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DISEASE CONTROL

Let Florida have its own CDC

By Bernie Machen

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From fire ants to Formosan termites to water-sopping Melaleuca trees, hundreds of invasive plants and animals threaten Florida's economy, agriculture and environment.

The good news is, federal and state officials have established effective control programs for many species introduced on our shores. The bad news is, we are not nearly as well prepared to deal with a more ominous threat already leaving its mark on the Sunshine State. This is the threat of new and emerging diseases.

This was made abundantly clear at the recent summit on bird flu in Tallahassee. There, Gov. Jeb Bush predicted that Florida would be among the first states with bird flu cases if a pandemic broke out.

Yet the state soon to become the third largest in the country has no centralized research and response capability. We owe it to Florida residents and businesses to better protect them against such threats.

That's why we're asking the Florida Legislature to create what is best described as a Centers for Disease Control and Prevention, or CDC for Florida, at the University of Florida. We're calling it the Institute for Advanced Study of Emerging Pathogens. We're seeking \$6.7 million in state funding for this institute divided among UF's three main areas -- its general operations, health science center and Institute of Food and Agricultural Sciences.

Others besides bird flu

With its warm climate, huge number of visitors and intense trade with South America, Florida is probably more susceptible to new diseases than any other state in the country. That goes for diseases that sicken not only people, but also animals and plants.

Although the high-profile example is bird flu, an increasing number of lesser-known but still dangerous pathogens await their opportunity to wreak havoc.

Eastern equine encephalitis and malaria have both sickened Floridians in recent years. West Nile virus is here. Residents have also seen the effects of Norwalk virus, which affected hundreds of passengers aboard a Florida-based cruise ship in 2002. We are also vulnerable to avian flu, SARS, dengue fever and Q fever -- not to mention bioterrorism.

Worse than canker

On the agriculture front, a decade after it was first identified near the Miami International Airport, citrus canker has been found nearly as far north as Jacksonville. That despite the state spending \$477 million on eradication. A new disease, citrus greening, potentially even more damaging than canker, was discovered in Florida in September and has already spread to eight counties.

Florida so far has been fairly lucky on the animal side, but this year's appearance of canine influenza shows our weakness. If African swine fever were to become established in Florida's wild hog population, or foot and mouth disease introduced into cattle, the pork and livestock industries respectively could be decimated.

The same vulnerabilities that make Florida a magnet for invasive plants and animals also make it a target for new diseases.

Suspected outbreaks

Our climactic variability, from tropical to temperate, means we can nurture a diversity of microorganisms. Seventy-six million tourists and thousands of immigrants cross our borders annually. The massive tonnage of agricultural products and goods that come through our ports is another disease vector.

Indeed, the scale of the problem dwarfs the systems we have in place to cope with it. Statewide, current research centers address only very specific elements of the picture, such as insect-borne diseases.

Our Florida CDC would solve this problem by gathering the expertise and technology required to anticipate, understand and prevent emerging pathogens. It would also serve as a point of contact and collaboration with the federal government and other states. And it would offer a "hot line" web page for reporting of suspected outbreaks of any kind.

Threat is great

UF is the natural home for such an institute because of its enormous diversity of research, scholarly and clinical endeavors. We have a history of pioneering research, large colleges in relevant areas such as medicine, and a faculty that includes prominent experts in fields as diverse as chemistry, microbiology, nanoscience, meteorology and biotechnology.

The threat of new disease is great. But with a comprehensive, sustained effort of the kind this institute could mount, Florida can have a fighting chance of successfully overcoming this ever- increasing challenge.

Bernie Machen is president of the University of Florida.