

# Biotech by the Bay

## Views from the biotech start-up world

<http://www.biotechbythebay.com/2010/04/the-rise-of-companion-diagnostics/>

### The Rise of Companion Diagnostics

Earlier this week was the [BayBio 2010](#) conference titled “Life Science Innovation: Drivers and Barriers”. I wasn’t able to attend, but there were a lot of great updates on Twitter from a variety of sources such as [BayBio](#) and [Michael Fitzhugh](#). From the updates it appears it was a great conference with a lot of interesting insights about the life sciences industry in general and in the Bay Area. (You can search for the hashtag [#baybio](#) to see a recap of the many great updates.)

One of the trends discussed at the meeting was the rise of companion diagnostics, or the strategy of integrating a diagnostic with a therapeutic. A classic example of such an approach is the HER2 test being used to select patients for Herceptin treatment. There are more and more examples of drugs failing to show therapeutic effect on a large, general patient population, but having significant effect on a targeted patient population identified by some diagnostic endpoint. It is effectively the first incarnation of personalized medicine.

The interesting thing about companion diagnostics is how quickly the idea has gained traction in just the last four years. In 2006 Steve Burrill was talking about how “theranostic” companies would be the next big thing in life sciences. That year I participated in the [Idea to IPO](#) class offered at UCSF in conjunction with Burrill & Company and worked on a business plan for just such a company combining a diagnostic with a therapeutic. I was surprised at the end of the course when much of the feedback we received from various venture capitalists was to get rid of the diagnostic portion and focus on the therapeutic. In our team’s mind the combined approach was part of the value proposition for that particular technology, but investor sentiment was clearly against it.

Fast forward to 2010 and the companion diagnostics approach can be seen from the smallest therapeutic company to the largest pharma company. In March, Roche held an investor day in New York to [give an update](#) on their pipeline developments. One key area that they discussed was their development of a BRAF mutation assay as a companion diagnostic to their BRAF inhibitor. They discussed other companion diagnostics and highlighted their strengths in diagnostic development going forward. Other examples of such practice can be found throughout big pharma, as companies recognize the value of reducing patient pool in exchange for a chance to have increased therapeutic effectiveness.

So what does this mean for life science start-ups? There are a lot of great diagnostic and platform technologies out there that are readily applicable to companion diagnostics. As a part of a larger strategy these start-ups could look at developing a product that could be used as a companion diagnostic. As many therapeutic companies do not have diagnostic expertise, this sort of project could lead to development partnerships, licensing, or even acquisition possibilities for start-ups in the diagnostic space. As a way to help get the ideas flowing there is a [BayBio meeting](#) next week focusing on personalized medicine, featuring venture capitalists and their interests in the field. While diagnostics have often been considered a lower priority than therapeutics in many investors' portfolios, it appears that change is in the air.