Q&A: Stephen Baylin and Peter Jones on Team Science

Competitors-turned-collaborators talk about benefits and barriers in multi-institutional projects

Stephen B. Baylin, MD, and Peter A. Jones, PhD, DSc, both studied the epigenetics of cancer, saw one another regularly at conferences, and grew familiar with each other’s work. They even coauthored a handful of reviews. But they didn’t conduct experiments together or share data. They were competitors.

That changed 2 years ago when Stand Up To Cancer announced grants to fund 5 multi-institutional “dream teams” composed of the nation’s sharpest medical and scientific minds. Baylin and Jones joined forces. They assembled a team with colleagues at their respective institutions—Baylin is deputy director of the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, and Jones is director of the Norris Comprehensive Cancer Center at the University of Southern California—and other medical research centers, including the University of Pittsburgh Cancer Institute, Lovelace Respiratory Research Institute, and M.D. Anderson Cancer Center. Ultimately, they received $9.12 million to study therapies that inhibit epigenetic mistakes in lung, colon, and breast tissues that lead to tumor development and allow cancer stem cells to renew themselves.

To learn more about the inner workings of such ambitious collaborations, Cancer Discovery’s Suzanne Rose spoke with Baylin and Jones about their experience.

Why hasn’t team science fully caught on?

Jones: The system favors individuals. Professional advancement is predicated on showing that you can be a fully independent investigator—come up with ideas of your own, test them, and then publish the findings. That model has worked well, because we’ve been trying to figure out all the pieces of the cancer puzzle. Now that we’ve moved into the genomic era, one needs a much bigger view, and that requires more of a team approach.

Was it difficult to recruit students and younger faculty for your team?

Jones: I’ve had no problem getting people. People relish working on our project because our main focus is making patients better. Also, most of the people who work on our project have other research under way that isn’t part of the collaboration.

Baylin: I agree. When students and post-docs see what their lab work might mean for patients in the near future, they’re eager to work on the project.

What challenges have you encountered?

Jones: It’s a work in progress, dictated partly by the science and the needs of the clinical trials. Different labs have different strengths, and we talk about who can handle particular tasks most efficiently.

Baylin: It’s a sticky issue. Steve and I are not that concerned personally about getting credit anymore; we’re interested in the papers being good papers and getting them published. But credit is important to students, post-docs, and junior faculty, who need to have published papers to advance their careers.

How do you divide up the work?

Baylin: We want to promote teamwork, but we also want to help younger team members advance their careers, so we’ll make sure that they get their due, perhaps with joint first authorships. It’s critical to be transparent about any decisions from the very beginning and mentor young people. You need to make everyone aware of how dependent they are upon one another.

Do you still compete on other projects?

Jones: No. Now we’re competing against cancer, not each other. We share manuscripts that have been submitted for publication and discuss data that haven’t been presented yet. They know what we’re up to, and we know what they’re up to. It’s a lot more gratifying.

What advice can you offer to researchers who might want to launch a collaborative project?

Jones: Keep your eyes focused on the goal, not just the things that need to be done to reach it.

Baylin: I agree. Look at the science. Is it goal-worthy? Once you’ve set the goal, figure out how to put the team together and get around any challenges. A project like this is risky; we’re putting what we’ve done in the field for many years up against patient outcomes. Failure here is not going to be easy, but we try not to think about that. We think about what we can do.

Disclosure: AACR is the scientific partner to Stand Up To Cancer.
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