of Minnesota confirmed those at the University of Wisconsin. MLC results showed that both Stoneridge and Portage BALB/c mice included animals that could stimulate strong MLC responses by BALB/c mice from the University of Minnesota colony, while no Wilmington BALB/c animals did so (Table 1). The ability to stimulate was paralleled by antibody-mediated cytotoxicity tests indicating disparate H-2 expression (Table 2).

The seriousness of our findings cannot be overemphasized. Since shipments received in January 1981 and September 1981 from the Stoneridge facility and in September 1981 and October 1981 from the Portage facility were incorrectly identified it may well be that shipments in general made from these facilities over many months may have led to erroneous conclusions in research experiments. For example, experiments indicating that hybridoma cells (usually of BALB/c origin) failed to develop as ascites tumors may have been due to the use of histoincompatible hosts rather than functionally limited tumor cells. Similarly, results of experiments on NK activity, tumor susceptibility, and immune responsiveness may need to be reassessed.

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**References and Notes**

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## Histocompatibility and Isoenzyme Differences in Commercially Supplied BALB/c Mice: A Reply

Kahan, Auerbach, Alter, and Bach emphasize the need for genetic monitoring of inbred strains of rodents (*1*). Genetic characteristics have always been considered an important factor in the selection of animals for use in biomedical research. However, only in the last few years have genetic monitoring procedures become available for assessing the integrity of these inbred strains. Even now, availability of these procedures is largely restricted to academic or government institutions. In such institutions, procedures are primarily research oriented; thus, routine monitoring has a low priority, and it is almost impossible to maintain an adequate population survey based on such limited testing.

Until recently, assurances as to the genetic integrity of inbred strains of rodents in commercial breeding operations was primarily based on records provided by the supplier of the original breeding stock. Even if such breeding stock were truly inbred, potential for human error always exists. These relative weaknesses were a continuing—albeit minor—concern until a few years ago when the field of immunology became one of intense investigation resulting in rapid advances in knowledge. With the recent increased demand for both inbred and hybrid mice and rats, a common potential variable is the lack of genetic integrity in animal models used, regardless of whether they were acquired from commercial sources or from the investigators' own breeding colony.

Charles River Breeding Laboratories, Inc., through its close liaison with the scientific community, is cognizant of the need for genetic monitoring as part of its overall quality control program. In order to better assess the various methodologies available for genetic monitoring, a colloquium was convened by the company in Boston on 30 July 1981. Participants who attended the meeting came from the United States and Europe and had expertise in many different areas of genetic monitoring. After this colloquium, our professional and technical staff visited various laboratories to acquire skills for biochemical markers (*2, 3*), immunogenetic markers such as skin grafting (*3, 4*), serologic methodologies (*3, 5, 6*), and mandibular analysis (*3, 7*). A comprehensive, routine genetic monitoring program was established in our laboratories in October 1981 to supplement existing colony management practices developed to produce inbred strains of rodents. We believe that this program is reflective of the long-standing progressive attitude of Charles River since in the currently published guidelines (*8–10*) there is no mention of genetic monitoring.

Since the inception of this program, we have monitored more than 2500 animals, representing various strains of mice and rats, for their genetic integrity. If the test results are suspect, or even equivocal, the entire subline or production colony is eliminated. It should be noted that Charles River breeds BALB/c mice at nine different locations throughout the world, in 13 separate rooms, and suspicion of a problem in one room at one site represents a small percentage of the production animals available to investigators.

In addition, the company has retained, since the fall of 1981, a consultant mammalian geneticist who makes periodic scheduled visits to our laboratory. More recently, we have engaged the consulting services of two immunogeneticists who are assisting in the genetic monitoring of our inbred strains of rats.

We at Charles River Breeding Laboratories, Inc., would like to maintain an open policy of sharing information derived from its quality control diagnostic program with investigators using these animals. We urge investigators using inbred strains of mice and rats to monitor the genetic makeup of these animals in their own laboratories upon receipt, or request from the supplier current results of their genetic monitoring program.

It is our belief that a mutual responsibility must be exercised by both the supplier of laboratory animals and the user of animals to promptly report to each other any discrepancy in results which may provide an early warning that a potential problem might exist.

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