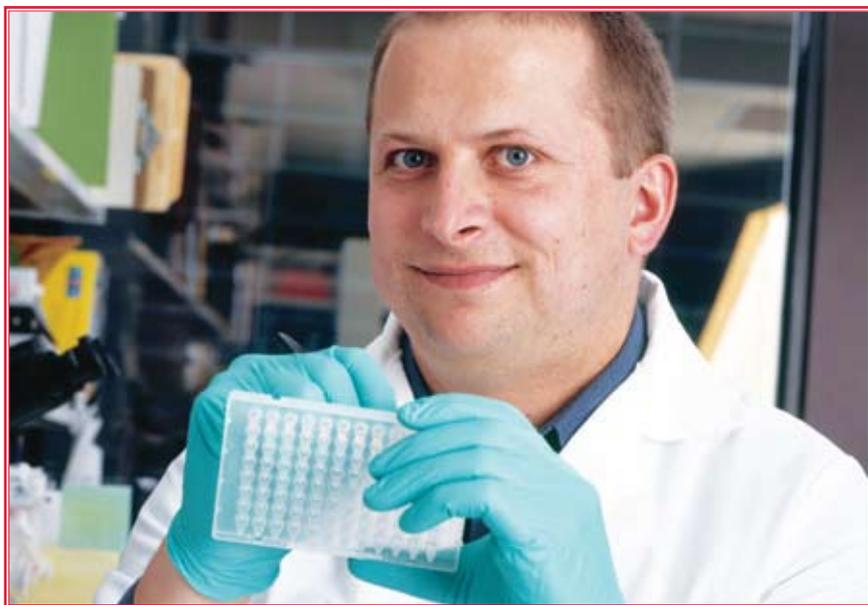


In Conversation:

Research Fellow

Aaron Schetter, Ph.D., M.P.H.



(Photo: R. Baeer)

Aaron Schetter, Ph.D., M.P.H.

CCR: Aaron, you have been a Fellow at CCR for four years now—what brought you to the field of cancer research?

Aaron: I did my Ph.D. at Cornell, in Ken Kempfhus' lab, studying the genes involved in early development of the model organism *C. elegans*. I was fortunate to arrive just in time to take advantage of RNAi as a powerful new tool for genetic screening.

Then, while I was in graduate school, I was actually diagnosed with Hodgkin's lymphoma. In terms of cancers, if you have to get one, that's not a bad one to get—it is usually curable, although the chemotherapy makes you miserable for a few months. After that, I decided that I wanted to change the direction of my research to something that is more relevant to cancer.

CCR: Wow, what a powerful and personal motivation for your career. How did you decide where to pursue it?

Aaron: I applied for an NCI Cancer Prevention Fellowship. The fellowship takes people from a broad set of backgrounds and provides an opportunity to go back to school and earn a Master's in Public Health (M.P.H.). It then sponsors postdoctoral research at NCI for three additional years. Once I had my master's, the choice for me came down to picking a laboratory that was investigating therapeutic targets or biomarkers for cancer.

What interested me about Curt Harris's lab was that he was studying miRNAs, which I thought had high potential to be developed into biomarkers and therapeutic targets. Their small size made them easy to detect, knock down, or overexpress. At the time, one of the postdocs in the lab, Nozomu Yanaihara, had a project in which he found miRNAs that could predict survival in lung cancer.

I thought it would be great to do something similar for colon cancer.

CCR: And, have you succeeded in finding a biomarker for colon cancer?

Aaron: In fact, we have. We published a paper in *The Journal of the American Medical Association* last year that was the first to take miRNA expression profiles and predict survival and therapeutic outcome in colon cancer.

We are also following up on one of the most significant miRNAs from that biomarker study—mir-21—to see if it could be a useful therapeutic target. Because mir-21 was upregulated in patients that did not respond as well to chemotherapy, we are trying to sensitize colon cancer cells in culture to chemotherapy by knocking down mir-21. All of this is far away from the clinic because we don't have great ways to affect miRNAs in people. But, it sets us on the path.

CCR: Where do you see yourself in five years?

Aaron: I would like to take the kind of work I do now into the pharmaceutical industry to identify and potentially develop new drug targets. I want to work on a project that could end up treating disease.

CCR: And what advice would you give graduate students interested in coming to CCR?

Aaron: The biggest thing is to look for an environment and a group of people that match your research interests. Overall, I think the great thing about being here is that you are surrounded by floors of people working on cancer. The knowledge base about cancer even in this building alone is larger than you could find at many other institutions. Through journal clubs, meetings, and seminars, you are exposed to all kinds of insights and technologies and just have to walk down the hall to find out more.

The NIH Pediatric and Wildtype GIST Clinic

Pediatric gastrointestinal stromal tumor (GIST) is a rare disorder affecting less than 200 patients in the United States. Because this disease is so rare and the biological differences between children and adults affected with GIST are so great, it has been difficult to study this disorder and determine the best therapy for pediatric patients. In an effort to advance research on GIST, Su Young Kim, M.D., Ph.D., and Lee J. Helman, M.D., in the Pediatric Oncology Branch at CCR, and Constantine A. Stratakis, M.D., D.Med.Sci., in the National Institute of Child Health and Human Development, have led the development of the Pediatric and Wildtype GIST Clinic.

The GIST Clinic is a collaborative effort between clinicians, research scientists, and advocates across the nation to better understand the pathogenesis of GIST, to develop innovative national clinical trials, and to assess the best treatment approaches for these patients. Dr. Kim also initiated a “virtual” GIST clinic, a secure NCI-based Web site (www.pediatricgist.cancer.gov) that will store medical information for patients, physicians, and researchers. The goal is to create a database of all young patients with GIST around the world that contains information on their clinical history, responses to prior treatments, histopathologic results, radiographic assessments, and genetic/molecular analyses in order to find a cure for this rare disease collaboratively.

(Photo: S.Y. Kim, CCR)



Four mothers and their daughters await appointments at the Pediatric GIST clinic.

To learn more about Dr. Kim's research, please visit his CCR Web site at <http://ccr.cancer.gov/staff/staff.asp?profileid=7870>.