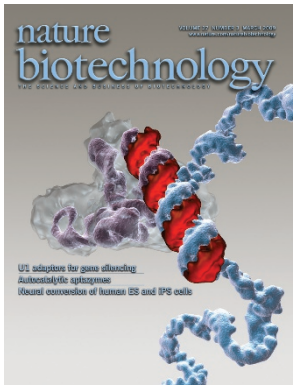
Regulating laboratory-developed tests

To the Editor:

As Chief Medical Officer at Genentech (South San Francisco, California, USA), I found one perspective in your March editorial[1] notably missing from the arguments against our citizen's petition regarding *in vitro* diagnostic tests: that of the patient.

At the end of each diagnostic test is a person, along with his or her family, faced with a treatment choice that could change the course of their lives. We believe any test making a claim that could influence this choice should be reviewed by the one body responsible for regulating the safety of our medicines and medical devices—the US Food and Drug Administration (FDA; Rockville, Maryland).



Imagine the outcry that would arise from both the public and scientific community at the suggestion that FDA review of new medicines and medical devices be curtailed because there are too many, they cover too many areas and reviewing them all would just be too expensive and would stifle innovation. These are essentially the arguments being made against the review of *in vitro* diagnostics.

To state that the FDA is not staffed for the "thousand or so" tests that would need to be reviewed assumes that each test has the level of clinical data needed to even submit an application for the claims the test manufacturer is making. As for concerns about the length of review, three *in vitro* diagnostic multivariate index assays performed at labs approved under the Clinical Laboratory Improvement Amendments have received FDA clearance in the past 2 years, with the first test having a review time of less than 30 days, suggesting there is not a potential backlog for all of the laboratory developed tests. To say that the field is "so unstandardized" and regulation is in "direct opposition to market forces" only further supports our view that patients need someone looking out for them. The recent massive recall of a 'home-brew' vitamin D test affecting thousands of people serves as an example of what issues can emerge when there is no reliable means of reporting adverse results.

These arguments against FDA review have been postulated by home-brew test makers time and again and, in our opinion, do not account for the person and the family facing a decision on a medicine for a life-threatening disease. We believe the FDA is more than a "box" for doctors to "tick" when deciding how to treat a disease. The opinion of the FDA is one of the most important (though not the only) sources of information for doctors when considering a medicine, device or diagnostic test to treat any life-threatening disease.

With Herceptin (trastuzumab), a drug that has helped women with HER2-positive breast cancer live longer, Genentech has shown that working with the FDA to review data for both a medicine and a diagnostic test does not stifle innovation in personalized medicine. Identifying the roughly one out of four women who respond to the medicine—and the three out of four who do not—was of immense benefit to patients and also made sound business sense—so much so that we seek to apply the same personalized approach to all of our medicines in development.

At Genentech, we have always believed that doing what is right for the patient is also what is right for the business. Test manufacturers should spend their time presenting robust data that support their claims and ultimately help patients rather than arguing that having the FDA review that data would be bad for business.

COMPETING INTERESTS STATEMENT
The author declares competing financial interests: details accompany the full-text HTML version of the paper at http://www.nature.com/naturebiotechnology/.

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1. Anonymous. *Nat. Biotechnol.* **27**, 209 (2009).

To the Editor:

You argue in your March editorial[1] that the US Food and Drug Administration (FDA; Rockville, Maryland) should keep out of the regulation of genetic tests. The editorial is framed as a reaction to a petition Genentech (South San Francisco, California, USA) filed with FDA last December proposing that the agency regulate genetic tests on the basis of their complexity and risk, not on whether they're produced in-house (with little or no oversight) or as a commercial kit (which means they will have gone through all the available regulatory hoops to ensure public safety).

The editorial misrepresents Genentech's petition (which the Genetics and Public Policy Center supported) as calling for blanket FDA regulation of all laboratory-developed tests. In fact, Genentech focuses its arguments on the much smaller category of high-risk tests used in conjunction with pharmaceutical or therapeutic decision-making. In the age of personalized medicine, drugs will be only as good as the tests used to make prescribing and dosing decisions; FDA can't ensure the safety and effectiveness of drugs if it can't also ensure that the tests are good.

Contrary to the position of the journal, FDA's role is the protection and promotion of public health, not the protection and promotion of the genetic testing market. It is this philosophy that undergirds US President Obama's recent decision[2] to reverse regulatory deference to market forces in promulgating measures to protect the public health and welfare.

Moreover, the editorial's defense of the coherence of existing regulatory pathways notwithstanding, current regulatory practice actually interferes with market forces by regulating *in vitro* diagnostic test kit makers with both before-marketing and