NEWS

> "I don't want to call somebody on the phone and say, 'You know ... I wrote the textbook on vaccines.'"
>
> **Stanley Plotkin,** 88, who pioneered the widely used rubella vaccine, in *The Washington Post*, about the many tries it took for him to obtain a COVID-19 vaccine.

IN BRIEF

Edited by **Jeffrey Brainard**

EYE ON BIDEN

Order calls for science integrity review

Federal government policies designed to protect scientists from political interference will get a sweeping review under a 27 January order from President Joe Biden. In an implicit swipe at former President Donald Trump's administration, the memo asks U.S. agencies to document instances in which "improper political interference" led to the suppression or distortion of data. It also asks them to review dozens of technical advisory panels and determine whether to revive ones killed or overhauled by Trump. Gretchen Goldman of the Union of Concerned Scientists says the review offers "a huge chance to assess and learn from what went wrong under Trump." Some science policy specialists say Congress should pass new laws to prevent interference.

Travel ban reversal raises hope

IMMIGRATION | Researchers last week praised President Joe Biden's Inauguration Day decision to revoke former President Donald Trump's so-called Muslim ban. Imposed in 2017, the policy barred citizens of Iran, Syria, and several other Muslim-majority nations from entering the United States, leaving thousands of students and scientists in limbo at home. Biden's move could help others already in the United States on single-entry visas who did not dare to leave the country out of fear they could not return. Despite the change, the COVID-19 pandemic and U.S. sanctions on Iran, the most advanced scientifically of the countries blacklisted, will likely continue to limit travel. Still, Sara Mashhadi Nejad (below), an aspiring environmental engineer in Iran, hopes Biden's action will help her accomplish her goal of pursuing doctoral studies at the University of Toledo, which accepted her in 2019. The travel ban forced her to wait and reapply for a visa and admission to the university. "I will persevere," she said.

PHOTO: MOSTAFA MOHAMMAD REZAEE

Harris recalls NIH memories

LEADERSHIP | As U.S. Vice President Kamala Harris last week received the Moderna COVID-19 vaccine at the National Institutes of Health (NIH), she called it a "full circle" moment. Her late mother, breast cancer researcher Shyamala Gopalan, served on NIH peer-review panels, and, Harris recalled, "My first job was cleaning pipettes in my mother's lab," CNN reported. Harris, who had received her first vaccine dose in December 2020, told NIH employees that everyone should "take the vaccine when it is your turn."

Court axes Trump's EPA data rule

POLICY | Ending a long battle, a U.S. federal judge on 1 February killed a controversial regulation that would have limited the kinds of scientific evidence the Environmental Protection Agency (EPA) could use in rulemaking. Environmental groups had challenged the rule in a lawsuit, later backed by President Joe Biden's administration, and Judge Brian Morris of the U.S. District Court of Montana sided with their argument that former President Donald Trump's administration violated proper procedures in finalizing the rule on 5 January. EPA spent much of Trump's term crafting the rule, which originated in an effort by Republicans in Congress to prevent EPA from using confidential patient data from large health studies to justify stiffer air pollution regulations. The rule was "a flagrantly unlawful attempt to restrict EPA from using important scientific studies," said attorney Benjamin Levitan of the Environmental Defense Fund. "We're glad the court ... put a stop to it."

Doomsday Clock stays dire

GLOBAL SECURITY | The Bulletin of the Atomic Scientists last week kept its iconic Doomsday Clock unchanged from 2020, set at 100 seconds from a catastrophic "midnight" that symbolizes society's self-destruction from military conflict and global warming. The past year saw little progress on those fronts, said the group of scientists, which monitors global tensions. But it cited some cause for hope, such as the election of a U.S. president who acknowledges the human contribution to climate change and the United States and Russia's intentions to extend for 5 years their New Strategic Arms Reduction Treaty, set to expire on 5 February. Rachel Bronson, president of the Bulletin, said the COVID-19 pandemic, though lethal and global, doesn't have the power to obliterate humanity. But she said it was "a wake-up call," showing that national governments and international organizations remain unprepared to handle the even greater threats posed by nuclear war, climate change, and other new diseases.

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ECOLOGY

Lizards help suppress Lyme disease in U.S. southeast

Skinks and a warm climate help protect people from Lyme disease in the southeastern United States, a study has found. Scientists have long known the disease—which is caused by bacteria borne by black-legged ticks (*Ixodes scapularis*) and can cause serious illness in humans bitten by them—is more common in the north, even though the ticks are found throughout the U.S. East Coast. A research team studied eight sites in the north and south and found factors that help explain the regional difference in human infections. In the north, the ticks prefer mammals; but in the south, they prefer glomming onto skinks (above, with attached ticks) and other lizards. These animals tend to transmit the Lyme disease bacteria poorly, infecting fewer ticks. What's more, the south's warmer temperatures tend to drive ticks under leaves on the ground to avoid dehydration, where they are less likely to bite passing humans. In *PLOS Biology* last week, the team speculated that a warming climate may lessen the incidence of Lyme disease in mid-Atlantic states, as southern lizards move north and ticks take cover.

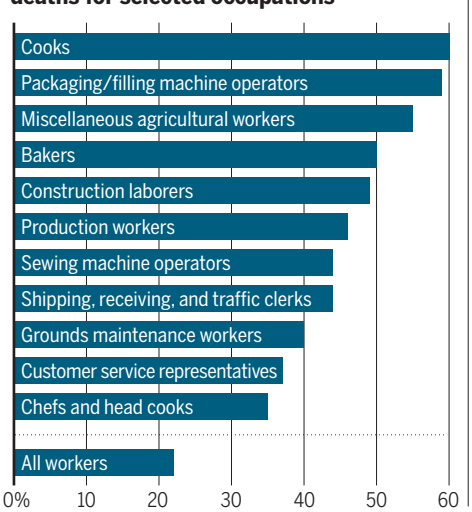
U.S. cities underreport emissions

CLIMATE CHANGE | Cities in the United States are underestimating their greenhouse gas emissions by an average of more than 18%, a study has found. U.S. and French scientists compared estimates by 48 cities with an independent model. In all but 11 cases, the cities' projections were lower. Undercounts resulted because, for example, some cities estimated local car emissions primarily by checking local gasoline sales but did not monitor all traffic, according to the study, published in N*ature Communications* on 2 February. Cities with the biggest underestimates included Dallas and Los Angeles. The authors said the inaccuracies make it difficult to mitigate emissions, but researchers are building better accounting systems. If all U.S. cities undercount by as much, they are missing emissions totaling more than all those released annually in California, the study estimates.

Pandemic slams essential workers

COVID-19 | Workers in food, agriculture, transportation, and other essential sectors have suffered some of the highest increases in mortality during the COVID-19 pandemic, according to an analysis of California death records. Many of the jobs with large increases cannot be done while sheltering at home. The study, described in a 22 January preprint on the medRxiv server, examined records from March to October 2020 to calculate "excess mortality" over the same months in 2018 and 2019. Yea-Hung Chen at the University of California, San Francisco, and colleagues noted that disproportionately high numbers of Black and Latino people and individuals with low educational attainment work in high-risk jobs; this could help explain the above-average excess mortality observed among those groups as a whole, they said. The authors suggest prioritizing the hardest hit occupations for vaccination and providing essential workers who cannot stay home with free protective gear, easily accessible testing, and generous sick leave policies.

Increase in observed versus expected deaths for selected occupations



Football's risky practices

BIOMEDICINE | Almost three-quarters of concussions sustained by U.S. college football players occur during practice, a 1 February study in *JAMA Neurology* reports. Described as the largest of its kind, it evaluated 658 players in the National Collegiate Athletic Association from 2015 to 2019. The authors call for rules that reduce the number of practice sessions during which collisions are allowed; the National Football League and many high schools have already adopted them.

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