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## Zebrafish on drugs

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In the November 21 [Proceedings of the National Academy of Sciences](#), Peterson *et al.* describe a screen for chemicals that can be used to interfere with, and time, developmental events in zebrafish (*Proc Natl Acad Sci USA* 2000, **97**:12965-12969). Zebrafish eggs were arrayed three to a well in 96-well plates, along with one of 1,100 synthetic [small molecules](#). The developing embryos were screened once a day for three days for defects in the central nervous system, the cardiovascular system, pigmentation, or ear development, with one person capable of screening approximately 400 compounds a day. Approximately 2% of the compounds were generally lethal or caused widespread necrosis, but approximately 1% of the compounds affected a specific aspect of one system under study. Peterson *et al.* demonstrated the utility of such probes by adding and washing away a particular chemical at different times, thus determining that a critical stage for ear development occurs between 14 and 26 hours post-fertilization. Further insight may come from [isolation of the proteins](#) targeted by the chemicals, using procedures such as affinity chromatography.

## References

1. *Proceedings of the National Academy of Sciences*, [<http://www.pnas.org/>]
2. Target-oriented and diversity-oriented organic synthesis in drug discovery.
3. Chemistry or biology: which comes first after the genome is sequenced?