

The Latest: Nobel winner Young: Body clocks are the future

2 October 2017



In this Sept. 24, 2013 photo provided by The Chinese University of Hong Kong, Michael W. Young, right, speaks during a lecture at Shaw College of The Chinese University of Hong Kong in Hong Kong with Jeffrey C. Hall, left, and Michael Rosbash. The three Americans won the Nobel Prize in Physiology or Medicine on Monday, Oct. 2, 2017, for their discoveries about the body's daily rhythms, opening up whole new fields of research and raising awareness about the importance of getting proper sleep. (The Chinese University of Hong Kong via AP)

The Latest on the [Nobel Prize in Physiology or Medicine](#) (all times local):

6:15 p.m.

At a Rockefeller University news conference in New York, Nobel Prize winner Michael Young said the news of the award came as a shock.

He says "This really did take me by surprise. I had trouble even getting my shoes on this morning."

Young won the Nobel on Monday with fellow Americans Michael Rosbash and Jeffrey Hall for their discoveries about the body's biological clock. He said their research had disclosed "a beautiful

mechanism" for how genes controlled body clocks.

Asked about possible medical payoffs from the work, he said "we're just starting with this." But he noted that a genetic mutation has been found in some people who have chronic trouble getting to sleep at night.

Young says this "gives us ways of thinking we didn't have before ... I think we're going to run into this over and over."

4:40 p.m.

Jeffrey Hall, 72 wryly noted that he was already awake when he received the call from Sweden about his Nobel Prize in medicine because of changes in his circadian [rhythm](#) as he has grown older.

Speaking from his home in rural Cambridge, Maine, he says "I said 'Is this a prank?' I didn't really believe it. I didn't expect it."

Hall won the Nobel on Monday with fellow Americans Michael Rosbash and Michael W. Young for their discoveries about the body's daily rhythms.

Hall said scientists have known about [circadian rhythms](#) since the 1700s. He said understanding the mechanics of the circadian rhythm can provide researchers with an opportunity to address [circadian rhythm disorders](#) that contribute to sleep problems.

He says "If you understand how the normal process works, that gives you a chance, not an inevitability, but a chance to influence the internal workings of the clock and possibly to improve a patient's well-being."

2:20 p.m.

Nobel Medicine winner Michael Rosbash says, at 73, it's usually never good to get a call at 5:09 a.m. on your landline.



Winners of the 2017 Nobel Prize for Medicine are displayed, from left, Jeffrey C. Hall, Michael Rosbash and Michael W. Young, during a press conference in Stockholm, Monday Oct. 2, 2017. The Nobel Prize for Medicine has been awarded to the three Americans for discoveries about the body's daily rhythms. (Jonas Ekstromer/TT via AP)

He told The Associated Press on Monday that "when the landline rings at that hour, normally it's because someone died."

Then, on finding out that he had won a Nobel Prize: "I was stunned, shocked."

Rosbash and fellow Americans Jeffrey C. Hall and Michael W. Young won for their discoveries about the body's daily rhythms, opening up whole new fields of research and raising awareness about the importance of getting a good night's sleep.

Rosbash says he started on this work in 1982. He says "I am very pleased. I am very pleased for the field. I am very pleased for the fruit fly. And it is a great thing for the university. I stand on the shoulders of giants. This is a very humbling award."

10:30 p.m.



Thomas Perlmann, Chariman of the Nobel Committee of Medicine, announces the winners of the 2017 Nobel Prize for Medicine during a press conference at the Nobel Forum in Stockholm, Monday Oct. 2, 2017. The Nobel Prize for Medicine has been awarded to three Americans for discoveries about the body's daily rhythms. The laureates are Jeffrey Hall, Michael Rosbash and Michal Young. (Jonas Ekstromer/TT via AP)

Michael Hastings, a scientist at the U.K. Medical Research Council, said the discoveries by the 2017 Nobel Medicine winners had opened up a whole new field of study for biology and medicine.

"Until then, the body clock was viewed as a sort of black box," Hastings told The Associated Press. "We knew nothing about its operation. But what they did was get the genes that made the body clock, and once you've got the genes, you can take the field wherever you want to."

"It's a field that has exploded massively, propelled by the discoveries by these guys," he told the AP.

Jeffrey C. Hall, Michael Rosbash and Michael W. Young won 9-million-kronor (\$1.1 million) prize. Their work stems back to 1984, when Rosbash and Hall, who was then also at Brandeis University,

along with Young isolated the "period gene" in fruit flies. Hall and Rosbash found that a protein encoded by the gene accumulated during the night and degraded during daytime. A decade later, Young discovered another "clock gene."

"The paradigm-shifting discoveries by the laureates established key mechanisms for the [biological clock](#)," the Nobel Assembly said.

daily biological rhythm. Circadian rhythms adapt the workings of the body to different phases of the day, influencing sleep, behavior, hormone levels, body temperature and metabolism.

They "were able to peek inside our biological clock and elucidate its inner workings," the Nobel citation said.

Rosbash is on the faculty at Brandeis University, Young is at Rockefeller University and Hall has been associated with the University of Maine.



Anna Wedell, chairman of the Nobel committee, center, and members of the committee Juleen Zierath, left, and Carlos Ibanez, announce the winners of the 2017 Nobel Prize for Medicine during a press conference at the Nobel Forum in Stockholm, Monday Oct. 2, 2017. The Nobel Prize for Medicine has been awarded to three Americans for discoveries about the body's daily rhythms. The laureates are Jeffrey c. Hall, Michael Rosbash and Michael W. Young. (Jonas Ekstromer/TT via AP)

10:30 p.m.

Three Americans won the Nobel Prize in Physiology or Medicine on Monday for their discoveries about the body's [daily rhythms](#), opening up whole new fields of research and raising awareness about the importance of getting proper sleep.

Jeffrey C. Hall, Michael Rosbash and Michael W. Young won 9-million-kronor (\$1.1 million) prize for isolating a gene that controls the body's normal

In this Thursday, Oct. 13, 2016 file photo, permanent Secretary of the Swedish Academy Sara Danius announces that Bob Dylan is awarded the 2016 Nobel Prize in Literature during a presser at the Old Stockholm Stock Exchange Building in Stockholm, Sweden. The panel that awards the Nobel Prize in literature says this year's winner will be announced Thursday, Oct. 5, 2017. In 2015 and 2016, the award went to writers outside the conventional conception of "literature" as novels and poetry. Svetlana Alexievich's books are artistic sociopolitical reportage, and Bob Dylan's lyrics arguably have more power as song than on the page. (Jonas Ekstromer / TT via AP, File)

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