

## REPLY TO LETTER

**Reply: Autosomal dominant segregation of CAPN3 c.598\_612del15 associated with a mild form of calpainopathy**Babi Ramesh Reddy Nallamilli<sup>1</sup> , Samya Chakravorty<sup>2,3,4</sup> , Akanchha Kesari<sup>1</sup> , Lora Bean<sup>1</sup>  & Madhuri Hegde<sup>1</sup> <sup>1</sup>PerkinElmer Genomics, Waltham, Massachusetts<sup>2</sup>Department of Pediatrics and Human Genetics, Emory University School of Medicine, Atlanta, Georgia<sup>3</sup>Neurosciences Division, Children's Healthcare of Atlanta, Atlanta, Georgia<sup>4</sup>School of Biological Sciences, Georgia Institute of Technology, Atlanta, Georgia**Correspondence**

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Dear Editor,

We were delighted to read the letter published by Dr. Cerino and colleagues noting that “autosomal dominant segregation of CAPN3 c.598\_612del15 variant associated with a mild form of calpainopathy.”<sup>1</sup> The authors reported familial segregation analysis results along with phenotype, muscle MRI, and calpain 3 protein expression correlation studies in a family with heterozygous 15 base-pair in-frame deletion variant c.598\_612del15 (p.Phe200\_Leu204-del) in CAPN3. These findings clearly indicate that this variant is associated with autosomal dominant mild form of calpainopathy similar to previous reports of another in-frame deletion c.643\_663del21 (p.Ser215\_Gly221del) and missense c.1333G>A (p.Gly445Arg) variants with fatty degenerative changes in muscle.<sup>2–5</sup> As reported previously we identified this in-frame 15 bp deletion c.598\_612del15 in total of 16 patients without a second pathogenic variant in CAPN3 indicating autosomal-dominant inheritance.<sup>6</sup> We fully agree that this in-frame 15 base pair deletion is associated with autosomal dominant mild form of calpainopathy. This further enhances our understanding of the genotype–phenotype spectrum of calpainopathies. Our study<sup>6</sup> and this report by Cerino and colleagues suggest that autosomal dominant forms and milder presentations of calpainopathy should be considered in the clinical and molecular diagnostic practice.

**Conflict of Interest**

The authors have no conflict of interest to declare.

**References**

1. Cerino M, Bartoli M, Riccardi F, et al. Autosomal dominant segregation of CAPN3 c.598\_612del15 associated with a mild form of calpainopathy. *Ann Clin Transl Neurol* 2020; In press.
2. Vissing J, Barresi R, Witting N, et al. A heterozygous 21-bp deletion in CAPN3 causes dominantly inherited limb girdle muscular dystrophy. *Brain* 2016;139(Pt 8):2154–2163.
3. Straub V, Murphy A, Udd B, group Lws. 229th ENMC international workshop: Limb girdle muscular dystrophies - Nomenclature and reformed classification Naarden, the Netherlands, 17–19 March 2017. *Neuromuscul Disord* 2018;28:702–710.
4. Martinez-Thompson JM, Niu Z, Tracy JA, et al. Autosomal dominant calpainopathy due to heterozygous CAPN3 C.643\_663del21. *Muscle Nerve* 2018;57:679–683.
5. Cerino M, Campana-Salort E, Salvi A, et al. Novel CAPN3 variant associated with an autosomal dominant calpainopathy. *Neuropathol Appl Neurobiol* 2020.
6. Nallamilli BRR, Chakravorty S, Kesari A, et al. Genetic landscape and novel disease mechanisms from a large LGMD cohort of 4656 patients. *Ann Clin Transl Neurol* 2018;5:1574–1587.