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Healthy trade
 proves resistant
 to global
 economic ills

PHARMACEUTICALS' STRONG **IMMUNE SYSTEM**

By Ina Paiva Cordle

It's a simple fact of life: People get sick. So when economies take ill worldwide, the one area consumers won't skimp on is their own health. For the pharmaceuticals industry, it amounts to a recession-proof formula.

And that's why growing demand for pharmaceuticals has been one of the rare bright spots in an otherwise bleak year for shippers, carriers and intermediaries and — with food imports and exports — why the refrigerated transportation industry has fared much better than other transportation segments in this economic downturn for the ages.

Air cargo carriers, logistics firms and package delivery companies report an increasing flow of trade in temperature-controlled pharmaceuticals, particularly exports from Puerto Rico.

Helping to drive the growth — and putting increasing pressure on logistics interests and technology providers — is the periodic outbreak of diseases requiring a global response: China's SARS threat earlier this decade, avian flu fears last year and, now, swine flu.

"Especially when it comes to vaccinations, and distributing vaccinations to remote parts of the world, pharmaceuticals have some of the greatest logistical challenges," said Evan Armstrong, president of Stoughton, Wis.-based consulting firm and analyst Armstrong & Associates. "Avian flu vaccine, from Texas to the Congo ... these are logistical challenges you just don't have when you think of distributing

Xboxes or other types of commodities," he said.

Technology and logistics providers are rising to meet the demand. UPS this summer opened a 150,000-square-foot, temperature- and humidity-controlled distribution facility in Caguas, Puerto Rico, that serves the pharmaceuticals and medical device industries.

Vaccines, pills, insulin and other injectibles from customers such as Johnson & Johnson and Merck are trucked from the manufacturer to the UPS facility. As orders come in from customers, the products are packed and flown to their destinations on the U.S. mainland, the Caribbean and other parts of the world, said John Menna, director of marketing for UPS's Healthcare Logistics Strategy Group.

Packaging is among the keys to maintaining the required temperature. Items may be packed in a "passive container," using gelpacks or styrofoam to retain the temperature, or they may be loaded into an "active air container," in which the container maintains the required temperature and humidity by using a battery-operated system, or other mechanism, such as dry ice, he said.

"We set the aircraft temperature to maintain that environment, as well," Menna said.

Once the plane lands, the temperature-sensitive containers are quickly offloaded so they are not exposed for long to the outdoor temperature. They are moved to another

temperature-controlled facility, or to a temperature-controlled tractor-trailer, to go to their destination, he said.

The latest technology includes placing a temperature-monitoring device inside the container or inside the packaging, to monitor the product's temperature throughout the journey, Menna said.

UPS provides reports to the shipper for regulatory compliance, to prove the items have not been subjected to any adverse temperature or humidity environment.

"What is really important for a temperature-sensitive shipment is being able to monitor and track a shipment through its transit lifecycle, from origin of shipment to being delivered to the ultimate destination," Menna said.

UPS tracks at least 26 "milestones" on every shipment, providing tracking and location data, including any delays in transit, which allows the company to take corrective action to maintain the desired shipment temperature.

In addition to its new facility in Puerto Rico, UPS has health-care-dedicated, temperature-controlled distribution facilities in Louisville, Ky.; Toronto; Reno, Nev.; Atlanta; and Roermond, Netherlands.

Miami-based air cargo carrier Arrow Cargo also is seeing growing traffic in temperature-controlled pharmaceuticals. The airline carries products manufactured in San Juan to Miami, then transfers the temperature-controlled Envirotainers to trans-Atlantic carriers for flights to Europe, said Tony Phillips,



Arrow's vice president of interline and international marketing.

"In the case of Envirotainers, we can re-ice them or reset them, or whatever is necessary to protect the product inside" during transit, he said.

Among the carrier's clients are Wyeth, Pfizer, Eli Lilly, Bristol-Myers Squibb, Baxter International, Roche and GlaxoSmithKline.

"It's a pretty active market now," Phillips said.

American Airlines also handles a significant amount of temperature-controlled pharmaceuticals in Puerto Rico, said Carmen Taylor, managing director of cargo sales for the Latin America division, based in Miami.

"Despite the fact that a lot of cargo traffic has decreased in the last 10 months or so, pharmaceuticals traffic has done relatively well," Taylor said. "I would say 65 percent of our business out of San Juan is pharmaceuticals."

In fact, during the first three months of this year, when American's overall cargo traffic was down 30 percent, pharmaceuticals did not decline, she said.

For American, shipments typically fly from San Juan to London; Milan, Italy; Paris, Toulouse or Bordeaux, France; Sao Paulo; and even Tokyo. Most flights go through Miami; some shipments then stop at New York's JFK or Dallas, headed for Europe or Asia, Taylor said.

For Miami International Airport, pharmaceuticals are growing in importance. The airport handled 12,929 tons of pharmaceuticals worth \$1.74 billion last year, up 12 percent in weight and up 32 percent in value from 2007, airport figures show.

That's a faster pace of growth than for the U.S. as a whole, which handled 216,669 tons last year, up 4 percent, worth \$97.3 billion, up 10 percent.

Until now, pharmaceuticals companies provided American Airlines with the temperature-controlled containers, and controlled and monitored the temperature themselves on shipments from Puerto Rico, Taylor said. But beginning Sept. 1, American will provide Envirotainers and monitor the temperature itself throughout the journey under a new service called ExpediteTC.

The airline has been conducting trials on several routes for the past few months. "We see growth and expect growth from all parts of the world," Taylor said.

Logistics provider National Retail Systems also sees the potential of pharmaceuticals and is exploring new technology, while targeting the industry for growth. NRS is expanding its trucking services to pharmaceuticals companies to move goods from manufacturing sites to distribution centers, spokesman Gordon Forsyth said.

The company is working to broaden its existing shipment-tracking technology to monitor temperatures inside refrigerated trailers, he said.

"The most critical aspect of it is to not only control the temperature," Forsyth said, "but to then verify back to the customer that the temperature was controlled throughout the shipment." cc

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