

## Majority of human and cow genomes identical

A new comparison map of cattle and human genomes has shown that many genes, and even whole chromosomes, are configured identically in the two species. This study was carried out by AniGenics Inc., an animal genomics company, and Research Genetics, which supplies tools and reagents essential for genome research. The USDA National Research Initiative provided funds for this project. This discovery will allow the use of one species' map to identify genes controlling important traits – such as lactation, reproduction and resistance to infectious diseases – in the other species.

Of the 1,087 genetic markers that were placed on the radiation hybrid map of the cattle genome, 768 have been identified. Among these, 638 (83 per cent) were accepted as being identical to human genes. The comparative map revealed up to 149 conserved chromosome segments in humans and cattle, including four whole chromosomes that appear to have the same genes in both species, despite the two species being separated by more than 60 million years of evolution. Moreover, 48 novel genes were identified which allow the predicted mapping of 48 unmapped human genes on the basis of the cattle-map position.

Once the cattle genome is completed, it will give a detailed picture of the evolutionary events that distinguish the different mammals. This could eventually prove to have enormous scientific and practical significance, particularly in the area of food safety and animal health. *Contact: Mr. H.A. Lewin, Department of Animal Sciences, University of Illinois, Urbana-Champaign, Urbana, IL 61801, the United States. Tel: +1 (217) 3335 998; E-mail: h-lewin@staff.uiuc.edu. (Website: <http://www.bioresearchonline.com>)*