

## **Book review: Breakthrough by William Pao**

I've just finished reading "Breakthrough-The Quest for Life Changing Medicines" by William Pao.

"Breakthrough" is a series of "short stories" about the discoveries of eight different drugs. This is no mean feat, as many other (excellent) books on biotech describe the discovery of one drug or family of drugs. But being able to summarise in an interesting and didactic way the stories of eight drugs is no mean feat. I particularly liked William's emphasis on: 1) the many contributors to the discovery of a drug (as opposed to the "one star who figured it all out" versions), 2) all the "scientific stars" that need to align for a breakthrough, 3) the dramatic twists in fortune for projects which were close to being terminated before they became successes.

There is a quote from David Altshuler (MIT and Vertex) that summarises a key point of the book very well: "It's really easy to treat cells in a dish, it's easy to cure mice. It's been done thousands of times. When you try and make medicines for people...it's a very hard thing. It would be like saying you've built a bridge of Lego and now you think you know how to build a bridge across the Hudson".

The book finishes on a high with the chapter "How to Innovate" with William's own valuable insights for drug developers. Here are some of my favourite insights: 1) The sweet spot of drug innovation happens at the intersection of the biologic understanding of a target, clinical understanding of the disease in relation to a target and sufficient technological advancement that enables drugging of the target, 2) innovation means turning an idea into something of practical value on a large scale, 3) discoveries in unrelated fields unlock innovation and 4) innovation demands determination, resilience and collaboration.

In short, I will recommend "Breakthrough" to all current and future clients of Basel Biotech Consulting GmbH. Basel Biotech Consulting's aim is to help companies find the means to "build the bridge across the Hudson" after they built a good Lego bridge!

*Full disclaimer: I've had the pleasure of working with William when he was a "stakeholder" of my BD projects at Roche. Through our shared passion for tennis, we ended up playing in the same team in Swiss Interclub. But that's for another post.*

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