

ISTOCK/GETTY to vaccines for similar strains.

How this works is unclear, however. “While it is well accepted that imprinting happens, the mechanisms that govern it essentially remain a black box,” says Matthew Miller, who works on flu immunology at McMaster University in Hamilton, Canada.

The researchers running the cohort studies will take blood and other samples from the infants periodically. Using recently developed technologies that sort single cells from samples, they will sequence RNA from individual immune-system cells to track patterns of gene activity over time and in response to flu exposures. These techniques allow researchers to profile entire repertoires of immune cells and other components of the immune system at depths impossible until now.

The scientists will be able to analyse samples taken from individual infants over years — including before and after the initial imprinting events, during later flu infections and convalescence, and before and after flu vaccinations.

Thomas expects the study to generate models of how children’s immune systems respond to flu infections and vaccinations, depending



Early influenza infections shape a child’s immunity to later strains of the virus.

on their history. “The impact of this work is potentially enormous,” says Miller. The two consortia have begun talks to see how they might best work together. “It is my hope that

there will be a great deal of collaboration and complimentary expertise that will improve upon what both groups have proposed,” says Staat. ■

#### SEXUAL HARASSMENT

# NIH critics want stronger action

*US biomedical agency is reworking its policies on harassment.*

BY SARA REARDON

The women came to the podium one by one to recount how they had been sexually harassed by their graduate-school advisers, senior scientists or other colleagues. Many said they had left science to escape retaliation and feelings of powerlessness after struggling to find anyone who would believe them.

Francis Collins, director of the US National Institutes of Health (NIH), sat metres away, in the front row. He organized the 16 May meeting at the NIH campus in Bethesda, Maryland, as part of his agency’s ongoing effort to revise its policies for addressing sexual harassment by the scientists whose work it funds.

The NIH has come under fire in recent years for moving too slowly to address harassment by its grant recipients. Another major US government research agency, the National Science Foundation, last year began to require research institutions to notify it when they put a principal investigator (PI) or co-PI of

an agency-supported project on leave during a sexual-harassment investigation, or when people in those roles are disciplined. But the NIH requires institutions to report only if a person working on a project it supports has been taken off a grant or fired, and it does not require them to give a reason.

“To the NIH, as long as you continue to fund the harassers, you are part of the problem,” said one speaker, Alysha Dicke, to applause.

Some of the women who addressed the meeting said they had quit academia because they were frustrated with the culture. Others left because their former mentors and departments refused to write letters of recommendation for them after they reported that they had been harassed.

“There are a lot of people who should be in this room who aren’t,” said BethAnn McLaughlin, a neuroscientist at Vanderbilt University in Nashville, Tennessee, who has pushed the NIH to reform its sexual-harassment policies.

McLaughlin asked the packed auditorium, which included a number of top NIH officials,

to remain silent for 47 seconds — one for each year since the passage of Title IX, the US statute that provides a legal basis for combating sexual harassment in academia. The system that the law sets out to address harassment in education is ineffective, she said, because it allows universities to police themselves. “The NIH is failing us,” McLaughlin added.

Sonia Flores, vice-chair of diversity and justice at the University of Colorado Denver and a member of the NIH’s working group on sexual harassment, says it is clear that people want action. “The working group will make recommendations that have implementation and teeth,” she says, including a timeline for the agency to implement specific reforms. “The NIH has the power of the purse. That’s the only way institutions listen.”

#### NEXT STEPS

In February, the NIH announced that — for the first time — it had taken disciplinary action against people found to have committed sexual harassment. The agency replaced 14 PIs on its grants and banned 14 from participating in peer-review panels. It also said that 21 PIs had been disciplined or fired by their employers.

February also marked the first meeting of the NIH’s harassment working group. The panel will present its interim recommendations to Collins in June.

At the listening session, NIH principal deputy director Lawrence Tabak apologized to the women who had spoken about their experiences with harassment. “Thank you for holding us accountable,” he said. “We can do better, we must do better and we will do better.” ■