

Correspondence

Genomics of African American remains — limits must not compound inequity

We agree that African American skeletal remains must be treated with dignity and diligence (see J. Dunnavant *et al. Nature* **593**, 337–340; 2021). But we caution against any stifling of high-quality, ethical, quantitative genomic inquiry that might be imposed by an African American Graves Protection and Repatriation Act (AAGPRA). Restrictions must not compound existing disadvantages in health and education. DNA studies can support oral histories; they can provide the strongest objective case for reparations for past offences of enslavement and institutionalized racism; and they can increase opportunities for precision medicine.

Rather than being constrained, researchers working with the consent of and on behalf of African American communities should feel empowered to use DNA analysis to take charge of hypothesis testing and define the resulting interpretative narrative. Such analyses do not always require the destruction of skeletal remains. In an unpublished investigation of the seventeenth- and eighteenth-century New York African Burial Ground, we detected human-associated bacteria in 69 soil samples; we generated human microbiome profiles for each individual and identified pathogenic bacteria in some cases. This information creates a form of identity for the buried person and helps us to learn more about their living conditions and possible cause of death.

Furthermore, such ethical genomic enquiry helps to close the representation gap for people of African descent

in genomic databases. This gap denies access to gene therapy and precision medicine (G. Sirugo *et al. Cell* **177**, 26–31; 2019).

Therefore, we propose that the AAGPRA be explicitly crafted to do several things in addition to those Dunnavant *et al.* propose. It should: require the recruitment and training of Black and brown forensic scientists in each of the facilities currently curating remains (see go.nature.com/36qcks7); increase genetic ancestry studies among African Americans and continental Africans (see go.nature.com/3f10izf); develop publicly available databases on African-American biological histories to increase interdisciplinary research on this population; and drive the identification of disease biomarkers in African American skeletal remains that inform medicine relevant to the descendant population.

Crucially, the AAGPRA should also mandate the development of standard operating protocols for future discoveries of remains, delineating the appropriate curation and research applications of data. These protocols must be guided by the priorities of both the descendant community and the engaged scientific community. Nothing must magnify the dearth of knowledge that limits African Americans' opportunities now and in the future.

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Declare your environmental impact

Every research activity – from data collection and computational analysis to laboratory experiments and fieldwork – has an environmental impact. Many scientists recognize this, but most overlook it because they are overwhelmed by other priorities. We therefore urge funding agencies, academic institutions and publishers to ask scientists to declare what steps they will take, or have taken, to minimize the environmental impact of their work.

Scientists have a responsibility to assess each proposed research activity as a trade-off between knowledge gains and negative impacts. Consequently, some minimize the use of electricity and plastics, reuse materials where possible, share equipment and reduce air travel for conferences and fieldwork (see J. Rosen *Nature* **546**, 565–567 (2017) and J. Madhusoodanan *Nature* **581**, 228–229; 2020).

Asking scientists to declare their efforts to safeguard the environment in their grant proposals and in appendices of research papers and theses (see examples in P. Grogan *Front. Ecol. Environ.* **19**, 143; 2021) will raise awareness and inspire others to change their behaviour.

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India's cyclones: hasten mitigation measures

Two severe cyclones, Tauktae and Yaas, made landfall in India in May. They killed 199 people and affected 37 million more, damaging houses, infrastructure and agriculture at an estimated cost of 320 billion rupees (US\$4.3 billion). As cyclones become more frequent, putting further measures in place to mitigate the effects of such disasters is increasingly urgent.

Cyclones regularly hit India's 7,500-kilometre coastline, and about 7% of the world's tropical cyclones originate in the North Indian Ocean. Since 1999, such events have killed more than 12,000 people and caused damage worth \$32.6 billion. Improvements in early-warning systems and disaster management have helped to reduce the death toll but not the economic hit.

Embankments that are resilient to storm surges are needed urgently, along with improved prevention of flooding from swollen rivers. Shelter-belt plantations should be widened and coastal mangrove habitats regenerated. Such measures could markedly reduce the impact of India's cyclones.

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