LETTERS

Edited by **Jennifer Sills**

Editorial Expressions of Concern

In 2001, *Science* published the Report "Binding of DCC by netrin-1 to mediate axon guidance independent of adenosine A2B receptor activation" by E. Stein *et al.* (*1*). In 2015, the authors made us aware of issues with Western blot images in Figures 1 and 3, which were caused by tiling with overlap of adjacent columns and combining blot images to standardize panel sizes. The authors provided corrected images, but due to an error on our part, *Science* never posted an Erratum. We regret this error and apologize to the scientific community. Both we and the authors are aware that additional concerns have been raised since 2015. We are therefore not proceeding with a correction at this point but are alerting readers to the concerns while the authors and the authors' institution investigate further.

H. Holden Thorp
Editor-in-Chief

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1. E. Stein, Y. Zou, M.-M. Poo, M. Tessier-Lavigne, *Science* **291**, 1976 (2001).

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In 2001, *Science* published the Research Article "Hierarchical organization of guidance receptors: Silencing of netrin attraction by Slit through a Robo/DCC receptor complex" by E. Stein and M. Tessier-Lavigne (*1*). In 2015, the authors made us aware of issues with Western blot images in Figures 4, 5, and 6, which were caused by tiling with overlap of adjacent columns and combining blot images to standardize panel sizes. The authors provided corrected images for those Western blots. In addition, images were duplicated in Figure 2D (micrographs) and in Figure 4B (blank Western blots), and an incorrect blank panel was used in Figure 5E (top right). The original data for these figures could not be accessed, so not all specific conclusions related to these panels are supported by these figures. *Science* agreed to the publication of an Erratum; however, due to an error on our part, it was not posted. We regret this error and apologize to the scientific community. In light of the delay, we are not proceeding with a correction at this point but are alerting readers to the concerns while the authors and the authors' institution investigate further.

H. Holden Thorp
Editor-in-Chief

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Retraction

In the Research Article "Gradual emergence followed by exponential spread of the SARS-CoV-2 Omicron variant in Africa" (*1*), we reported data from retrospective characterization of viral genomes of putative ancestors of the SARS-CoV-2 Omicron variant from western Africa months before the first detection of Omicron. After several social media posts suggested that these putative early Omicron ancestor sequences may have been false positives, we reanalyzed our data and the residual samples. We found a mixture of different SARS-CoV-2 genomic fragments contaminating some of the samples and sequence data on which we based our analysis. The residual samples are now exhausted, and the reconstruction of evolutionary intermediates cannot be replicated. Therefore, we are retracting our Research Article. The epidemiological data are not called into question and will be made available.

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Accessing the Loss and Damage climate fund

The 2022 United Nations Climate Change Conference, or Conference of the Parties (COP27), held in Sharm el-Sheikh, Egypt, in November, produced a long-awaited agreement to set up a global "Loss and Damage" fund (*1*). Under negotiation since the early 1990s, the fund's primary purpose is to provide financial assistance to developing countries that are vulnerable to and suffering from the adverse effects of climate change (*2*), such as the destruction of physical and social infrastructure. The new funding arrangements will "focus on addressing loss and damage by providing and assisting in mobilizing new and additional resources" (*2*). Now that a decision to establish the fund has been made, the question of how vulnerable groups can access the money must be addressed.

People who live in developing countries, many of whom are already climate refugees (*3*), are particularly vulnerable to climate change (*4*). Those who live below the poverty line often reside in precarious housing, haphazard settlements, underserviced neighborhoods, and environmentally hazardous locations, such as steep slopes, riverbanks, and low-lying areas. These populations suffer disproportionately relative to more affluent communities from extreme weather events, such as tropical cyclones, fluvial floods, and landslides (*4*). For example, the 2022 flood in Pakistan caused damages and economic losses of about US$30 billion (*5*). In addition, people in developing countries are affected by slow-onset processes, such as sea level rise (*4*), and noneconomic losses and damages, such as loss of territory, cultural heritage, sense of place, and Indigenous knowledge (*6*).

The transitional committee responsible for the operationalization of the new funding arrangements (*2*) must assure that the most vulnerable and affected groups can access this critical financial support. The deliberations ought to focus on making financing inclusive. Flexible finance governance architecture, such as a database tracking social protection of vulnerable populations in each country, could mitigate inequalities. Proactive measures could ensure that the money reaches even those communities who lack internet connections and the expertise required to make requests. For example, social security numbers, bank accounts, and smart (mobile) technologies could be linked to enable direct benefit transfers, similar to the system used in India to provide support during the COVID-19 pandemic (*7*). Contingency funds should be established to provide rapid financial support to the affected groups in the immediate aftermath of future disasters. The Loss and Damage fund should also include long-term financing to support alternative, climate-resilient livelihoods. This provision could help address financing gaps in the case of slow-onset events and noneconomic losses. The litmus test for a fair and just Loss and Damage fund will be whether it serves those who need it the most.

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A new fund will support impoverished communities vulnerable to climate change, such as this one in Jakarta.

Remote opportunities for scholars in Ukraine

Russia's unprovoked attack on Ukraine has destroyed civilian infrastructure, including universities, research centers, and other academic infrastructure (*1*). Many Ukrainian scholars and researchers remain in Ukraine, and their work has suffered from major setbacks (*2*–*4*). We call on international scientists and institutions to support them.

The global research community has offered research opportunities and

Russian shelling damaged this Kharkiv National University building in March 2022. As Russia's invasion continues, scientists who remain in Ukraine would benefit from international support and remote opportunities.

PHOTO: OLEKSANDR LAPSHYN/REUTERS IMAGES

fellowships to Ukrainian academic faculty and students who were forced to leave the country due to the war (*5*, *6*). Science diplomacy (*7*) has resulted in opportunities like the Polish Academy of Sciences–US National Academy of Sciences Scientists and Engineers in Exile or Displaced (PAS-NAS SEED) initiative, which helps to place Ukrainian researchers in an institute of the Polish academy and supplies grants that provide up to 6 months of support (*8*). The Institute for International Education (IIE) emergency student fund provides financial support to Ukrainian students studying at US colleges and universities (*9*). The Resources to Help Displaced Scholars from Ukraine program mobilizes short-term stipends in support of displaced Ukrainian scholars.

Despite the success of those initiatives, little support has been made available to scientists who have not left the country. Men between the ages of 18 and 60 are not allowed to leave the country under martial law (*10*). Many scholars, both male and female, have volunteered to fight on the front lines. Others have families to take care of and are not willing to leave them behind (*11*).

Supporting the researchers who remain in Ukraine through short-term and long-term opportunities can help the current situation and prevent a potential disconnect with the global research community that could lead to lost opportunity for a generation. Remote opportunities are especially important, but they need to come in tandem with proper training on state-of-the-art skills including coding, data analytics, and scientific writing. Computational data–driven fields are particularly suitable to remote work, but other fields could also participate through collaboration, training, and data sharing. The beneficiaries of these opportunities will be able to increase their international collaborations and research output and facilitate the postwar recovery. Institutions across the world should fund training initiatives for scientists in Ukraine.

Engaging Ukrainian scholars and students in scientific conferences is another remote opportunity. Many conferences are now hosted in a hybrid format, allowing in-person as well as remote attendance (*12*). Organizations that hold scientific conferences could waive fees for scientists located in Ukraine to participate virtually. Scientific societies can also help by waiving the registration fees for Ukrainians, allowing them to participate in international scientific life without leaving the country.

Supporting and engaging Ukrainian scholars remaining in the country could have benefits that span generations. Making remote opportunities available will strengthen the Ukraine's scientific landscape and expedite the postwar reconstruction of the country.

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Science

Retraction

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