Dear Editor

In this manuscript we describe a cross-sectional study that investigates the association between muscle strength and bone mineral density at the hip among women enrolled in the Geelong Osteoporosis Study. The study was conducted following the recent publication of recommendations in Australia for preventing osteoporosis. A key component of the recommendations is the promotion of muscle strengthening exercises for building and maintaining a healthy skeleton. We thus aimed to investigate the relationship between skeletal muscle strength (specifically hip flexor and hip abductor strength) and areal bone mineral density at the total hip. We do report a positive association between muscle strength and bone mineral density. However, as the association was explained by differences in lean mass, it remains unclear whether muscle strengthening exercises might impact on bone through increased muscle strength, muscle mass, or a subtle interplay between the two.

All authors meet the criteria for authorship. These data were delivered in poster format at the recent meeting of the American Society for Bone and Mineral Research (ASBMR) in Houston, USA, 12-15 September 2014; however, the findings have not been published elsewhere.

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Thank you for considering our manuscript for publication in BMC Musculoskeletal Disorders.

Yours sincerely
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