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Genetics-Based Field Studies Prioritize Safety

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M. Enserink's news of the week story on the open release trials of genetically modified mosquitoes in the Cayman Islands ("GM mosquito trial alarms opponents, strains ties in Gates-funded project," 19 November 2010, p. 1030) highlights the growing pains associated with bringing new technologies out of the laboratory into the field. Unlike for vaccines, drugs, and insecticides, no industry-wide standards are yet in place to guide either public or private efforts in the development of these technologies. However, it is important for the public to know that the scientists working on these new technologies are aggressively supporting the formulation of best practices for their safe, efficient, ethical, and regulated application, and are reaching out to experts from a range of relevant disciplines for advice and counsel. A series of publications document the evolution of this process (1–5). Indeed, efforts are currently under way to develop a guidance framework for quality standards to assess safety and efficacy and to address regulatory, legal, social, and cultural issues, as recommended by an international consultation held at the World Health Organization in 2009 (5). Thus, although we have not achieved harmonized international standards, as has taken decades for other technologies, we are much closer than most people realize. We recognize the need to ensure that our enthusiasm for the promise of these app approaches as powerful public health tools does not outstrip our responsibility to apply scientifically validated and socially acceptable product development practices. The tragedy would be if this important but complex birthing process were to stifle creativity in the development of not only genetics-based solutions, but all truly novel approaches that seek to reduce the serious health threat of diseases such as malaria and dengue fever. We hope that debates over specific circumstances do not cloud the urgent need for the development and deployment of new tools to mitigate these disease scourges.

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