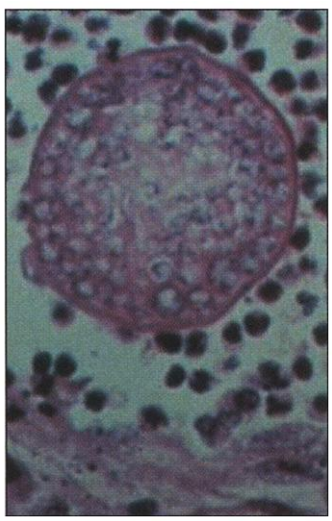
Questioning CDC's "Select Agent" Criteria

THE NEW ANTITERRORISM LEGISLATION THAT D. Malakoff and M. Enserink discuss in their News of the Week article "New law may force labs to screen workers" (2 Nov., p. 971) could result in the imposition of onerous security measures in laboratories doing research with any of the organisms on the Centers for Disease Control and Prevention's list of "select agents." We do not challenge the wisdom of such legislation in general, but we question the composition of the "watch list" of organisms. We cannot speak to the appropriateness of every organism on that list, but as investigators who have carried out clinical and laboratory research on *Coccidioides immitis* for more than 15 years, we can attest to the absurdity of including this particular one on the list.



The tissue form of *C. immitis* is the spherule (50 μM in diameter) shown here in lung tissue (hemotoxylin and eosin stain). Mature spherules contain hundreds of endospores, which then develop into spherules.

First, controlling and monitoring the few research laboratories that work on this pathogen will not limit access to the fungus because it is freely available to anyone who wants to take the trouble to obtain it. The fungus grows in desert soil and is endemic in the southwestern United States from mid-Texas to the Pacific Coast. It would take little effort to grow this mold. Furthermore, it is routinely grown from patients' specimens in microbiology laboratories all over the endemic area, where the annual infection rate reaches several thousand. These laboratories are not required to screen anyone who has access to those facilities; therefore, it seems unreasonable to expect that restrictions could be effectively implemented.

Second, the mild consequences of infection with *C. immitis* make it an unlikely choice as a biological weapon. Only ~30% of people who are naturally infected develop symptoms, which in most cases is self-limited pneumonia. In fact, should even 1000 people be exposed to *C. immitis* by means of a spray (although we know of no research on preparing the fungal spores for such a dispersal), the resulting "epidemic" would hardly be noticed if it occurred in the endemic area. A high incidence of illness outside the endemic area would naturally raise suspicions, but would hardly cause panic, given the nature of the illness. Moreover, unlike smallpox, *C. immitis* is not contagious, and unlike the rapid, fatal effects of anthrax and plague, the severe, progressive form of coccidioidomycosis is generally a prolonged illness. Even in rare cases of fatal outcome from *C. immitis* infection, patients do not die rapidly. Therefore, coccidioidomycosis is not likely to create the public panic that terrorists seek to engender.

Third, *C. immitis* is even less likely to be used against a military force because its infection rate is too low and its incubation period too long to disable a military unit, nor is there a vaccine to protect invading troops from their own weapon.

Other agents on the watch list are also unlikely candidates for biological weapons. We in the scientific community have the responsibility to take a closer look at this list to avoid imposing costly restraints that could impede legitimate research.

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Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the previous 6 months or issues of general interest. They can be submitted by e-mail (science_letters@aaas.org), the Web (www.letter2science.org), or regular mail (1200 New York Ave., NW, Washington, DC 20005, USA). Letters are not acknowledged upon receipt, nor are authors generally consulted before publication. Whether published in full or in part, letters are subject to editing for clarity and space.

HHMI's Attention to Wiley's Lab Staff

THE UNEXPLAINED DISAPPEARANCE OF DON Wiley has been extremely painful for his many colleagues and friends, as J. Gewolb conveyed very well in his News of the Week article "Lab's fate uncertain as search continues" (14 Dec., p. 2265). There were, however, some misunderstandings conveyed in the article. Gewolb says that the Howard Hughes Medical Institute (HHMI) soon "may have to terminate funding of the HHMI investigator, a step that will disrupt the lives of some two dozen young scientists in Wiley's lab," and, further, that HHMI "has a policy of speedy terminations when an investigator dies." On the contrary, HHMI does not take precipitous action in such cases, but works to cushion the blow for the investigator's research team. We put the highest priority on treating each person involved as an individual facing a unique set of personal and career challenges. The recent news that Don's body has been found in a tributary of the Mississippi River brings a great deal of grief, but in no way diminishes our commitment to the members of his laboratory.

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Editors' Note

WE OFFER OUR CONDOLENCES TO PROFESSOR Don Wiley's family, friends, and colleagues.

CREDIT: (LEFT) THEO KIRKLAND; (RIGHT) JON CHASE/HARVARD UNIVERSITY NEWS OFFICE