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| Journal Name: | [**Journal of Advances in Biology & Biotechnology**](https://journaljabb.com/index.php/JABB) |
| Manuscript Number: | **Ms\_JABB\_140819** |
| Title of the Manuscript:  | **Recombinant Expression of Taq DNA Polymerase Using pBluescript SK(+) and Chromatography-Free Purification: A Cost-Effective Strategy for Low-Resource Laboratories** |
| Type of the Article | **Original Research Article** |

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **This study titled as "Recombinant Expression of Taq DNA Polymerase Using pBluescript SK(+) and Chromatography-Free Purification: A Cost-Effective Strategy for Low-Resource** **Laboratories" holds potent importance as it demonstrate the first experimentally validated expression of thermostable Taq DNA polymerase using the widely available pBluescript SK(+) cloning vector traditionally used for blue-white screening—as a protein expression platform in E. coli. The authors mention that the protocol reduced the cost-per-reaction by 70–85%, depending on enzyme input and Their findings demonstrate that pBluescript SK(+) which is typically reserved for cloning purposes. On the otherhand, under-resourced research environments this study may act as open-access alternative to proprietary enzyme production. As it visualize fully open-access alternative to conventional Taq polymerase production by repurposing pBluescript SK(+), a widely available vector not previously validated for thermostable enzyme expression, it may be considered as a good finding for scientific community.**  |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **Yes, The title of the article is suitable.** |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **The Abstract of the article is comprehensive and also structured into a series-aim, methods, results and conclusions.**  |  |
| Is the manuscript scientifically, correct? Please write here. | The manuscript is scientifically correct  |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | The references are sufficient. Most of the references are almost recent, however, the authors can consider replacing these below references if possible and only if they are not integral parts of the paper, as they are quite old. Chien, A., Edgar, D. B., & Trela, J. M. (1976). Deoxyribonucleic acid polymerase from the 653 extreme thermophile Thermus aquaticus. Journal of Bacteriology, 127(3), 1550–1557.Saiki, R. K., Gelfand, D. H., Stoffel, S., Scharf, S. J., Higuchi, R., Horn, G. T., Mullis, K. B., &  Erlich, H. A. (1988). Primer-directed enzymatic amplification of DNA with a thermostable DNA polymerase. Science, 239(4839), 487–491.Engelke, D. R., Krikos, A., Bruck, M. E., & Ginsburg, D. (1990). Purification of Thermus  aquaticus DNA polymerase expressed in Escherichia coli. Analytical Biochemistry, 191(2), 396– 400.Lawyer, F. C., Stoffel, S., Saiki, R. K., Myambo, K., Drummond, R., & Gelfand, D. H. (1989).  Isolation, characterization, and expression in Escherichia coli of the DNA polymerase gene from  Thermus aquaticus. Journal of Biological Chemistry, 264(11), 6427–6437.Pluthero, F. G. (1993). Rapid purification of high-activity Taq DNA polymerase. Nucleic Acids  Research, 21(20), 4850.Brock, T. D., & Freeze, H. (1969). Thermus aquaticus gen. n. and sp. n., a nonsporulating  extreme thermophile. Journal of Bacteriology, 98(1), 289–297.Gelfand, D. H. (1989). Taq DNA polymerase. In PCR Technology: Principles and Applications  for DNA Amplification (pp. 17–22). London: Palgrave Macmillan UK. |  |
| Is the language/English quality of the article suitable for scholarly communications? | The Language/English quality of the article suitable and fulfils criteria for scholarly communications. |  |
| Optional/General comments |  |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer details:**

**Sreedeep Dey , University of Calcutta , India**