The Innovation Ecosystem and IP’s Role in the Fight Against Covid-19

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Mistaken Skepticism about IP and Covid-19 Research at Every Step

“IP will block information sharing for basic research”

“IP will impede vaccine and treatment development”

“IP is getting in the way of making and distributing vaccines”
A fundamental misunderstanding of innovation

If you build it, they will come

Yeah, I’m just writing the code now.
The three parts of innovation

And why IP matters
Difference-making innovation has three parts

- INVENTION
- MAKING A PRODUCT
- GETTING PRODUCTS TO PEOPLE
Insights

Spread out the work

The division of labor is essential to bringing drugs from the lab to patients

Spread out the risk

Drug development is characterized by failure and wasted investment

Private sector work privatizes the financial and political risk
The three parts of life sciences innovation in the Covid-19 Story

And why IP matters
Moderna

• Started with Dr. Derrick Rossi reading an academic paper by Karikó

• Brought the first Covid-19 Vaccine to Human Trials in 45 days

• A year later, it is well on its way to manufacturing a billion doses
Synthetic mRNA

- Not an overnight success
- mRNA discovered in 1961
- Idea that synthetic mRNA could treat diseases has existed for decades
- For the researcher most responsible for advancing the idea, Katalin Karikó, it was almost a career dead-end
mRNA Technology

- Challenges to overcome:
  - Fragility of mRNA
  - Body’s rejection when it enters cell
  - Decades of public and private research
  - Billions of investment
• Ultimately, it took 100s of millions of investment in Moderna and BioNTech by VCs, companies, and the public to get these companies to the point where they could produce a vaccine.
Academic founder of Moderna

“You can be working on the coolest thing, but investors need to know that there is some protection for their investment, plain and simple.” IP is “the future prospect that reassures investors.”

Could the government or university researchers commercialize their work?

“Not a chance. Academics are good at academia and fundamental science. They are not good at developing drugs for patients.”

“This industry of professionals is out there. . . .The more people that are involved in the chain, post-academic discovery, the more you have pros involved – all the way from IP filings to VCs to due diligence to assembling a team,” the more likely you are to develop a viable treatment.
Creating a vaccine was just the first step

- Pfizer’s experience
- mRNA vaccines had never been manufactured at scale
- 86 different suppliers
- 10 - 15 unique raw materials
- 280 materials in total
- 46 steps to go through before they could release a batch of vaccine
Covid-19, IP, and the three steps of life sciences innovation

Each step – research, product development, and delivery to the public – was hard

Each step required investment

The investment was backed by IP

IP facilitated cooperation
Thank you

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