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OPEN Author Correction: Matrix metalloproteinase-9 activity and a downregulated Hedgehog pathway impair blood-brain barrier function in an in vitro model of CNS tuberculosis

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This Article contains an error in Figure 5a, where the key is incorrect. The correct Figure 5 appears below.

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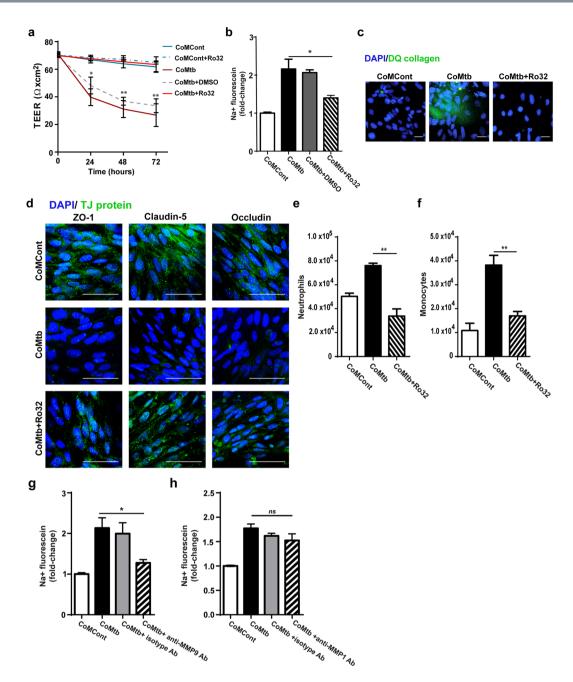


Figure 5. Blockade of MMP-9 activity prevents blood-brain barrier disruption. (a) Trans-endothelial resistance (TEER; $\Omega \times cm^2$) of blood-brain barrier (BBB) co-cultures incubated with control (CoMCont), CoMCont +Ro32-3555 (Ro32), conditioned media from Mtb-infected monocytes (CoMtb), CoMtb +Ro32 and CoMtb +DMSO vehicle control (n = 3). Average background resistance of cell-free coated transwells for each timepoint was subtracted from measurements. (b) Fold-change of flux of sodium-fluorescein relative to control transwells (n = 3). Treatment with 10 μ M of MMP inhibitor Ro32 decreased permeability to near control in CoMtb-stimulated BBB. (c) Confocal microscopy from transwells coated with dye—quenched (DQ) type IV collagen and stained for nucleic acids with DAPI (blue). BBB were stimulated with CoMCont, CoMtb and/or Ro32-3555 (Ro32). Green fluorescence is released in areas of collagen degradation. (d) Confocal microscopy from transwells stained for nucleic acids with DAPI (blue) and for the tight junction proteins ZO-1, claudin-5 and occludin (green). Scale bar: 50 μ m. Treatment with Ro32-3555 increased TJP staining. Number of transmigrated (e) neutrophils and (f) monocytes in CoMtb and CoMtb + Ro32-stimulated BBB. Fold-change in permeability to sodium-fluorescein with addition of: (g) 25 μ g/ml anti-human MMP-9 neutralising antibodies, or (h) 25 μ g/ml anti-human MMP-1 neutralising antibodies (n = 3). Figure e and f are representative of 3 independent experiments performed in triplicate. Data is represented as mean \pm s.d. *p < 0.05; **p < 0.01.

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