



**Figure S4** *ADMIXTURE* analysis of East Asian and Siberian populations with  $K = 2$  to 9. Ainu individuals are assigned to their own ancestry (dark grey) with  $K = 7$ , following separation of ancestry components concentrated in Sardinians (yellow), Native Americans (Karitiana and Surui; purple), Papuans (magenta), northeast Siberians (skyblue) and central Siberians and northeast Asians (orange; most concentrated in the Nganasan).