

Biologistics Security: Implications for Market Growth, Transportation and Logistics—
Proposal Abstract

Submitted by the Sparks Bureau of Business and Economic Research with the Intermodal
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The anticipated growth in the need for life sciences products, high value pharmaceuticals, and designer drugs increase logistical concerns and the costs and risks associated with those consignments. Providing secure shipping paths will grow exponentially as the shipments increase along with potential threats of bio-terrorism and theft. Product security risks associated with theft, terrorism and mishandling of biological shipments is on the rise already. Recent serious, high profile lapses in the physical security of regulated products from government and research labs, and high-value pharmaceutical thefts have indicated the new challenges in the handling of biologic products safely and securely. The cost of shipping is directly associated with the potential for product-linked liability and public relations considerations for companies along the supply chain. Theft, manipulation and resale of biological products are global issues associated with controlling security at every stage of the supply chain.

This project will present an overview of current security issues associated with the shipment of life sciences products, dual-purpose elements, vaccines, pathogens, “gain of function” substance sharing among research laboratories, and high value pharmaceuticals. Reviewing current literature, this research will provide an overview of current practices in the protection and security of life sciences products. Fundamental research questions will be examined related to biologic security including; data sources, cost considerations, active biologic shippers, biologic security firms, and demand for biologic security. Education and training practices related to door-to-door transport of dangerous or high value products will be examined as well. Based on the overview findings, this project will recommend an organizational and operational framework for a “Center for Biologic Product Protection and Security Research” —a research, education and training partnership between the Intermodal Freight Transportation Institute and the Sparks Bureau of Business and Economic Research.