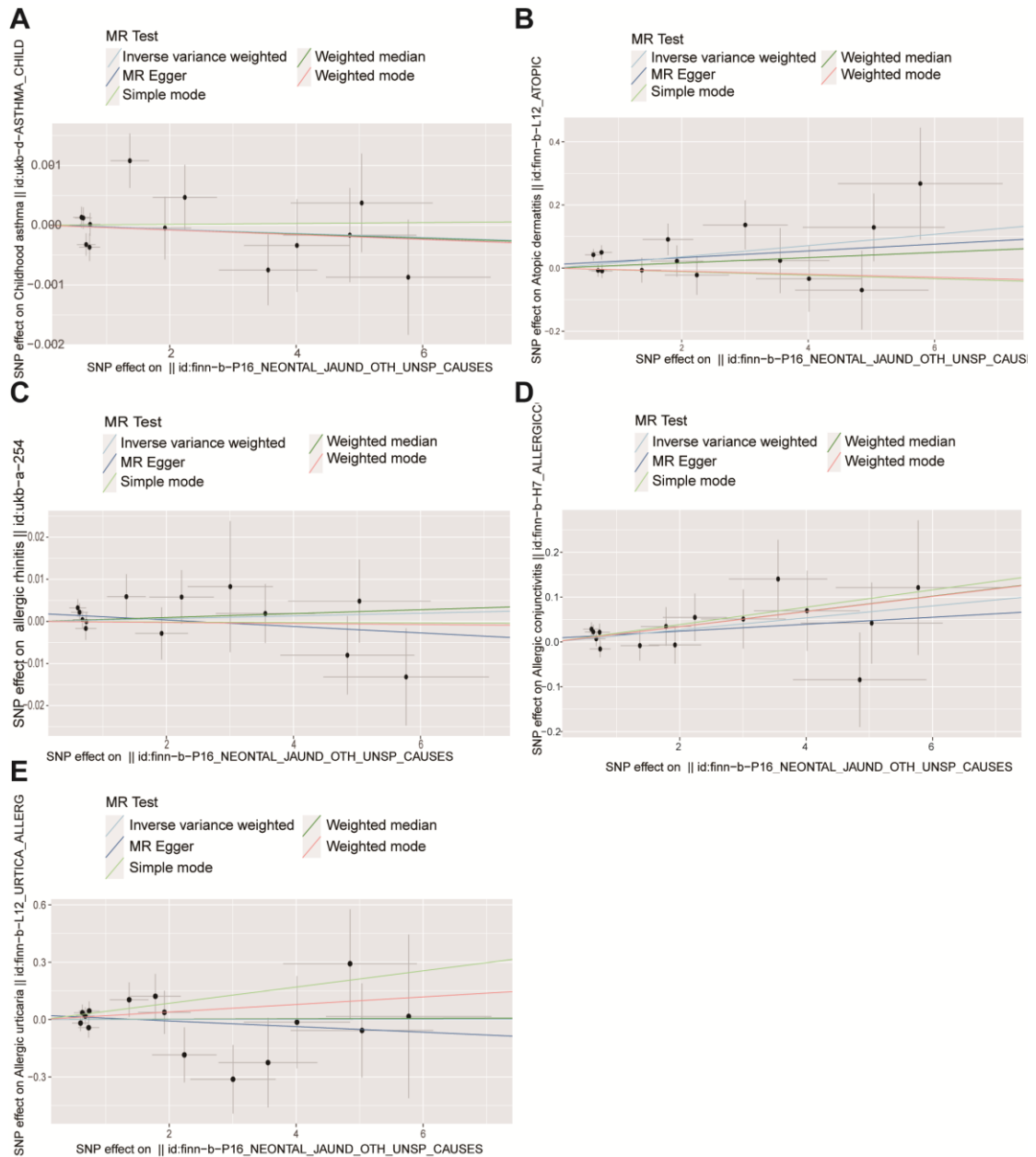
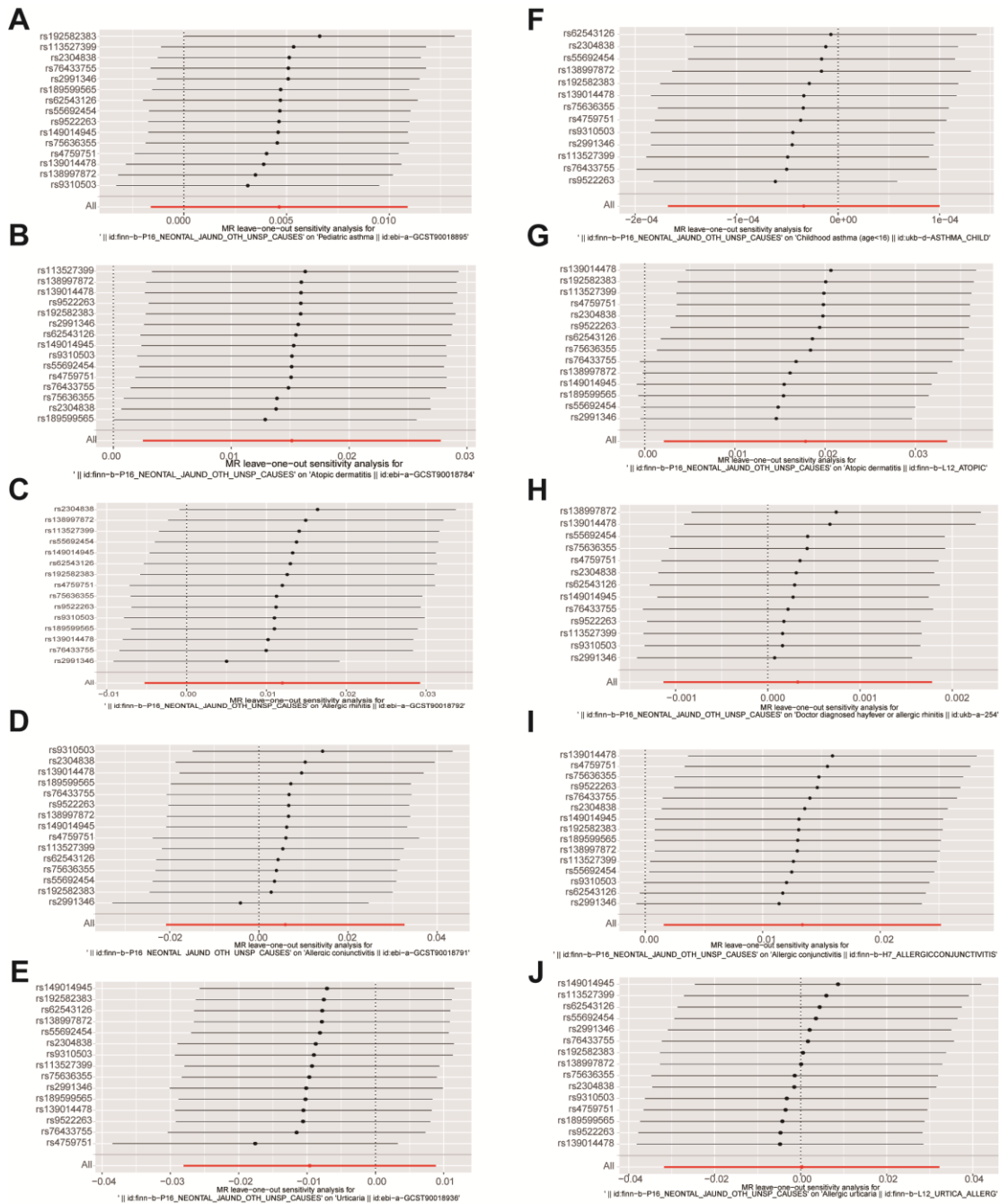


**Supplementary Figure S1.** Scatter plots of forward MR analysis in EBI. The slope of each line represents the expected MR impact in various models. (A) neonatal jaundice on Pediatric asthma; (B) neonatal jaundice on Atopic dermatitis; (C) neonatal jaundice on Allergic rhinitis; (D) neonatal jaundice on Allergic conjunctivitis; (E) neonatal jaundice on Allergic urticaria



**Supplementary Figure S2.** Scatter plots of forward MR analysis in UKB or FinnGen. The slope of each line represents the expected MR impact in various models. (A) neonatal jaundice on Pediatric asthma; (B) neonatal jaundice on Atopic dermatitis; (C) neonatal jaundice on Allergic rhinitis; (D) neonatal jaundice on Allergic conjunctivitis; (E) neonatal jaundice on Allergic urticaria



**Supplementary Figure S3.** The Leave-one-out forest plot of SNPs associated with neonatal jaundice and their risk of allergic

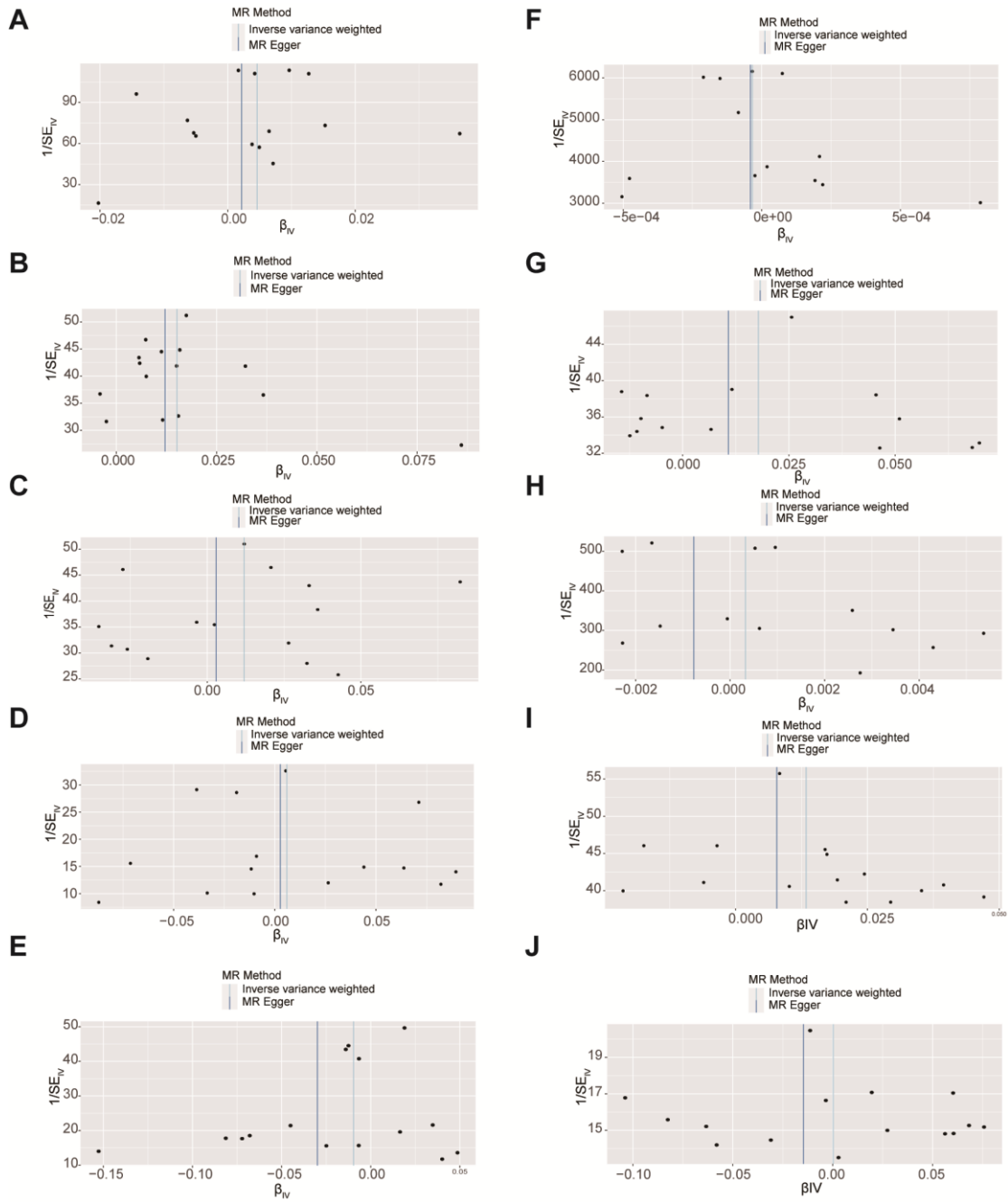
diseases in EBI (A-E). (A) neonatal jaundice on Pediatric asthma; (B) neonatal jaundice on Atopic dermatitis; (C) neonatal jaundice

on Allergic rhinitis; (D) neonatal jaundice on Allergic conjunctivitis; (E) neonatal jaundice on Allergic urticaria. The Leave-one-out

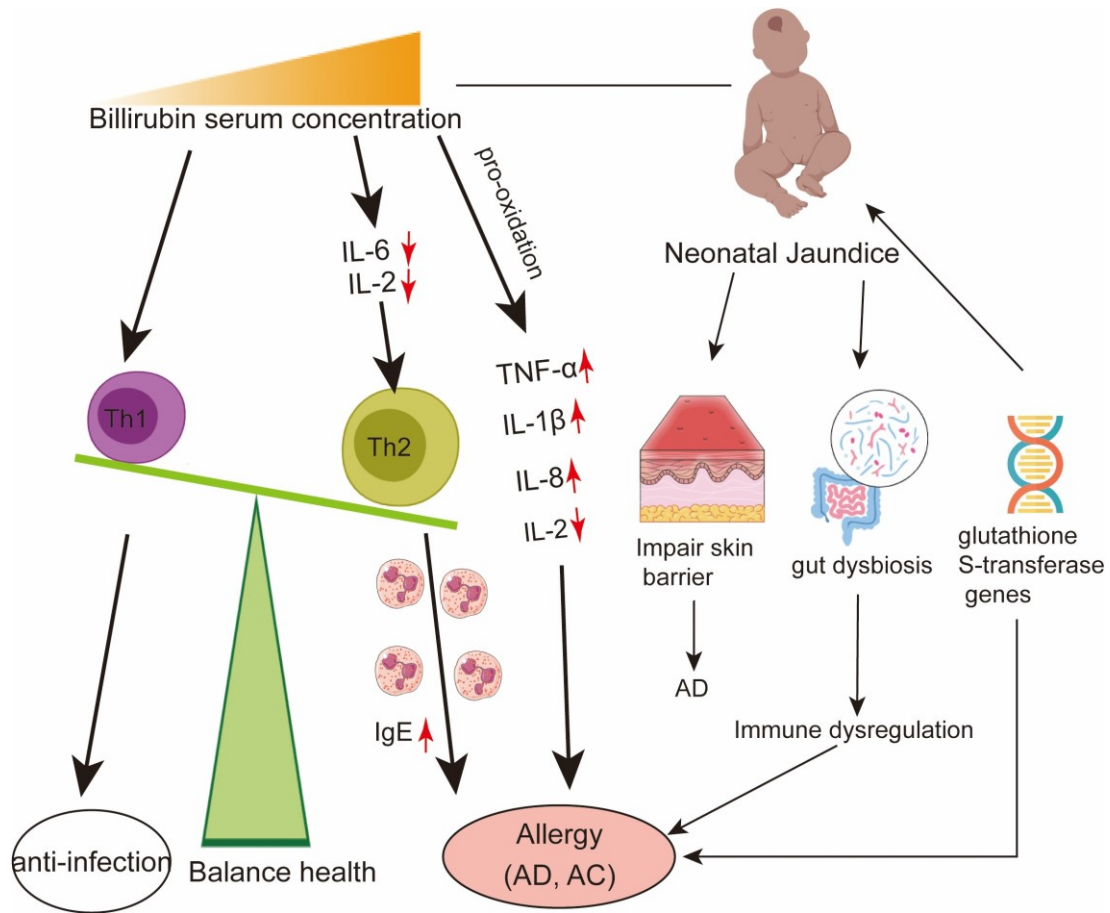
forest plot of SNPs associated with neonatal jaundice and their risk of allergic diseases in FinnGen or UKB (F-J). (F) neonatal

jaundice on Pediatric asthma; (G) neonatal jaundice on Atopic dermatitis; (H) neonatal jaundice on Allergic rhinitis; (I) neonatal

jaundice on Allergic conjunctivitis; (J) neonatal jaundice on Allergic urticaria



**Supplementary Figure S4.** The Funnel plot of SNPs associated with neonatal jaundice and their risk of allergic diseases in EBI (A-E). (A) neonatal jaundice on Pediatric asthma; (B) neonatal jaundice on Atopic dermatitis; (C) neonatal jaundice on Allergic rhinitis; (D) neonatal jaundice on Allergic conjunctivitis; (E) neonatal jaundice on Allergic urticaria. The Funnel plot of SNPs associated with neonatal jaundice and their risk of allergic diseases in FinnGen or UKB (F-J). (F) neonatal jaundice on Pediatric asthma; (G) neonatal jaundice on Atopic dermatitis; (H) neonatal jaundice on Allergic rhinitis; (I) neonatal jaundice on Allergic conjunctivitis; (J) neonatal jaundice on Allergic urticaria



**Supplementary Figure S5.** Conceptual diagram of the proposed pathways from neonatal jaundice to the development of AD and AC. AD: Atopic dermatitis; AC: Allergic conjunctivitis