

INTRODUCTION

H5N1

THE PUBLICATION IN THIS ISSUE OF THE RESEARCH PAPER *AIRBORNE TRANSMISSION of Influenza A/H5N1 Virus Between Ferrets*, plus its newer companion *The Potential for Respiratory Droplet-Transmissible A/H5N1 Influenza Virus to Evolve in a Mammalian Host*, marks the end of more than 8 months of widely reported controversy over whether some of the data now freely accessible should be withheld in the public interest (see http://scim.ag/H5N1_Flu for a compilation of News and Commentary recently published in *Science*). As a result, people worldwide are now much more aware of the potential threat that this virus, commonly known as “bird flu,” poses to humanity. And the open publication of new data concerning the potential of H5N1 to convert directly to a form that can be transferred through the air between ferrets will motivate many more policy-makers and scientists to work to reduce the likelihood that this virus will evolve to cause a pandemic. Breakthroughs in science often occur when a scientist with a unique perspective combines prior knowledge in novel ways to create new knowledge, and the publication of the two research Reports in this issue will hopefully help to stimulate the innovation needed, perhaps from unsuspected sources, to make the world safer.

As described in News and Commentary pieces in this special section, the prolonged controversy has also provided a “stress test” of the systems that had been established to enable the biological sciences to deal with “dual-use research of concern” (DURC): biological research with legitimate scientific purposes that may be misused to pose a biologic threat to public health and/or national security. One centerpiece of this system is the U.S. National Science Advisory Board for Biosecurity (NSABB). *Science* strongly supports the NSABB mechanism, which clearly needs to be supplemented and further strengthened to deal with the inevitable future cases of publication of dual-use research, both before and after their submission to journals. Still missing is a comprehensive international system for assessing and handling DURC—one that provides access, for those with a need to know, to any information deemed not to be freely publishable.

If fields subject to DURC are to attract the outstanding young scientists required to address problems such as those posed by H5N1, the appropriate experts may need to define in advance the most promising research strategies and, acting in concert with security experts, agree on responsible ways to address them. It is our hope that the thoughtful Commentaries, News, and research Reports in this special issue will help to jump-start intensive efforts along these lines.

— BRUCE ALBERTS
Editor-in-Chief of *Science*

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