From the Editor

Prizes in an age of collaborative research

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BioTechniques

When the 2011 Nobel Prize in Physiology or Medicine was announced in October for immunologists Ralph Steinman, Bruce Beutler, and Jules Hoffmann, I was delighted. Having worked on the innate immune response in *Drosophila* a little during my postdoctoral fellowship, I was pleased to see the discovery of Toll and Toll-like receptors as regulators of immunity being awarded arguably science's highest honor. However, as I reflect on this award, and the controversy surrounding the recipients three months later, I can now see how this award has again shed light on what is becoming a growing issue when bestowing science prizes in general—celebrating individual accomplishment in an era of collaborative research.

The controversy surrounding this year's physiology or medicine prize started shortly after the announcement when a group of 26 immunologists from around the globe co-signed a letter that appeared in the pages of journal *Nature* critiquing the Nobel committee for their omission in acknowledging the work of Charles Janeway Jr. and Ruslan Medzhitov, two pioneers in the field of immunology and innate immunity. This letter was then followed in early December by greater criticism from Bruno Lemaitre—a researcher who worked in Hoffmann's group—for the conferring of the award to Hoffmann. Lemaitre, who initiated the Toll project and is the first author of the article cited by the Nobel committee in their award announcement for Hoffmann, has gone so far as to set up a website devoted to explaining his role in the history of Toll discovery and the minor role he says Hoffmann played as a supervisor.

The question of who uncovered the role of Toll in the immune response and which deserving scientists the committee missed will continue to be debated, I suspect. But the larger issue for the Nobel committee that is now coming to light is what to do in cases where collaborative contributions lead to seminal insights in biology? Today,

a growing number of researchers are working together, and with this trend, issues of credit will most certainly continue to arise, especially if only three or less scientists can be honored for a discovery. What has taken place with the 2011 prize in physiology or medicine might just be the tip of the iceberg; other worthy efforts that involve multiple researchers working on a problem using a variety of techniques and skills could prove even more problematic to award, and potentially stir even more controversy within the scientific community.

For example, the Human Genome Project is one of the crowning accomplishments in modern biology. And yet, there has been no Nobel Prize awarded for this technical feat that has fueled both novel biological discovery as well as our current march toward the field of personalized medicine. While some will no doubt argue that deciphering the human genome is not deserving of such an award, I have to wonder if another reason is that awarding a Nobel Prize in this case would truly highlight the challenges faced when trying to honor large-scale collaborative research efforts. Conjecture aside, one point has become clear during this scientific awards season: as science changes and grows so too should the manner in which we acknowledge scientific contributions. If we stay on the current track, more controversy will certainly arise in the coming years and diminish the impact of such prestigious honors.

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