



**Fig. S3. Longitudinal changes in the skin microbiome between patient and control skin.** (a) The phylogenetic relationship of taxa identified as having significant longitudinal change (adjusted  $p < 0.05$ ). The colour and shape at each node indicate significant findings in patients' skin only, controls' skin only, both patients and controls, or neither. F: family; G: genus; S: species. (b) Longitudinal changes in microbial alpha diversity measured by Shannon diversity index in patient and control skin. Mean of the alpha diversity measures for samples at each time-point is shown. (c) Longitudinal changes in microbial beta diversity estimated by the first principal coordinate (PCoA1) in skin and control skin. Mean of the beta diversity estimates for samples at each time-point is shown.