

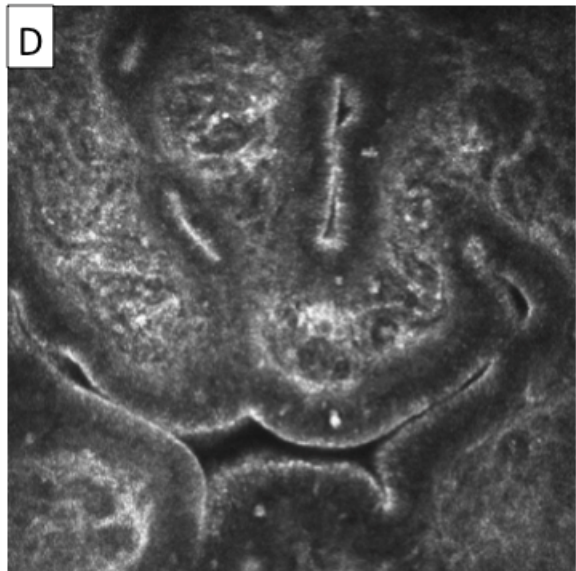
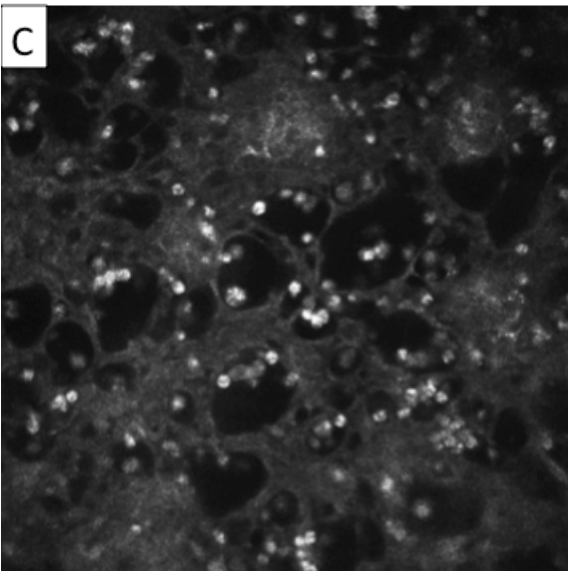
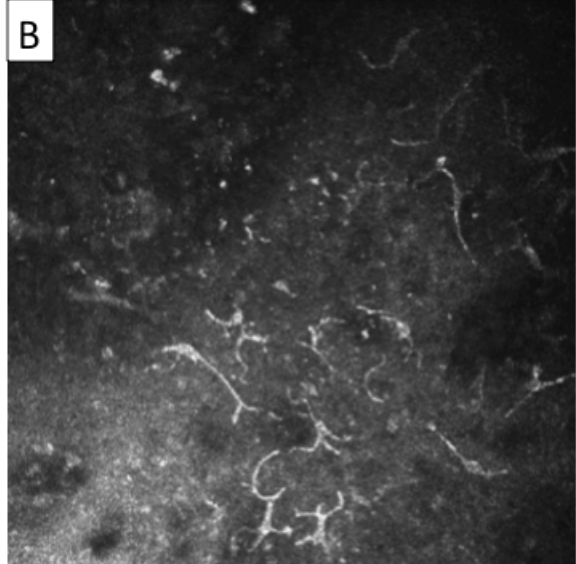
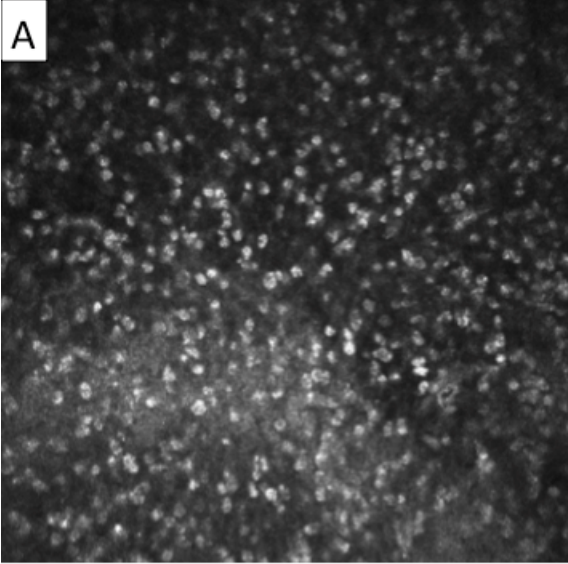
**Figure S1** *In vivo* confocal microscopy grading system of inflammatory features. Images are 400×400µm and are at a depth of around 10-30 µm from the surface.

**(a)** Inflammatory infiltrate: seen as multiple bright white nuclei. The mean inflammatory cell density of 3 randomly selected volume scans is calculated using the HRT/RCM software. The individual scan with the highest density of cells from within the volume scan is used for inflammatory cell density counting.

**(b)** Dendritiform cells: graded as present or absent. To be present, the mean number of DCs per volume scan needs to be  $\geq 1$ . The largest number of dendritiform cells in any individual scan in a volume scan is used for measurement. A mean number of  $\geq 1$  is used to differentiate occasional dendritiform cells seen in scans of otherwise normal subjects.

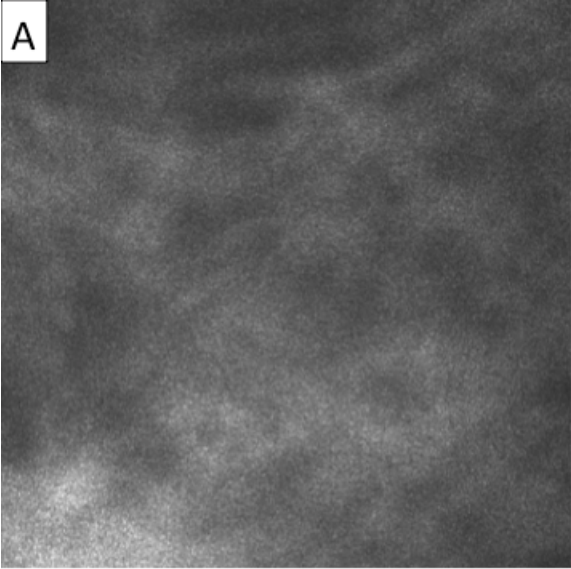
**(c)** Tissue edema: seen as multiple black empty spaces. Graded as present or absent in any volume scan.

**(d)** Papillae: seen as elevations with a central vascular network. Graded as present or absent in any volume scan.

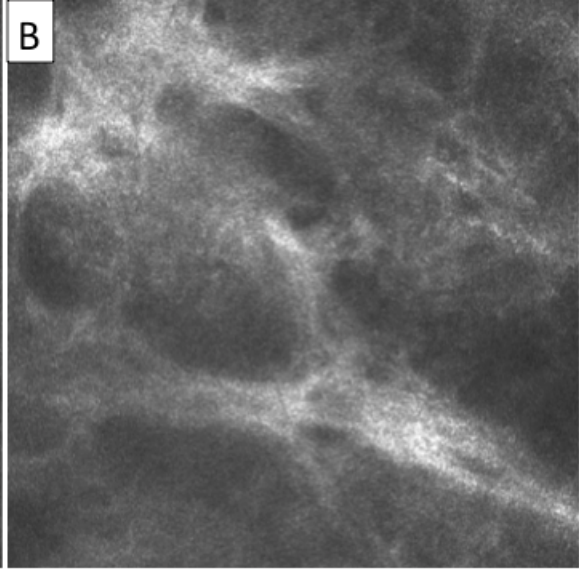


**Figure S2** *In vivo* confocal microscopy grading system for conjunctival connective tissue organization. Images are 400×400µm and at a depth of around 30-80 µm from the surface. **(a)** Normal: homogenous, amorphous appearance, with occasional, fine, wispy strands. **(b)** Grade 1: heterogenous appearance with poorly defined clumps or bands present. **(c)** Grade 2: clearly defined bands of tissue which constitute less than 50% of the area of the scan. **(d)** Grade 3: clearly defined bands or sheets of tissue which constitute 50% or more of the area of the scan and in which striations are present. If different grades of scarring are seen within a particular volume scan then the highest grade is recorded. The connective tissue which is graded needs to be separate from that associated with the vascular tissue, if this is not possible then the scan is considered ungradable.

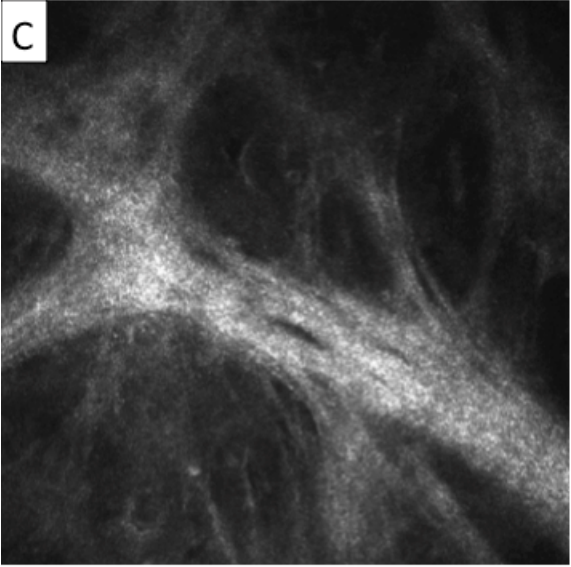
A



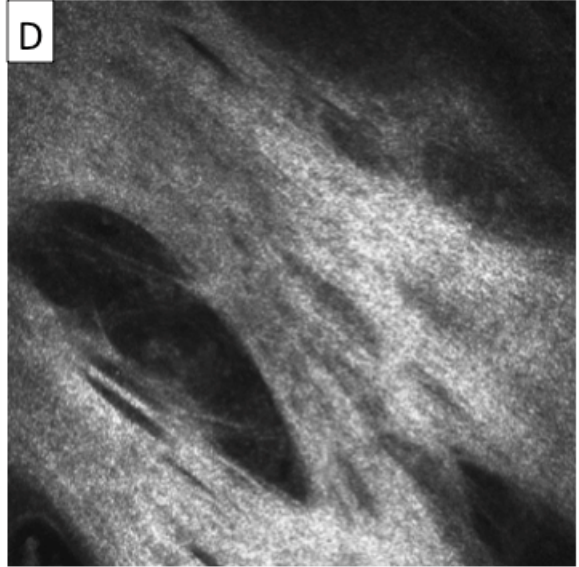
B



C



D



**Figure S3** Mean IVCM connective tissue scarring score by histological tarsal connective tissue scarring grade.

