Reviewer's report

Title: Biotinidase deficiency: clinical and genetic studies of 38 Brazilian patients

Version: 2 Date: 18 June 2014

Reviewer: Generoso Andria

Reviewer's report:

Borsatto et al report the findings of a multicenter study aimed at investigating clinical, biochemical and molecular features of 38 Brazilian subjects with reduced biotinidase activity. Most patients were identified by neonatal screening (33/38). The Authors thoroughly investigated expected correlation and discordance between biochemical phenotype and genotype and identified novel variants with in silico prediction of probable pathogenicity. The results suggest that partial biotinidase deficiency is the most common form of this condition in the Brazilian population, with an incidence probably higher than in other countries.

The paper is clearly written, methodologically sound and well discussed.

As a discretionary recommendation I would suggest to add a table reviewing what is known from the literature about the correlations between the biochemical phenotype (profound, partial, heterozygous deficiency) and the molecular basis (various possible combinations of alleles, either mutant or normal, including cis/trans status). This table might help the reader who is not specialist in the field of biotinidase deficiency.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests