

# [Addendum: molecular generation for desired transcriptome changes with adversarial...](https://assignbuster.com/addendum-molecular-generation-for-desired-transcriptome-changes-with-adversarial-autoencoders/)

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An Addendum on   
[Molecular Generation for Desired Transcriptome Changes With Adversarial Autoencoders](https://www.frontiersin.org/articles/10.3389/fphar.2020.00269/full)

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In the original article, we missed the parallel work by [Méndez-Lucio et al. (2020)](#B2) . This work also tackles a similar problem of generating molecular structures from transcriptomic data. The authors proposed a conditional model based on the generative adversarial networks [Goodfellow et al. (2014)](#B1) . Unlike their approach, our model is joint, allowing us to generate molecular structures for a given gene expression profile and vice versa.

## References

Goodfellow, I., Pouget-Abadie, J., Mirza, M., Xu, B., Warde-Farley, D., Ozair, S., et al. (2014). “ Generative adversarial nets,” in *Advances in Neural Information Processing Systems.* (Curran Associates, Inc), vol. 27, 2672–2680.

[Google Scholar](http://scholar.google.com/scholar_lookup?author=I.+Goodfellow&author=J.+Pouget-Abadie&author=M.+Mirza&author=B.+Xu&author=D.+Warde-Farley&author=S.+Ozair&publication_year=2014&title=Generative adversarial nets&book=Advances+in+Neural+Information+Processing+Systems.&volume=27&pages=2672)

Méndez-Lucio, O., Baillif, B., Clevert, D.-A., Rouquié, D., Wichard, J. (2020). De novo generation of hit-like molecules from gene expression signatures using artificial intelligence. *Nat. Commun.* 11, 1–10. doi: 10. 1038/s41467-019-13807-w

[PubMed Abstract](https://pubmed.ncbi.nlm.nih.gov/31911652/) | [CrossRef Full Text](https://doi.org/10.1038/s41467-019-13807-w) | [Google Scholar](http://scholar.google.com/scholar_lookup?author=O.+Méndez-Lucio&author=B.+Baillif&author=D.-A.+Clevert&author=D.+Rouquié&author=J.+Wichard&publication_year=2020&title=De novo generation of hit-like molecules from gene expression signatures using artificial intelligence&journal=Nat.+Commun.&volume=11&pages=1)