Response to: 'Correspondence to 'Normal human enthesis harbours conventional CD4+ and CD8+ T cells with regulatory features and inducible IL-17A and TNF expression" by Wang and Ma

We thank Wang and Ma[1] for their comments on our description of T-cells and their cytokines profile at the normal human spinal enthesis.[2] Wang and Ma[1] report on synovial T-cells in psoriatic arthritis (PsA) obtained from synovial biopsies, and amongst other things, describes that infliximab therapy leads to a reduction in interleukin (IL)-23 related pathway transcripts indicating a potential pathogenic interplay between tumour necrosis factor (TNF)-α and IL-23/IL-17 axis at the synovium.[1]

The enthesis and synovium form what is known as the synovio-entheseal structure complex.[3] A major unresolved issue in the immunopathology of PsA, is the link between synovial and entheseal immune cells. Animal models suggest that disease either TNF or IL-23 originating enthesitis may drive synovitis,[4 5] but it is unclear if this is the case humans. It is possible that the findings of Wang and Ma[1] could be extended to the enthesis and bone but formal studies are needed since the precise link between these immune compartments is unclear. The authors' results suggest a 'dampening' of the IL-23/IL-17 axis following infliximab therapy by acting on TGF-β and aryl hydrocarbon receptor signalling, that are involved in the regulation of the 23/17 axis. These findings are of interest towards the further understanding of the link between the enthesis and synovium in PsA and spondyloarthritis.

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REFERENCES

1 Wang LT, Ma K. Correspondence to "Normal human enthesis harbours conventional CD4+ and CD8+ T cells with regulatory features and inducible IL-17A and TNF expression. *Ann Rheum Dis* 2022;81:e254.
2 Watad A, Rowe H, Russell T, *et al*. Normal human enthesis harbours conventional CD4+ and CD8+ T cells with regulatory features and inducible IL-17A and TNF expression. *Ann Rheum Dis* 2020;79:1044–54.
3 Benjamin M, McGonagle D. Histopathologic changes at "synovio–entheseal complexes" suggesting a novel mechanism for synovitis in osteoarthritis and spondylarthritis. *Arthritis Rheum* 2007;56:3601–9.
4 Sherlock JP, Joyce-Shaikh B, Turner SP, *et al*. Il-23 induces spondyloarthropathy by acting on ROR-γt+ CD3+CD4−CD8− entheseal resident T cells. *Nat Med* 2012;18:1069–76.
5 Jacques P, Lambrecht S, Verheugen E, *et al*. Proof of concept: enthesitis and new bone formation in spondyloarthritis are driven by mechanical strain and stromal cells. *Ann Rheum Dis* 2014;73:437–45.