

Review of: "Arginine-dependent hypusination of the eukaryotic translation initiation factor (eIF)5A drives erythroid lineage differentiation"

Annette Kaiser

Potential competing interests: The author(s) declared that no potential competing interests exist.

This article by Gonzales Menendez *et al.* is of significant interest to the polyamide scientific community. It shows a novel finding i.e. that EIF5A is involved in erythropoiesis and might be translationally applied in the treatment of ribosomopathies like Diamond-Blackfan anemia. The methodology of the experiment is convincing and clear and the results are sound. I encourage the authors to publish this important piece of work.

However, I hope that my comments are constructive and supportive.

1. GC7 functions as a spermidine mimetic in DHS inhibition and unfortunately inhibits other proteins. There are more selective inhibitors available. <http://Molecules 2022, 27, 2463>. <https://doi.org/10.3390/molecules27082463>
2. Secondly, it has been recently shown that in infective diseases, hypusinated EIF5A controls translation of certain mRNAs. [doi: 10.1007/s00726-020-02843-2](https://doi.org/10.1007/s00726-020-02843-2). Epub 2020 May 4. PMID: 32367435
3. In Figure 3C the effect of different polyamide inhibitors is shown. However, the results between GlyA and CD11b⁺ differ significantly. Can the authors provide explanations for this?
4. In Fig. 3G the author used spermidine and DFMO. I think it would be more reasonable to use putrescine since DFMO inhibits ornithine decarboxylase and thus putrescine biosynthesis.