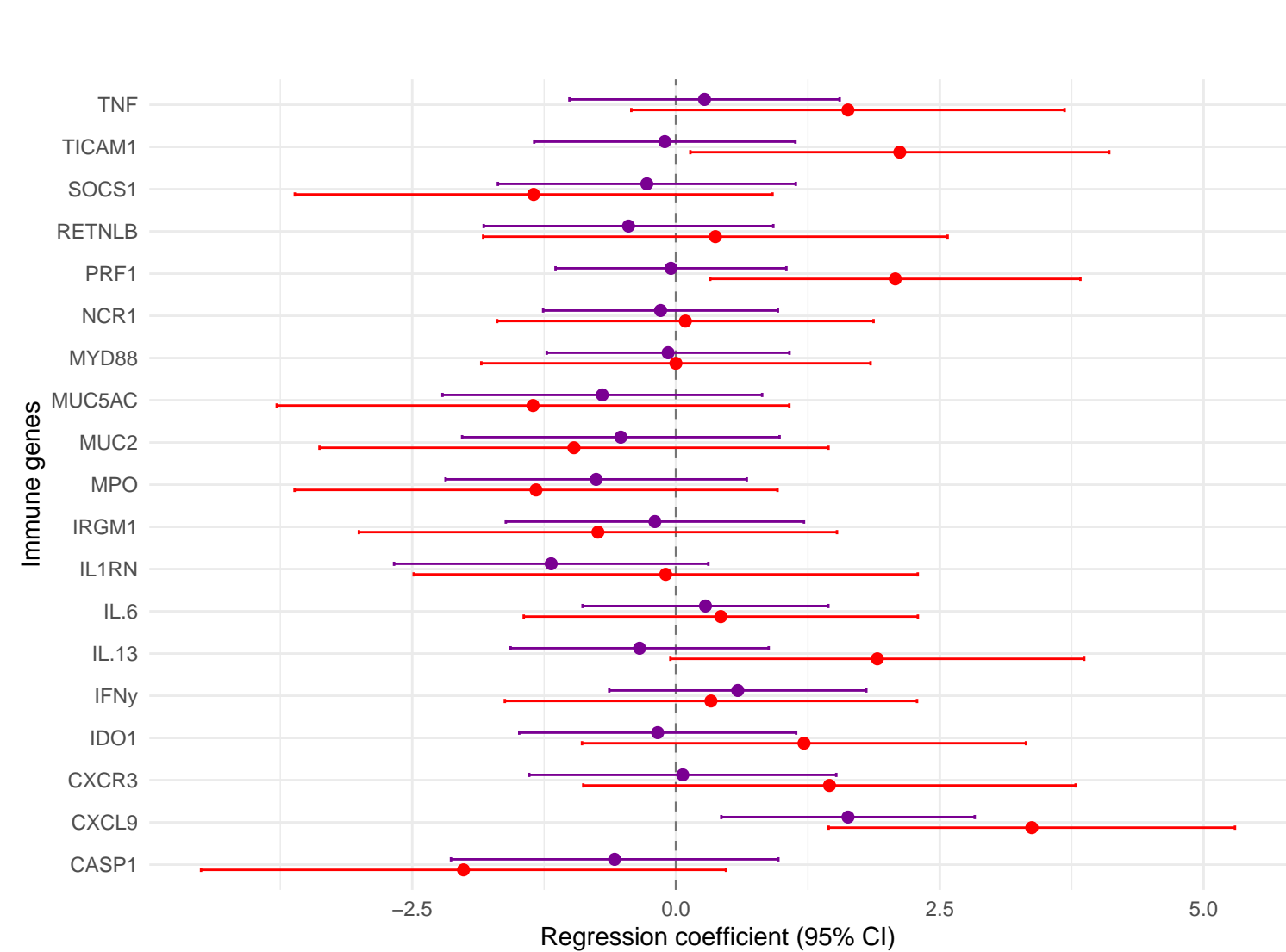


**Laboratory immune signatures translate to natural infections**  
Validation: 52.6% direction consistency, 51.4% PCA variance, CXCL9 conserved across populations

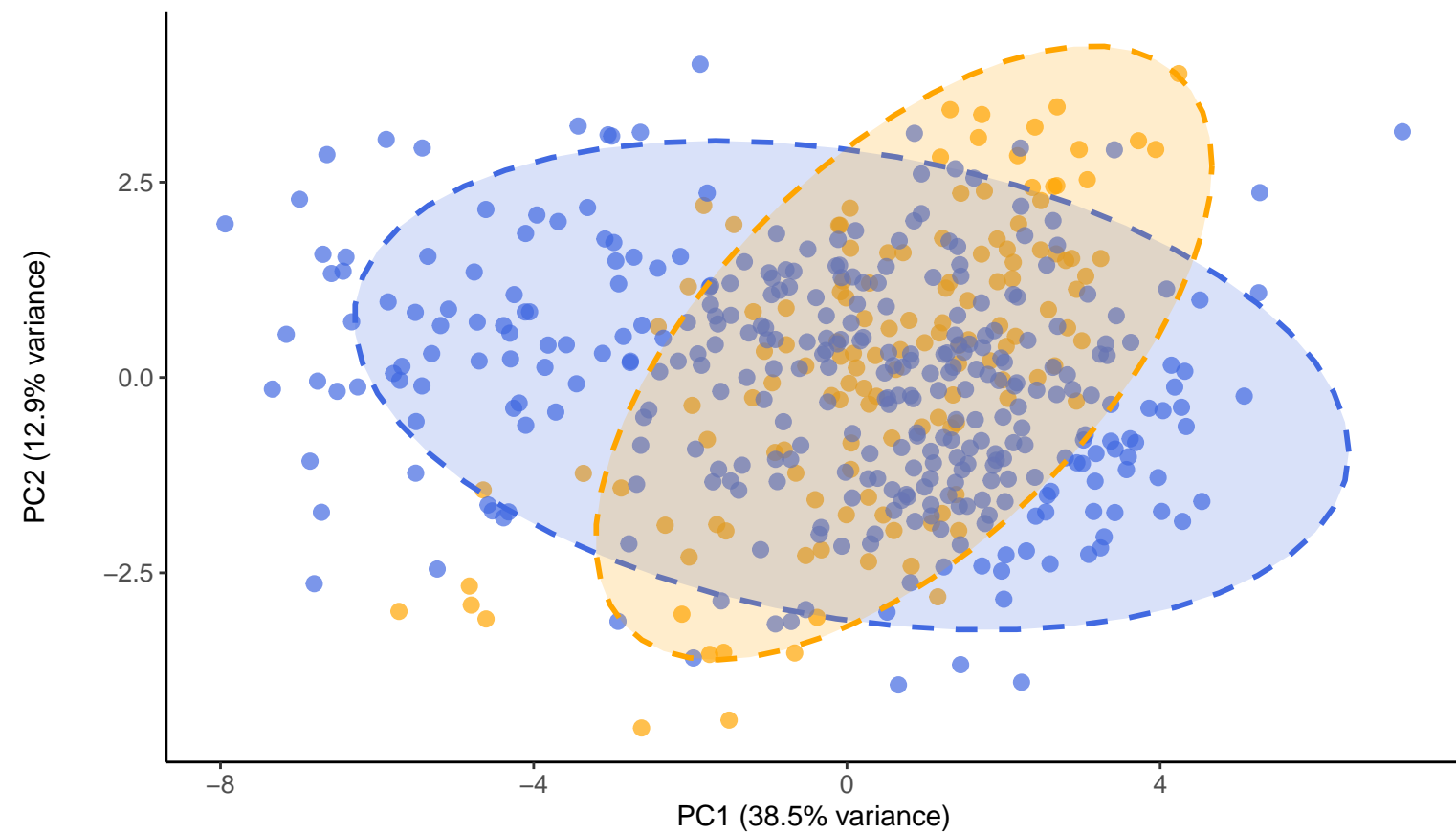
A) Laboratory infections



B) Field infections



C Population overlap supports translation (51.4% total variance)



D Effect correlation:  $r = 0.187$ ,  $p = 0.261$

