

Peer Review

Review of: "Polyethylene Terephthalate (PET) Primary Degradation Products Affect c-di-GMP-, cAMP-Signaling, and Quorum Sensing (QS) in *Vibrio gazogenes* DSM 21264"

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Dear Authors,

Thank you for the opportunity to review your interesting manuscript. This study provides valuable insights into PET metabolism and signaling pathways in *Vibrio gazogenes* DSM 21264. I have several suggestions that I think would further improve this study.

Major Points

1. The manuscript would benefit from careful editing to improve readability and clarity. A thorough review of grammar, punctuation, and formatting consistency would help readers better appreciate their findings (see **Specific Points**). Standard scientific formatting conventions should be followed consistently throughout, including table captions, unit notation, and significant digits in the values presented (see **Specific Points**).
2. The figures, particularly those presenting transcriptomic data (Figures 4–6), could be improved to facilitate interpretation. Inadequate illustration of figures hampers the ability to accurately compare across conditions (see **Specific Points**). Addressing these issues and applying consistent, clear labeling would allow the data to be more readily assessed and interpreted.
3. Results section: I find it intriguing that UlaG has been identified as a BHET hydrolase (Figure S3). I think this result is suitable for inclusion in the main manuscript.

4. Discussion section: The authors should explore the ecological implications of their findings. The authors performed experiments on biofilm formation and PET hydrolysis under nutrient-rich conditions (artificial seawater medium supplemented with tryptone and yeast extract). It would be helpful to discuss how they relate to the natural environment. The physiological relevance of the observed changes in gene expression, especially at the high BHET concentration (30 mM), should be discussed in more detail. The authors should address whether such concentrations are likely to be found in natural environments and if not, discuss how this might impact the interpretation and applicability of their results.

They state that "data from this study will help identify key factors enriching pathogens in this man-made habitat (Page 20)" but lack specific examples or hypotheses on how their findings might inform pathogen dynamics in the plastisphere. Expanding on these implications and directly connecting them to their data would enhance the impact and relevance of this study. Given that plastisphere communities typically comprise diverse bacterial species, it would be valuable to consider how BHET might influence other bacteria and the overall community dynamics. Understanding these interspecies interactions could provide important insights into how PET degradation products shape microbial ecology in marine environments. This broader ecological perspective would help readers better understand the significance of their findings in complex natural systems.

A more comprehensive discussion of the effects of TPA will provide a fuller picture of the complex interplay between PET degradation products and bacterial physiology.

5. Materials and Methods section: To facilitate reproducibility of the experiments, providing additional experimental details would be valuable. This includes specifications for the plastic materials (PET and PE foils) used, the analytical conditions for measuring enzymatic activity, and the statistical methods employed for data analysis (see **Specific Points**).

6. References section: The format of the entries needs to be standardized. The page numbers or article numbers are often not specified. What do the lowercase letters a, b, and c stand for?

Specific Points

1. Abstract, L1: Add a comma after "rapidly."
2. Abstract, L5: Add a comma after "biofilms."
3. Abstract, L7: Remove the definition of "MHET" from the Abstract, as it is not used. Abstracts should only define abbreviations that appear multiple times for clarity.

4. Abstract, L10: Add a comma after "(BHET)."
5. Abstract, L14: Add a comma after "prodigiosin."
6. Importance, L1: Add the definite article (the) after "provides."
7. Introduction, L2: An en dash (–) should be used to represent a range of numbers, not a hyphen (-).
8. Introduction, L4: Add a comma after "nano-."
9. Introduction, L7: "wellbeing" should be "well-being."
10. Introduction, L8: "fossil-fuel based" should be "fossil-fuel-based."
11. Introduction, L10: What do the authors mean by the phrase "only being produced at lower quantities"?
12. Introduction, L11: The statement "While for most of these polymers no enzymes and microorganisms are known to degrade them" is somewhat misleading, as reports indicate that some enzymes and microorganisms can degrade certain polymers, although to a lesser extent than PET. Consider rephrasing this sentence.
13. Introduction, L13: Add a comma after "lipases."
"or" should be "and."
14. Introduction, L14: Add a comma after "studies." Add a comma after "recently."
15. Introduction, L16: Add a comma after "i.e."
16. Page 3, L6: Add a comma after "e.g."
17. Page 3, L7: Add a comma after "*Vibrio vulnificus*."
18. Page 3, L10: The phrase "synonym PB1, AATCC 29988" may be confusing for some readers. To improve clarity, consider rephrasing this to "also called PB1 and AATCC 29988."
19. Page 3, L10: "gram-negative and" could be removed.
20. Page 3, L12–13: I'm afraid that the sentence "The *pet6* gene is encoded by ORF AAC977_05355" lacks meaningful information here.
21. Page 3, L13: "heterologous" should be "heterologously."
Add a comma after "PET."
22. Page 3, L14: Add a comma after "substrates."
"short chain" should be "short-chain."
Add a comma after "esters."
23. Page 3, L24: Add a comma after "cAMP-CRP."

24. Page 4, L6: The authors define "artificial seawater medium" as "ASWM"; however, they also refer to it as "ASW medium" in the main text. The abbreviation should be consistent throughout the manuscript.
25. Page 4, L7: "PE-degradative genes" should be "the genes encoding PE-degradative enzymes."
"gram-negative bacteria" should be "this strain." Have the authors confirmed that the strain does not harbor the gene(s)?
26. Page 4, L7: "PE-foil" should be "PE foil."
27. Page 4, L8: Add a comma after "experiments."
28. Page 4, L9: "single cell layer" should be "single-cell layer." However, it is challenging to confirm this because the images along the z-axis are unavailable.
29. Page 4, L9: "Figure 1 & S1" should be "Figures 1 and S1."
30. Page 4, L10: "tryptone and yeast extract 1 % (w/v)" should be "1 % (w/v) tryptone and yeast extract."
31. Page 4, L11: Add a comma after "conditions."
"few" should be "eight."
32. Page 4, L13: An en dash should be used to represent a range of numbers, not a hyphen.
Add a comma after " μm ."
33. Page 4, L14: "one cell layer" could be "a single-cell layer." As mentioned earlier, it is challenging to confirm this because the images along the z-axis are unavailable.
34. Page 5, Figure 1: Include scale bars in B, C, and E.
35. Page 5, The legend of Figure 1: "(A, D)" should be "(A and D)."
"(B, C, E, F)" should be "(B, C, E, and F)."
"(C & D)" should be "(C and D)."
Add the definite article after "show."
"(A & C)" should be "(A and C)."
"(E & F)" should be "(E and F)."
36. Page 5, L2: An en dash should be used to represent a range of numbers, not a hyphen.
37. Page 5, L3–5: Have the authors confirmed that the air plasma treatment has altered the surface of the PET foil?
38. Page 5, L6: Add a comma after "tests."
39. Page 5, L7: "(FigureS 1 & S1)" should be "(Figures 1 and S1)."

40. Page 6, Figure 2: Why did the authors use UV-treated PET foil here? The Materials and Methods section does not provide a description of the treatment.

The vertical axis should include scale lines.

Change the color of the error bars, as some of them are hard to see.

"released products" should be "Released products."

41. Page 6, The legend of Figure 2: Add a comma after "UV-treated foil."

Add a comma after "3."

Add a comma after "days."

Add a comma after "replications."

42. Page 6, L2: "AAC977_0355" is a locus tag rather than an accession number in the database.

Clarifying this distinction would be helpful.

43. Page 6, L4: To simplify the sentence structure, it would be better to remove the phrase "with the goal."

44. Page 6, L6: Add a comma after "total."

45. Page 6, L7: Add a comma after "times."

46. Page 6, L7–9: The information "which have been submitted to the European Nucleotide Archive (ENA). They are publicly available under accession PRJEB80907" does not constitute an experimental result; therefore, it would be better not to include it here.

47. Page 7, L1: "CP151640" and "CP151641" are the accession numbers in the database. It would be helpful to clarify the distinction.

Add a comma after "genes."

48. Page 7, L3: "reads" could be removed.

49. Page 7, L4: Add a comma after "parameters."

Add a comma after "expression."

50. Page 7, Figure 3: The vertical axis label "number of genes" seems unsuitable.

The error bars should be presented in the same manner as in Figure 2, making them easy to understand.

Use a consistent format for labeling conditions, such as "BHET (0.5 mM)" instead of "BHET 0.5 mM."

Include the concentration of DMSO. The authors used DMSO as a control. Is this because BHET and TPA are dissolved in DMSO? If that is the case, it should be indicated.

Pay attention to the significant digits in the values.

"TPA (1mM)" should be "TPA (1 mM)."

51. Page 7, The legend of Figure 3: "Ribosomal," should be removed.
52. Page 7, *PET6 is weakly expressed in biofilms grown on PET and PE foils*, L5: "Plasma-treatment" could be "Plasma treatment."
53. Page 7, *PET6 is weakly expressed in biofilms grown on PET and PE foils*, L7: "we noticed, that" should be "we noticed that."
54. Page 8, L1: Add a comma after "genes."
55. Page 8, L3: Add the definite article (the) before "Highest."
56. Page 8, L5–6: It would be beneficial to cite the paper(s) reporting that AdhE is involved in EG metabolism.
57. Page 8, L6: Add a comma after "metabolism."
58. Page 8, L9: Add a comma after "21264."
59. Page 8, L9: "we were able to verify" could be "we verified."
60. Page 10: The caption should be placed above the table.
61. Page 10, L2: Add a comma after "chitin."

The authors do not explain their use of alginate, chitin, and carboxymethyl cellulose. Are these polysaccharides natural substrates for the strain DSM 21264? (Does the strain possess the genes necessary for the enzymes that degrade these polysaccharides?)
62. Page 10, L4: Add a comma after "cultures."
63. Page 10, L5: "Table S1, Figures 4–6" & Figure S2 could be "Table S1 and Figures 4–6 and S2."
64. Page 10, L5: "was" should be "were."
65. Page 10, L8: The authors used *rpoD* as a housekeeping gene. Have they confirmed that its expression is stable under each culture condition?
66. Page 10, L8: Add a comma after "summary."
67. Page 10, L9: "and" should be removed.
68. Page 10, *Pet6 and ulaG transcription are induced by BHET in DSM 21264*, L4: Add a comma after "questions."

Add a comma after "performed."
69. Page 10, *Pet6 and ulaG transcription are induced by BHET in DSM 21264*, L5: Add a comma after "5.0."

70. Page 10, *Pet6 and ulaG transcription are induced by BHET in DSM 21264*, L6: Add a comma after "controls."
- Add a comma after "(0.5 % v/v)."
71. Page 10, *Pet6 and ulaG transcription are induced by BHET in DSM 21264*, L10: Add a comma after "concentrations."
72. Page 10, *Pet6 and ulaG transcription are induced by BHET in DSM 21264*, L11: "FigureS 4–6" could be "Figures 4–6."
73. Page 10, *Pet6 and ulaG transcription are induced by BHET in DSM 21264*, L11–15: The sentence is too long to comprehend. It would be beneficial to rephrase it in the following manner:
- High concentrations of BHET (5.0 and 30 mM) had the most pronounced effects on overall gene expression levels in DSM 21264: the presence of 5.0 mM BHET resulted in >230 upregulated and >100 downregulated genes, while the presence of 30 mM BHET resulted in >830 upregulated and >550 downregulated genes compared to DMSO and TPA.
74. Page 11, L4: Add a comma after "BHET."
75. Page 11, L5–6: The authors used the SHuffle strain to express UlaG in *E. coli*. I guess that the protein does not have a signal peptide and functions in the cytosol of the strain. I'm interested to know that the protein contains disulfide bond(s).
76. Page 11, L7: Add a comma after "tests."
77. Page 11, L10: "source" could be "sources."
78. Page 11, L13: Add a comma after "cAMP–CRP."
79. Page 11, L15–21: These sentences need to be combined into a single paragraph.
80. Page 11, L16–17: "colony morphology, biofilm formation, prodigiosin biosynthesis and others" could be "colony morphology, biofilm formation, and prodigiosin biosynthesis."
81. Page 11, L20: Add a comma after "0.5 mM."
82. Page 11, L25: Add a comma after "cAMP–CRP signaling."
83. Page 11, L26: Add a comma after "production."
84. Page 11, L29: Add a comma after "cyclases."
85. Page 12, L2: Add a comma after "J."
86. Page 12, Figure 4: Use a consistent format for labeling conditions, such as "BHET (0.5 mM)" instead of "BHET 0.5 mM." Pay attention to the significant digits in the values.
- Providing additional context about the genes and their functions or pathways represented will help readers quickly grasp the key patterns and trends in the transcriptional data.

87. Page 12, Legend of Figure 4: "The color intensity and size of the circles is" should be "The color intensity and size of the circles are." The authors need to briefly explain how the transcript levels are normalized.
88. Page 13, L6: "neither" should be "either." "nor" should be "or."
89. Page 14, Figure 5: Use a consistent format for labeling conditions, such as "BHET (0.5 mM)" instead of "BHET 0.5 mM." Pay attention to the significant digits in the values.
Providing additional context about the genes and their functions or pathways represented will help readers quickly grasp the key patterns and trends in the transcriptional data.
90. Page 14, Legend of Figure 5: "The color intensity and size of the circles is" should be "The color intensity and size of the circles are." The authors need to briefly explain how the transcript levels are normalized.
91. Page 15, Figure 6: Use a consistent format for labeling conditions, such as "BHET (0.5 mM)" instead of "BHET 0.5 mM." Pay attention to the significant digits in the values.
Providing additional context about the genes and their functions or pathways represented will help readers quickly grasp the key patterns and trends in the transcriptional data.
92. Page 15, Legend of Figure 6: "The color intensity and size of the circles is" should be "The color intensity and size of the circles are." The authors need to briefly explain how the transcript levels are normalized.
93. Page 15, L2: "In the contrary" should be "On the contrary."
94. Page 15, L3: Add a comma after "*aphF*."
95. Page 15, L4–5: An en dash should be used to represent a range of numbers, not a hyphen.
96. Page 16, L1: An en dash should be used to represent a range of numbers, not a hyphen.
97. Page 16, L2: "CP151641" could be removed.
98. Page 16, L3: "CP151640" could be removed.
99. Page 16, L7: Add a comma after "summary."
100. Page 16, L8: Add a comma after "QS."
101. Page 16, Discussion, L1: Add a comma after "Today."
Add a comma after "known."
102. Page 16, Discussion, L2: Add a comma after "functions."
103. Page 16, Discussion, L8–10: The authors performed biofilm formation experiments in nutrient-rich conditions. This is likely the reason.

104. Page 16, Discussion section, L12: It would be inappropriate to cite Table 2, which is not included in the Results section, in the Discussion section.
105. Page 17–18, Table 2: Why not include log₂-foldchanges? It seems to me that all the other entries, except for *ompU*, are just a list and provide less valuable information.
106. Page 18: The caption should be placed above the table.
107. Page 18, L1: Add a comma after "starch."
Add a comma after "chitin."
108. Page 18, L11: Add a comma after "*thiooxidans*."
109. Page 18, L12: Add a comma after "periplasm."
110. Page 18, L15: Add a comma after "c-di-GMP."
111. Page 18, L18: Add a comma after "BHET."
112. Page 18, L19: Add a comma after "pathogenicity."
113. Page 19, L3: Add a comma after "setting."
114. Page 19, L4: Add a comma after "(Figure 3)."
115. Page 19, L5: Add a comma after "data."
116. Page 19, L7: "QS, cAMP-CRP and c-di-GMP signaling" should be "QS, and cAMP-CRP and c-di-GMP signaling."
117. Page 19, L7: "FigureS 4–6" should be "Figures 4–6."
118. Page 19, L9: Add a comma after "assembly."
119. Page 19, L9: There is one extra period (sp..).
120. Page 19, L10: Add a comma after "e.g."
121. Page 19, L16–22: Rather than using the term "affected," it would be informative to provide more details on the specific changes observed in response to BHET.
122. Page 19, L17–18: "FigureS 4–6" should be "Figures 4–6."
123. Page 19, L25: "well studied" should be "well-studied."
124. Page 19, L31: Add a comma after "function."
125. Page 20, L3: Add a comma after "well."
126. Page 20, L4: Add a comma after "was."
127. Page 20, L5: Add a comma after "general."
128. Page 20, L6: "BHET is interfering with this signaling cycle as well" could be "BHET also interferes with this signaling cycle."
129. Page 20, L8: Add a comma after "observations."

130. Page 20, L9–11: This sentence would be clearer if divided into multiple sentences.
131. Page 20, L15: Add a comma after "biofilms."
132. Page 20, L17: "Based on the above made observations" should be "Based on the findings."
133. Page 20, L21: Add a comma after "plastisphere."
134. Page 20, L23: "plastics" should be "plastic."
135. Page 22, *Bacterial strains and growth conditions*, L3–4: "x" should be ".".
136. Page 22, *Bacterial strains and growth conditions*, L7–10: "Na₂HPO₄ 33.7 mM, KH₂PO₂ 22 mM, NaCl 51.3 mM, NH₄Cl 9.35 mM, MgSO₄ 1 mM, biotin 1 µg, thiamin 1 µg, EDTA 0.134 mM, FeCl₃·6H₂O 0.031 mM, ZnCl₂ 0.0062 mM, CuCl₂ 2H₂O 0.76 µM, CoCl₂ 2H₂O 0.42 µM, H₃BO₃ 1.62 µM, MnCl₂ 4H₂O 0.081 µM" could be "33.7 mM Na₂HPO₄, 22 mM KH₂PO₄, 51.3 mM NaCl, 9.35 mM NH₄Cl, 1 mM MgSO₄, 1 µg/l biotin, 1 µg/l thiamin, 0.134 mM EDTA, 0.031 mM FeCl₃, 0.0062 mM ZnCl₂, 0.76 µM CuCl₂, 0.42 µM CoCl₂, 1.62 µM H₃BO₃, and 0.081 µM MnCl₂." Additionally, pay attention to the significant digits in the values.
137. Page 22, *Bacterial strains and growth conditions*, L13: "to" should be ",".
138. Page 22, *Bacterial strains and growth conditions*, L15: Add a comma after "autoclaving."
139. Page 22, *Fluorescence imaging analysis of biofilms*, L2: "plastics" should be "plastic."
Add a comma after "surfaces."
140. Page 22, *Fluorescence imaging analysis of biofilms*, L3: "6 -well" should be "6-well."
141. Page 22, *Fluorescence imaging analysis of biofilms*, L5: Add a comma after "incubation."
142. Page 22, *Fluorescence imaging analysis of biofilms*, L8: Insert the definite article after "using."
143. Page 23, L1: Add a comma after "images."
144. Page 23, L2: Add a comma after "sample."
Add a comma after "observed."
145. Page 23, *Preparation for scanning electron microscopy*, L1: A more effective heading might be "Observation using scanning electron microscopy."
146. Page 23, *Preparation for scanning electron microscopy*, L2: "after incubation" could be removed.
147. Page 23, *Preparation for scanning electron microscopy*, L3: The abbreviations "PFA" and "GA" should be defined before use.
148. Page 23, *Preparation for scanning electron microscopy*, L3: Add a comma after "day."
149. Page 23, *Preparation for scanning electron microscopy*, L4: Add a comma after "drainage."

150. Page 23, *Preparation for scanning electron microscopy*, L4–5: "30 %, 50 % and 70 % of ethanol" should be "30, 50, and 70 % ethanol."
151. Page 23, *Preparation for scanning electron microscopy*, L6: "80 %, 96 % and 100 % of ethanol" should be "80, 96, and 100 % ethanol."
152. Page 23, *Preparation for scanning electron microscopy*, L7: "100 % of ethanol" should be "100 % ethanol."
153. Page 23, *Preparation for scanning electron microscopy*, L8: "18 x" should be "18 times."
154. Page 23, *Preparation for scanning electron microscopy*, L8–9: The sentence seems to have no subject.
155. Page 23, *Sample preparation for RNA seq and analysis*, L1: "RNA-seq" or "RNAseq" is the preferred notation compared to "RNA seq." In the Discussion section, the authors refer to it as "RNAseq."
156. Page 23, *Sample preparation for RNA seq and analysis*, L2: "6 -well" should be "6-well."
157. Page 23, *Sample preparation for RNA seq and analysis*, L3–4: The information has already been stated.
158. Page 23, *Sample preparation for RNA seq and analysis*, L7: Add a comma after "cells."
159. Page 23, *Sample preparation for RNA seq and analysis*, L8: "afterwards immediately" could be "immediately afterwards" or "afterward immediately."
160. Page 23, *Sample preparation for RNA seq and analysis*, L12–13: "0.5 mM, 5 mM and 30 mM" should be "0.5, 5, and 30 mM."
161. Page 23, *Sample preparation for RNA seq and analysis*, L14: Add a comma after "controls."
162. Page 23, *Sample preparation for RNA seq and analysis*, L14: Provide the concentration of DMSO.
163. Page 23, *Sample preparation for RNA seq and analysis*, L14–15: "Cells were harvested and cell pelleted" could be "Cells were harvested and pelleted."
164. Page 24, L1: "re-suspended" could be "resuspended."
165. Page 24, L2: Add a comma after "(10 $\mu\text{l ml}^{-1}$)."
166. Page 24, L3: "400 μl RLT buffer" should be "400 μl of RLT buffer."
167. Page 24, L3: The information "(RNeasy Mini Kit Qiagen)" has been stated.
168. Page 24, L3–4: "1200 μl 96 % (vol./vol.) ethanol" should be "1200 μl of 96 % (v/v) ethanol."
169. Page 24, L6: "also" could be removed.
170. Page 24, L6: Add a comma after "number."
171. Page 24, L10: "(" should be removed.

172. Page 24, L14: Add a comma after "libraries."
173. Page 24, L21: The method for citing a paper is different.
174. Page 24, L22: Use a consistent name for the strain, such as "DSM 21264" instead of "DSM 21264^T."
175. Page 24, L22: "back-bone" could be "backbone." Add a comma after "backbone."
176. Page 24, L27: Add a comma after "used."
177. Page 24, L29: Add a comma after "reads."
178. Page 25, *Cloning and expression of V. gazogenes UlaG*, L3: "x" should be "×."
179. Page 25, *Cloning and expression of V. gazogenes UlaG*, L4: Add a comma after "Diego."
Add a comma after "States)".
180. Page 25, *Cloning and expression of V. gazogenes UlaG*, L5: "After PCR cleanup" could be "After restriction enzyme treatment."
181. Page 25, *Cloning and expression of V. gazogenes UlaG*, L6–7: "over night" should be "overnight."
182. Page 25, *Cloning and expression of V. gazogenes UlaG*, L7: Add a comma after "cells."
183. Page 25, *Cloning and expression of V. gazogenes UlaG*, L7: I think that the *E. coli* strain (T7 SHuffle) used for protein expression is not employed in plasmid preparation.
184. Page 25, *Cloning and expression of V. gazogenes UlaG*, L8: "identified were" should be "identified."
185. Page 25, *Protein production and purification*, L2: Add a comma after "production."
186. Page 25, *Protein production and purification*, L4: "over night" should be "overnight."
187. Page 25, *Protein production and purification*, L5: "5.000" should be "5,000."
188. Page 25, *Protein production and purification*, L6: Add a comma after "purification."
189. Page 25, *Protein production and purification*, L6: Add "and" before "10."
190. Page 25, *Protein production and purification*, L7: "by Hielscher" could be "(Hielscher)."
191. Page 26, *Measurement of PET and BHET degradation*, L3: Add a comma after "incubated."
192. Page 26, *Measurement of PET and BHET degradation*, L4: Add a comma after "day."
193. Page 26, *Measurement of PET and BHET degradation*, L4: The information on the column and eluent used should be provided.
194. Page 26, *Measurement of PET and BHET degradation*, L5: Add a comma after "control."
195. Page 26, *Measurement of PET and BHET degradation*, L5: "Dh5α" should be "DH5α."
Add a comma after "DH5α."
196. Page 26, *Measurement of PET and BHET degradation*, L7: Add a comma after "degradation."

197. Page 26, *Measurement of PET and BHET degradation*, L7–8: "6 well plates" should be "6-well plates."
198. Page 26, *Measurement of PET and BHET degradation*, L8: Add a comma after "plates."
199. Page 26, *Measurement of PET and BHET degradation*, L9–10: Provide the information on the buffer condition and reaction temperature.
200. Page 26, *Measurement of PET and BHET degradation*, L9: Add a comma after "degradation."
201. Page 26, *Measurement of PET and BHET degradation*, L10: Add a comma after "h."
202. Page 26, *Cloning promoter fusion of adhE*, L1: A more effective heading might be "*Construction of adhE promoter fusion*."
203. Page 26, *Cloning promoter fusion of adhE*, L6: Add a comma after "ligation."
204. Page 26, *Cloning promoter fusion of adhE*, L10: "at ratio 1:1" could be "at a ratio of 1:1."
205. Page 26, *Cloning promoter fusion of adhE*, L12: Add a comma after "medium."
206. Page 26, *Cloning promoter fusion of adhE*, L13: Add a comma after "°C."
207. Page 26, *Cloning promoter fusion of adhE*, L14–15: "µg" could be "µg/ml."
208. Page 27, *Promoter fusion measurements*, L3: Add a comma after "amcyan." Add a comma after "strain."
209. Page 27, *Promoter fusion measurements*, L3: "wild type" should be "wild-type."
210. Page 27, *Promoter fusion measurements*, L4: "48 well-" should be "48-well."
211. Page 27, *Promoter fusion measurements*, L6–7: "For the detection of the influence of ethylene glycol 5 mM were added and strains were grown in the presence with and without EG" could be "For the detection of the influence of EG, strains were grown with and without EG (5 mM)."
212. Page 27, *Promoter fusion measurements*, L7: Add a comma after "incubation."
213. Page 27, *Promoter fusion measurements*, L8: Clearly indicate the excitation and fluorescence wavelengths.
214. Page 27, *Promoter fusion measurements*, L8: "was" could be "were."
215. Page 27, *Promoter fusion measurements*, L9: Add a comma after "evaluated."
216. Figure S1: B is currently missing.
Include scale bars in fluorescence images.
217. Legend of Figure S1: "ASW salt solution" could be "ASW medium."
218. Figure S2: Image resolutions are too low to read.
219. Legend of Figure S2: "rpM" should be "rpm."
"1mM" should be "1.0 mM."

220. Figure S3: There is a legend about TPA, but did TPA really exist?

The vertical axis should include scale lines.

"degradation products" should be "Degradation products."

221. Figure S4: "degradation products" should be "Degradation products."

222. Legend of Figure S4: "artificial seawater salt solution" could be "ASW medium."

Add a comma after "3 days."

"BHET is completely degraded" could be "BHET was completely degraded."

223. Figure S5: "fluorescence units" should be "Fluorescence units."

224. Legend of Figure S5: Add a comma after "As controls."

Information on the hypothesis testing performed is currently missing.

225. Figure S6: Include scale bars in the images (A–K).

226. Legend of Figure S5: "*V. gazogenes*" should be "*V. gazogenes*."

227. Table S2: The concentration of DMSO should also be indicated.

"table S1" should be "Table S1."

228. Table S3: It is unclear which condition is indicated as a change in gene expression.

229. Caption of Table S4: Add a comma after "5.0."

230. Table S5: "560–700 nm" and "410–560 nm" should be "560–700 nm" and "410–560 nm," respectively. To begin with, it is common to indicate the filter set used.

Declarations

Potential competing interests: No potential competing interests to declare.