

MAKING AND BREAKING THE RULES

Q & A WITH BENJAMIN W. SLIVKA

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Tell us about Internet Explorer.

In 1994, I decided Microsoft needed to build a web browser. Many people at Microsoft felt the Internet was a threat to Windows and Office — which it was — and my effort was unpopular. Fortunately, the leaders of my group shared my views, so they supported my efforts to build the first three versions of IE.

What are the benefits to being a rule-breaker?

Well, there are mostly disadvantages to challenging the status quo! Human beings — and the cultures and organizations they create — love rules.

What interests you about the Institute for Protein Design (IPD)?

Most of the drugs available today were stumbled upon — natural molecules that happen to address some medical need. The promise of protein design is the ability to use software to quickly design proteins to solve problems which nature has never solved.



What do you hope your gift to the IPD will do?

David Baker's work at IPD is a perfect match for me and my wife, Lisa: it's a combination of sophisticated, ever-evolving software with the latest wet lab techniques. We made unrestricted gifts because those are the most difficult to raise.

What could machine learning bring to protein design?

IPD research projects start with theories, and each involves exploring millions or billions of possible solutions via software. Wet lab testing verifies the design. But our protein "rule book" is far from complete, so protein design today is very limited and very slow. Machine learning should allow us to speed up the learning cycle dramatically, allowing us to flesh out our "rule book".

As our protein "rule book" improves, what happens?

It will allow us to design proteins that are inconceivable today. We will be able to design a universal flu vaccine, or a drug that targets and kills only cancer cells. And instead of hunting around in nature for decades, these designs could be created and verified in weeks.

Words to live by?

Ask for forgiveness, not permission.