Author's response to reviews

Title: Gene expression analysis in human osteoblasts exposed to dexamethasone identifies altered developmental pathways as drivers of osteoporosis

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Dear Editor

Please find enclosed a manuscript entitled "Gene expression analysis in human osteoblasts exposed to dexamethasone identifies altered developmental pathways as drivers of osteoporosis" for consideration in BMC Musculoskeletal Disease.

This manuscript utilises an in vitro model of steroid associated osteoporosis to probe the underlying pathogenomic mechanism of decreased bone mineral density. This study has identified developmental pathways as being coordinately dysregulated in response to steroid, further reinforcing the concept of recapitulation of developmental networks as a primary mechanism of the disease process. In aggregate the data presented herein lend further weight to the hypothesis that osteoporosis arises, at least in part, from alterations in the developmental control pathways in human osteoblasts. Further studies will aim to articulate the exact mechanism of dysregulation of these developmental genes, characterise the effect of altered expression on osteoblast biology with a view to further characterising these mediators as indices of disease activity, diagnostic markers and therapeutic targets in osteoporosis.

We are grateful for your consideration of this manuscript

Best wishes

Peter P Doran