JOHNS HOPKINS
MEDICINE

Crowe Society Alumni Spotlight

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Residency Graduation: 2013

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**You've gone from Hopkins trainee to department chair at a world-leading institution. Was that something you ever saw coming?*

Honestly, no. "As a resident, I never thought about being a chair. It's not something I was really going for or trying for." What happened instead was a slow build: developing a research identity, earning a reputation in teaching and clinical practice, and getting deeply connected with engineering colleagues across the university and in Hong Kong. When the previous chair stepped down and the timing felt right, the pieces were already in place. "It was right place, right time, and how things transpired in Hong Kong."

**You've built two research programs that couldn't be more different: transoral robotics and the head and neck cancer microbiome. How did those come together?*

Both started with a conversation, not a plan. The robotics work kicked off around the first transoral single port robotics case in Hong Kong in 2016, which led to a collaboration with an engineering colleague working on MRI-compatible soft robotics. The microbiome program grew the same way, starting with a chat with scientists in the Microbiology Department and a hunch that turned into something much bigger. "The microbiome and head and neck cancer seem obvious given the exposure of the mucosa to bacteria, and we had a lot of non-smokers, non-drinkers developing cancer." That hunch has since grown into a lab of more than a dozen PhD researchers, postdocs, and scientists working on diagnostics and potential treatment applications across the oral cavity, nasopharynx, and esophagus. The two programs run largely independently and at this point mostly on their own momentum. "They're almost self-driving in a way. I join the lab meetings to make sure, from a clinical standpoint, we're doing the right thing and going in the right direction."

You co-founded Agilis Robotics while running a department. What gap were you trying to fill, and what surprised you about life on the startup side?

We were solving a real problem in endoscopic submucosal dissection: decoupling instrument movement from the endoscope's view so surgeons could work from a stable platform instead of constantly chasing a moving field of vision. The engineering challenges are significant—we're dealing with robotic arms just 2.8 to 3.5 millimeters in size, with precise motion that has to be transmitted over distance and around curves.

We also made a strategic choice to focus first on urology and GI, since those were more accessible entry points, with ENT to come later. If we had tried to go after ENT first, that probably wouldn't have been the best idea. It made more sense to begin with the larger market.

What's surprised me most is how fast things can move in a startup. Since starting in 2021, we've completed animal studies across three countries and run our first clinical trial in Hong Kong. I don't think we would have reached this point as quickly in a university setting, where there's usually more bureaucracy around funding, procurement, and decision-making.

What would you tell current Hopkins trainees?

"Be humble and keep an open mind. Anything can happen, especially if you're considering an academic career. A lot of what I've built didn't come from a set roadmap—it started with curiosity and being willing to talk with people outside my immediate field. People are still skeptical about the microbiome and head and neck cancer, but there's growing evidence that there may be a real relationship there. So my advice is: stay open, take the conversation, and don't underestimate where a good idea or a good collaborator can take you.

How do you manage to balance family time with your responsibilities as chair while also helping run a fast-moving startup company?

I stay connected to both work and my family by using video calls, no matter where my commitments take me around the world. On weekends and after work, I make it a point of taking my kids to their activities and building in quality family time. "At the end of the day, being a good father and husband takes the same intentionality as anything else I do. It takes effort and you have to prioritize it."