

# Review of: "Inhibiting Efflux Pumps and Resistance Mechanisms: A Mini Review"

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Hasan et al. present a comprehensive mini review titled "Inhibiting Efflux Pumps and Resistance Mechanisms: A Mini Review," delving into the intricate realm of efflux pumps and their pivotal role in antibiotic resistance. The authors adeptly navigate the complex landscape of resistance mechanisms, elucidating both the underlying processes and strategic approaches to impede efflux pump activity. Notably, the paper effectively bridges the knowledge gap, catering to both seasoned scientists and those with a high school-level understanding. The authors, as well, commendably explore instances of success and failure without bias. However, the paper lacked real complex informative text and writing professionalism which renders the manuscript from our perspective as not suitable for publication. For that, a detailed comments section is provided.

- The numbers of the affiliations do not correspond to the number superscript on the authors' name. Kindly revise.
- In Section 1.1, it is advised to refine the terminology, acknowledging that efflux pumps are not merely 'on' the membrane surface but intricately embedded within or integral to the bacterial membrane. Similarly, Section 1.2 merits elucidation on the term "MVPs," emphasizing the importance of explaining abbreviations for a more inclusive readership.
- Concerns about redundancy within Sections 1, 2, and 3 prompt a thorough review to streamline content effectively. Attention to detail is essential to ensure that each section offers distinct insights to avoid repetition.
- Section 3.1: What are the systems? Do they have a name/examples? How to they work and what influences them? The provided text tells no real information to the reader.
- Critically, the manuscript benefits from a rigorous editing process aimed at elevating its professional tone. While analogies and metaphors can enhance understanding, a judicious application is recommended to maintain conciseness. For instance, "Efflux pumps may be picky eaters when it comes to pumping out substances. Just as some people have dietary restrictions, certain efflux pumps have substrate specificity [13]. This means they can only pump out certain types of antibiotics or other substances. It's like being a bouncer who only lets in people wearing striped shirts." Should be replaced with "Efflux pumps are specific towards some molecules". One can already understand what you are trying to tell from the first sentence.
- Consider incorporating visual aids such as tables detailing efflux pump families or Efflux Pump Inhibitors (EPIs) to facilitate a deeper grasp of the concepts discussed.
- Lastly, it is imperative to address the assertion that the manuscript lacks substantial novelty, given the extensive coverage of this topic in existing literature. The authors should emphasize the unique contributions of their work,

differentiating it from prior reviews and highlighting its significance in advancing scientific understanding.