

LETTER TO THE EDITOR

DEVELOPMENT OF AN INTRAVENOUS FORMULATION OF HI-6: A WORKSHOP

Organophosphorous compounds are the basis of many insecticides and nerve agents. In military and first responder situations, organophosphorous (OP) poisoning is treated immediately with nerve agent antidote autoinjectors. The specific antidotes contained within these autoinjectors vary by country. In certain situations, such as severe exposure, skin exposure to low-volatility nerve agents and protracted low-dose exposure, there is a requirement for in-hospital care of OP nerve agent poisoned casualties. This treatment is more effectively carried out using intravenous (IV) therapy.

In extensive research conducted by NATO and other nations, HI-6 has been demonstrated to provide superior broad spectrum protection against the classical nerve agents when compared to currently fielded oximes. Canada hosted a two-day HI-6 Intravenous Drug Development Workshop that sought to address:

- Requirements for OP antidotes, including: currently stockpiled treatments, concepts of use, regulatory requirements and development plans;
- The chemistry and manufacturing issues related to HI-6 drug development; and
- Non-clinical and clinical development topics: including acceptable animal models, analytical methods, bridging toxicity and efficacy study designs.

More specifically, key stakeholders from Canada, the Czech Republic, France, Germany, Japan, the Netherlands, Singapore, the United Kingdom, and the United States were brought together to discuss each nation's requirements and concepts of use, areas of duplication in HI-6 research and development efforts, gaps in regulatory requirements for approval; potential areas of collaboration, and whether there is sufficient international interest in forming an HI-6 development consortium.

The meeting and its underlying deliberations were successful and the forum provided a forum for frank and open dialogue. All participants agreed

that the forum was beneficial. Sufficient international interest in the development of intravenous HI-6 was noted. The generation of an international medical countermeasures consortium concept would provide the most efficient mechanism for international collaboration to advance intravenous HI-6 development. The development of a consortium for HI-6 collaboration would also provide a template for future medical countermeasures moving through the drug development process.

Canada proposes to coordinate and lead an international consortium for the development of intravenous HI-6. The governance structure and business model for an international collaboration have yet to be determined. A follow-on meeting will be required to outline the scope of work, allocation of funds and the governance structure.

Canada has developed an HI-6 Drug Development Plan which will be the basis for future development. All partners in HI-6 development will have access to this plan. Follow-on meetings will be planned with interested parties and will hopefully lead to a collaborative consortium.

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