## **Description of Additional Supplementary Files**

Supplementary Dataset 1: Master Table containing regulatory features for each SNP in each cell type used in this work.

Supplementary Dataset 2. Predicted regulatory effects of genes (GW Bcells r<sup>2</sup>>0.5) Supplementary Dataset 3. Predicted regulatory effects of genes (GW CNS r<sup>2</sup>>0.5) Supplementary Dataset 4. Predicted regulatory effects of genes (GW Lung r<sup>2</sup>>0.5) Supplementary Dataset 5. Predicted regulatory effects of genes (GW Monocytes r<sup>2</sup>>0.5) Supplementary Dataset 6. Predicted regulatory effects of genes (GW T cells r<sup>2</sup>>0.5) Supplementary Dataset 7. Predicted regulatory effects of genes (GW\_Th1 cells\_r<sup>2</sup>>0.5) Supplementary Dataset 8. Predicted regulatory effects of genes (GW Th2 cells r<sup>2</sup>>0.5) Supplementary Dataset 9. Predicted regulatory effects of genes (GW Th17 cells r<sup>2</sup>>0.5) Supplementary Dataset 10. Predicted regulatory effects of genes (GW Treg cells  $r^2>0.5$ ) Supplementary Dataset 11. Predicted regulatory effects of genes (SR Bcells r<sup>2</sup>>0.5) Supplementary Dataset 12. Predicted regulatory effects of genes (SR CNS r<sup>2</sup>>0.5) Supplementary Dataset 13. Predicted regulatory effects of genes (SR Lung  $r^2>0.5$ ) Supplementary Dataset 14. Predicted regulatory effects of genes (SR Monocytes r<sup>2</sup>>0.5) Supplementary Dataset 15. Predicted regulatory effects of genes (SR T cells  $r^2>0.5$ ) Supplementary Dataset 16. Predicted regulatory effects of genes (SR\_Th1 cells\_r<sup>2</sup>>0.5) Supplementary Dataset 17. Predicted regulatory effects of genes (SR Th2 cells  $r^2>0.5$ )

Supplementary Dataset 18. Predicted regulatory effects of genes (SR Th17 cells  $r^2>0.5$ ) Supplementary Dataset 19. Predicted regulatory effects of genes (SR Treg cells  $r^2>0.5$ ) Supplementary Dataset 20. Predicted regulatory effects of genes (NR B cells  $r^2>0.5$ ) Supplementary Dataset 21. Predicted regulatory effects of genes (NR\_CNS\_r<sup>2</sup>>0.5) Supplementary Dataset 22. Predicted regulatory effects of genes (NR Lung  $r^2>0.5$ ) Supplementary Dataset 23. Predicted regulatory effects of genes (NR\_Monocytes\_r<sup>2</sup>>0.5) Supplementary Dataset 24. Predicted regulatory effects of genes (NR T cells  $r^2>0.5$ ) Supplementary Dataset 25. Predicted regulatory effects of genes (NR\_Th1 cells\_r<sup>2</sup>>0.5) Supplementary Dataset 26. Predicted regulatory effects of genes (NR Th2 cells  $r^2>0.5$ ) Supplementary Dataset 27. Predicted regulatory effects of genes (NR Th17 cells r<sup>2</sup>>0.5) Supplementary Dataset 28. Predicted regulatory effects of genes (NR Treg cells r<sup>2</sup>>0.5) Supplementary Dataset 29. Prioritized genes by region and cell/tissue type Supplementary Dataset 30: Network properties of MS associated genes (population level) Supplementary Dataset 31: Analysis of MS associated SNPs in a sub-set of 2,370 patients and 412 controls from UCSF

Supplementary Dataset 32. Network properties of MS associated genes (individual level)

Supplementary Dataset 33. Autosomal non-MHC genome-wide effects.

Supplementary Dataset 34. Strongly suggestive list of autosomal non-MHC loci.

Supplementary Dataset 35. List of non-replicated autosomal non-MHC effects.