

Career in focus: Creative Director

Science is so demanding that it seems like we must forego other interests, like art, music, and dancing. Here, we feature Christina Agapakis, who combined her passions for science and art in her career. She created a niche for herself as the Creative Director of Ginkgo Bioworks, a biotech startup in Boston. Ginkgo Bioworks designs microorganisms to produce ingredients for customers in industries like flavor and fragrance, cosmetics and personal care, or food and nutrition. Christina was an undergraduate at Yale and received a PhD from Harvard in synthetic biology. During her postdoc at UCLA in synthetic biology and microbial ecology, she was also an adjunct professor at the Art Center College of Design in Pasadena. Read more about her job as Creative Director and how she made the transition from academia to her unique position now.



FAQs

What is a Creative Director?

Creative director is not a traditional title in a biotech company. As such, the role is quite open-ended, and the responsibilities may be very broad. Working at the boundary between the technical and public-facing elements of a company, the role could include working as a translator, communicating the work of bioengineering to customers and consumers, collaborating with the creative teams of other companies, artists, designers, and social scientists to develop new creative concepts that explore future applications of biotechnologies. Similar projects and responsibilities may be found in a biotech company's marketing, communications, or design departments. In Christina's words: "For me, the key is creativity and the key to creativity is collaboration. Bridging boundaries between different fields and ways of knowing are the first step for creative problem solving and design."

Why switch to a career like this?

A creative director or similar position is suited for people with a lot of creativity and passion for both science and art. A scientist interested in a more artistic career might look for opportunities as a science writer or illustrator, but as tough as the academic job market is, being a freelance science writer or bioartist is not an easy or lucrative path either! There are more and more spaces and jobs opening up in this strange in-between world between science and art, but there is certainly no well-trod career "path" to follow. While such a position allows for flexibility in following your own interests, it also requires the ingenuity to pave your own way.

What kinds of skills are needed to be successful in these roles?

A successful creative director needs to be able to see how other people make sense of the world and communicate effectively between people of different world-views. Especially important are communication skills, reading, writing, talking to people, finding your own voice, and developing a critical eye. Networking is equally critical, for the job itself as well as finding a suitable position in the first place.

Roles like this are still being defined and you also need the skills to identify those needs and shape those roles for yourself. The first step is to realize when you're learning the "right" sorts of skills and to learn how to seek out the opportunities to learn more.

Opportunities while you're at Yale:

If you're interested in exploring a career as a creative director for a company, there are many ways to better prepare yourself for this field during your academic training:

- 1) Practice your writing skills by starting a blog
- 2) Write or edit for the [Yale Journal of Biology and Medicine](#)
- 3) Join [Science Diplomats](#) for opportunities to practice communicating science to the public
- 4) Network on LinkedIn, Twitter, and Facebook
- 5) Pursue your interests outside of lab

How did you get interested in what you do? Did you consider other career paths?

As a student, I probably changed my mind about my career path every semester. I never had a particularly clear image of what I wanted to be “when I grew up” other than that it was going to be something that had to do with science. I remember being so struck at the start of graduate school about how it seemed like everyone knew exactly what they wanted to do, down to the subspecialty of biochemistry that they were interested in pursuing! I knew I liked chemistry and biology. I also knew I liked politics and art and literature and music. As a first year grad student those seemed like they were totally separate from what I was doing in science classes or in lab, but the further I got through my PhD, the more I realized how you can't separate politics and art from science. It was at that point that I knew what I wanted to do was find a place in between science, technology, and culture, and since then I followed opportunities as they've emerged. I'm still not sure exactly where it's going to end up!

Can you share your career path with us from graduate student to what you do now?

There were a few really important decisions and turning points for me.

1. Choosing to work with Pam Silver for my thesis work. I hadn't heard of synthetic biology before I met her, but she and the work her lab were doing were so interesting that I dove right in and became really passionate about the research and the community.

2. Starting a blog. This was back when blogs were more of a thing, but my blog was a really important opportunity for me to form my opinions and beliefs about the science I was working on and its place in society. The first decision I made was directly relevant to this second one—Pam always supported my “outside” interests and activities as long as she saw that I was making progress on my path to graduation. She recognized how these interests, though they maybe weren't directly impacting the design and success of my benchwork, were directly impacting my growth as a scientist. Through my blog I learned a lot about the science, I learned about how to write and design websites and make videos, and I learned about different approaches to science that helped me make sense of things.

3. Applying for and getting accepted to the Synthetic Aesthetics project—a month-long residency where scientists were paired with artists to explore potential applications and implications of synthetic biology. Again,

Pam was very supportive, and having a month to explore something so different from what I was doing in the lab and to work with an amazing artist, Sissel Tolaas, was an incredible opportunity. My focus entirely shifted after this experience, and though I was still doing scientific work in the lab, I was also writing and teaching and creating artwork in this space just beyond the science.

4. Deciding to leave academia. Timing with things in my personal life aligned well with the wrapping up of my postdoc projects, but I didn't have a next step fully planned out. I went freelance; I kept writing for other outlets and I started a magazine, which connected me to so many wonderful people (including Zuri Sullivan, who led me directly to you and your newsletter!); I taught designers and artists at the Art Center; I started consulting for Ginkgo about these issues that I'd become so passionate about—media, communication, design, and storytelling. When timing with personal stuff and geography worked out again, that led to the role I have now.

What was the most challenging part of your transition from academia to your current field?

Every transition is challenging, but I think we've come to imagine the border separating academia and everything else as much bigger and scarier than it actually is. The edge of academia isn't a cliff, it's actually quite a nice border town where there are very friendly people doing all sorts of interesting things. Finding the right people in that town and being able to see myself in the sorts of things they did made the transition a lot easier because I could see more of where I would land once I jumped off the ledge.

What is a typical day like for you?

I'm not sure that there is a typical day, but I do spend a lot of time making slides and writing emails! If I look around my desk right now I have some jugs of fermenting vinegar at my feet (a collaborative experiment with small-scale fermentation), a book about perfumes on my left, and sketches for a booth I'm designing for a conference on my right. On any day I might be talking to perfumers, to our customers' Research and Development (R&D) or marketing teams, or to designers or scientists we're collaborating with. I might be attending a conference to learn more about another industry or to share Ginkgo's story with a different group of people. I might be working on writing a new presentation about a new product, or writing an article about biodesign. So, it really varies, but every day is certainly exciting.

What skills did you need to develop in order to move into your current position?

I'm learning a lot more about business that I didn't have the opportunity to learn as a student or postdoc. I've spent a lot of time trying to understand how people understand complex scientific concepts; my challenge now is learning how to get into the "head" of a company.

Is there room for career development and/or advancement for someone in your position?

I'm always learning and growing personally, and the company is learning and growing quickly as well. If you're doing graduate-level research, you should never settle for a position where you're not allowed room for personal development and growth, certainly after you leave academia but really especially in your thesis or postdoc research positions.

Is there any last advice you would give to someone looking to pursue a similar transition to a position like yours in a biotech start-up?

All companies work differently, and they are all different from academia. It can be hard to even know what kind of jobs exist and what it would mean to have that job. The best thing is to find opportunities to meet people who work in industry (any industry that you might be interested in!) and ask them about what they do. This can be at conferences, structured networking events, or even online. "Networking" can seem really icky, but at its best it means connecting with people that you genuinely think are interesting. Those relationships are vital to growing as a scientist and developing in whatever career path you choose.

We thank Dr. Christina Agapakis for participating as our featured scientist in this issue's Career-in-Focus section to highlight her unique role as Creative Director with Ginkgo Bioworks.

Career-in-Focus Section Career Spotlights on the Website

Our Career-in-Focus section career spotlights provide valuable insight into a number of career paths that are useful for graduate students and postdocs who are interested in careers outside of academia.

Although our newsletters have long been archived on the CNSPY website for future reference, we realized that the format in which these Career-in-Focus sections were presented were not conducive to quick, easy, and informative searches. We have fixed this issue, and all of these sections are now featured on a separate [page](#) of the CNSPY website to allow easier, faster searching by highlighting these pages with individuals' names and career paths.

In the past, we have interviewed individuals in:

Academic Administration
Academic Research
Biotechnology Patent Law
Industry R&D
Management Consulting
Medical Science Liaison
Non-Profit Organizations
Science Education
Science Policy
Science Writing
Start-up Companies

We have plans to interview individuals from grants administration and NIH, but we are open to suggestions as well. Let us know if there is a certain career path you'd like us to explore, and we'll do our best to seek out career professionals in those areas to provide insight for you and the Yale Community. Email [Victoria Schulman](#) with your requests!

Thank you for reading!!

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