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Fishy mutations

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Transgenic animals carrying a prokaryotic vector are useful tools for mutation studies and the detection of spontaneous or induced mutations in different tissues. Advances in [fish transgenesis](#) make it possible to develop fish that can be used both to assess the health hazards of mutagens in aquatic environments and for comparative mutagenesis analysis. In a paper published online ahead of print in [Proceedings of the National Academy of Science](#), Winn *et al.* report the use of a bacteriophage lambdaII transgene to detect mutations rates ([Read the abstract online](#)). The bacteriophage can be easily rescued from the fish genomic DNA and mutated phage are selected by plaque formation on a bacterial lawn. Winn *et al.* show that spontaneous mutation rates are tissue-specific (higher in liver than in testes) and are roughly comparable with those observed in transgenic mice. Also, mutations induced by exposure to ethylnitrosourea (ENU) are concentration- and time-dependent. This study shows that fish provide a simple lambda-based transgenic model for mutation analysis.

References

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