# Article information:

Use of Saccharomyces cerevisiae BLYES Expressing Bacterial Bioluminescence for Rapid, Sensitive Detection of Estrogenic Compounds  
<https://journals.asm.org/doi/epub/10.1128/AEM.71.8.4455-4460.2005>

# Article summary:

1. A bioluminescent bioreporter was developed in Saccharomyces cerevisiae for applications in chemical sensing and environmental assessment of estrogen disruptor activity.

2. The strain, designated S. cerevisiae BLYES, was constructed by inserting tandem estrogen response elements between divergent yeast promoters GPD and ADH1 on pUTK401.

3. Results with strain BLYES were compared to the colorimetric-based estrogenic assay that uses the yeast lacZ reporter strain (YES).

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides a detailed description of the research conducted and its results. The authors provide evidence for their claims, such as the calculated 50% effective concentration values from the colorimetric and bioluminescence assays (n = 7), which were similar at (4.4 ± 1.1) × 10−10 and (2.4 ± 1.0) × 10−10 M, respectively. Furthermore, they provide a comparison between the YES assay and strain BLYES in terms of lower and upper limits of detection for each assay, which were approximately 4.5 × 10−11 to 2.8 × 10−9 M respectively, as well as time required for results; strain BLYES requires only 1 hour while YES requires 3 days for results.

The article does not appear to be biased or one-sided; it presents both sides equally by providing evidence for both YES assay and strain BLYES in terms of their effectiveness in detecting estrogenic compounds. Additionally, there are no unsupported claims or missing points of consideration; all claims are supported by evidence provided by the authors throughout the article. There is also no promotional content or partiality present in the article; it is purely focused on presenting research findings without any bias towards either side of the argument presented within it. Finally, possible risks are noted throughout the article; however, these risks are not explored further than simply noting them as potential issues that could arise from using this method to detect estrogenic compounds in environmental samples.

# Topics for further research:

* Estrogenic compounds in environmental samples
* Detection of estrogenic compounds
* Colorimetric and bioluminescence assays
* Lower and upper limits of detection
* YES assay and strain BLYES
* Risks associated with estrogenic compounds

# Report location:

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