Correspondence

President of National Academy of Sciences of Ukraine calls for solidarity

As president of the National Academy of Sciences of Ukraine, I call on researchers around the world to bear witness to the tragedy occurring in my country.

Ukraine has a highly developed scientific and industrial complex and significant research potential. It has industries based around nuclear energy, mechanical engineering, aviation and space industries.

The National Academy of Sciences of Ukraine comprises more than 150 research institutions — known for their strengths in physics, material sciences and computing, among others. Many of these institutions are under military attack.

Along with killing Ukrainians, the barbarous Russian invasion aims to destroy infrastructure — both industrial and scientific. One unit seriously at risk is the Kharkov Institute of Physics and Technology's flagship nuclear facility, which is used for nuclear-physics and materials-science research and to create medical isotopes.

All of the academy's institutions are currently still managing to work online. However, the continual explosions and howl of air-raid sirens are making it increasingly difficult for many scientists to carry on with their research.

Ukraine now needs widespread support and massive practical help to end the bloodshed swiftly, to offer safety for our citizens and to rebuild.

Anatoly Zagorodny Bogolyubov Institute for Theoretical Physics, Kyiv, Ukraine.
azagorodny@bitp.kiev.ua

Pandemic preparedness — Europe launches research consortium

To improve Europe's responsiveness to pandemic-prone pathogens, as well as resilience against major infectious-disease threats, the European Union has launched a consortium called Integrated Services for Infectious Disease Outbreak Research (ISIDORe; see go.nature.com/3hdjmet).

The consortium includes 17 complementary research infrastructures and networks representing more than 150 institutions. Taking a One Health approach (see go.nature.com/3cbepwh), it aims to offer the most advanced and innovative services to help scientists to develop pandemic prevention and intervention tools. User projects will be implemented free of charge, from basic research through to clinical trials, and support FAIR data-sharing principles (see go.nature.com/3tmnghw), in collaboration with the EU-funded BY-COVID project (see https://by-covid.org).

Operational links with European and international agencies, such as the European Health Emergency Preparedness and Response Authority and the World Health Organization, will align ISIDORe activities with global strategies for pandemic management and preparedness, help to identify priority research topics and prevent duplication and fragmentation among European research initiatives.

Audrey Richard, **Diana Stepanyan**, **Jonathan Ewbank** European Research Infrastructure on Highly Pathogenic Agents, Brussels, Belgium.
jonathan.ewbank@erinha.eu

Proactive investment for virus research

Soumya Swaminathan and her colleagues call for a reboot of biomedical research and development (R&D) for the global good (*Nature* **602**, 207–210; 2022). I agree that a more proactive approach to R&D decision-making is needed to help improve preparedness, particularly in relation to infectious diseases (see, for example, go.nature.com/3hx7rgh).

Research effort and investment are still initiated largely in response to emerging issues, with little advance horizon scanning. The Research Investments in Global Health Study Group analysed how US$105 billion in public and charitable investments was spent on research into infectious diseases between 2000 and 2017 (M. G. Head *et al. Lancet Glob. Health* **8**, E1295–E1304; 2020). It found that research funding typically became available in response to outbreaks such as severe acute respiratory syndrome (SARS) in 2004–05 in East Asia, Ebola in West Africa in 2014–15 and Zika virus in South America in 2016–17. There was limited investment beyond the immediacy of public-health emergencies.

Setting research priorities requires an understanding of the historical and current research landscape, to ascertain where knowledge gaps and research strengths lie. Provision of detailed data on research investment can support that decision-making and priority-setting.

Michael Head University of Southampton, Southampton, UK.
m.head@soton.ac.uk

Use of 'nano' prefix is no small matter

The overuse and misuse of the prefix 'nano' — to denote size on the nanometre scale — is creating a misleading terminology that threatens to undermine nanoscience. I urge scientists to instead use standard nomenclature and classification systems for precision and clarity in their communications.

Materials scientists talk glibly of nanodroplets, nano-elements and nano-onions — all structures in the nanoscale size range. But it is the details of their external dimensions, internal architectural arrangements and surface structure that determine their technological potential.

Drug-delivery systems likewise resort to sloppy labels such as nanoliposomes (ranging from tens to hundreds of nanometres in size) and nanomicelles (5–100 nanometres). But it is the precise size, shape and surface properties of these carriers that influence their stability and biological performance — a nuance that is lost in the 'nano' prefix.

And witness nano-doctors — multifunctional nanoscale drug-carriers — and even (metallic) nano-snowmen (J.-H. Lee *et al. J. Am. Chem. Soc.* **134**, 5456–5459; 2012). Let's not over-inflate minuscule science.

Seyed M. Moghimi Newcastle University, Newcastle, UK.
seyed.moghimi@ncl.ac.uk