



INNOVATION COUNCIL

SME IP Story: Kinnos

As told by Jason Kang

Company Profile: Kinnos

Sector	Health
Company Location(s)	USA
Website	https://kinnos.com
Company Size	15 employees
Company Sector(s)	Healthcare/manufacturing
Company main market(s)	USA
Business	Kinnos pioneers color technology that revolutionizes how we use disinfectants. The company's flagship product, Highlight®, is a patented and award-winning color additive platform that improves disinfection technique and compliance. Highlight's real-time color visualization has been reported in independent studies and whitepapers to consistently increase thoroughness of cleaning. Recognized by Harvard Innovations Lab, Forbes, Newsweek, USAID, the USPTO Humanity Award, the WHO, and more, Highlight® is used internationally by hospitals, first responders, and transit agencies.

IP Story in a Nutshell

Kinnos' Highlight® is a patented solution that simplifies the disinfection process and makes it easy to use disinfectants optimally.



Tell us about the early part of your company's journey to market.

We started Kinnos in 2014 when we were still undergraduate students at Columbia University. We wanted to make a difference in the West Africa Ebola outbreak and saw that a major problem was human error during disinfection leading to infections. Since then, we've been able to deploy our Highlight® technology not just for epidemic response but also for everyday use in hospitals and other settings. As first-time founders, we've definitely made mistakes, but it's taught us a lot and we're happy to share here what we've learned along the way. One thing we did right was prioritizing our IP strategy, which played a big role in our fundraises.

**2**

How does the invention work? What impact does it have on society?

The problem we're solving is that there's a lot of human error in disinfection – about 50% of surfaces are cleaned improperly. Most people don't realize that you need to completely cover a surface with disinfectant for a certain amount of time to inactivate the pathogen. But given that disinfectants are invisible, it's really easy to miss spots on the surface.

Our product is called Highlight®, and it's a patented color additive that is directly combined with existing disinfectants at the point-of-use. A Highlight-enhanced disinfectant is colored blue, so when you apply it to a surface, you can actually see where you've applied it and where you haven't so you don't miss any spots. The color then automatically fades from blue to colorless after a few minutes to train that it takes time for disinfectants to inactivate pathogens. The idea is to make it really foolproof, so you can give it to anybody and say "make sure everything is covered in color and when the color is gone, you're good." We've actually been able to publish a number of peer-reviewed papers showing 30-70% improvements in disinfection quality metrics, which are linked to patient outcomes. Not only are we impacting the staff and empowering them to be confident in their work, but we're also providing peace of mind to the general public through visible disinfection you can see.

**3**

Do you market the product yourself or do you have partners?

Both. We do a lot of work directly with hospitals and we have a fantastic marketing leader who was one of the pioneers in creating a market for breakthrough technologies in the hospital infection prevention space. Our sales team also works with janitorial sanitation distributors and rep agencies that have expertise selling products specifically to environmental services, which is the group responsible for disinfection in hospitals.

**4**

What about your IP story?

We have over 25 issued patents around the world covering composition of matter, hardware, design, and method of use. We also have trademarks on both our product and the company and utilize trade secret protection where it makes sense. As an entrepreneur, you always look for efficient ways to use money wisely, but one of the most important lessons we've learned is not to skimp on having the right team lead the IP strategy!

**5**

What are the main challenges for your company to overcome?

Every company faces many major challenges and these evolve over time, so I'll talk about one of the more recent ones, which has been launching a hospital product line during COVID. It's kind of counterintuitive! Although the importance and awareness of disinfection has massively increased, the appetite of hospitals to try new things from both small and large companies has been very low. In the U.S., most of a hospital's revenue comes from elective procedures, which significantly declined during the outbreak, meaning budgets, especially for new products, were scaled back. The problem has been further exacerbated by labor shortages and high staff turnover rates, meaning that hospitals are literally in survival mode trying to have enough people working and aren't thinking about innovations to try out. Thankfully, the most recent surge from Omicron is improving and we're seeing a significant uptick in interest. A theme that we've experienced dating back to the Ebola outbreak and through the COVID pandemic now is that implementing something new in the middle of crisis is extremely challenging.

One of the things that's been able to help us overcome this challenge and get the attention of hospitals is building a body of literature and collecting data. We learned that communicating the value proposition requires being able to point to quantitative, tangible benefits that our product can provide. Having objective results and having it peer-reviewed by the scientific community makes it much easier to convince a decision maker that trialing our innovation is low-risk and high-reward.

**6**

Was it easy for you to get support/expertise on patents?

When we first started, we used a lawyer from our family and friends network to help us with intellectual property, and, well, you sort of get what you pay for. So you might say availability is easy, but it's hard to find quality you can afford. We ended up doing a lot of the heavy lifting on our own by spending time reading patents and teaching ourselves the best way to structure and defend our claims. Later on when we were better funded, we were able to hire patent lawyers and specialists in our field to expand our IP portfolio. Even though it wasn't easy to teach ourselves about patents, it's definitely paid off in the long run in terms of being able to work more intelligently with IP counsel to discuss strategy.

