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NEWS

The University of Texas Health Science Center at Dallas
5323 Harry Hines Boulevard Dallas, Texas 75235 (214) 688-3404

CONTACT: Robert Fenley
Office: 214/688-3404
Home: 214/352-2502

*****Scientists probe dilemma of
quadrigeminal armadillo.

DALLAS--The armadillo is giving his rugged rump to research.

At The University of Texas Health Science Center here, Dr. Rupert Billingham and Dr. William Neaves are using the Texas nine-banded armadillo (*Dasypus novemcinctus*) in a search for knowledge about immunity mechanisms as related to transplantation.

Why did they choose the bizarre mascot of Texas subculture?

The armadillo always seems to give birth to identical quadruplets. The offspring are assumed to be from one egg which splits twice to produce four genetically identical beings.

"But some years ago, a theory was published which indicated there might be differences between the four. If so, this would raise some very interesting questions of immunology," said Dr. Billingham.

Drs. Billingham and Neaves obtained a dozen armadillos and grafted each individual with its own skin and that of each of its three siblings. Test site was an area smoothed off at the rear of the horny shell-like back.

"They've got the toughest skin I've seen," marvels Dr. Billingham, who is chairman of Cell Biology at the health science center.

In fact, when ordinary bandages wouldn't stick, the researchers resorted to squares of laboratory coats stuck on with contact cement.

So far, there hasn't been any significant rejection, indicating that the theory may be wrong. The scientists explain that knowledge of skin graft acceptance or rejection is valuable in understanding transplant mechanisms. Other researchers have found that, in some cases, human skin used as burn covering actually was accepted by the host.

The experimentation hasn't seemed to faze the hardy creatures. One day the researchers took some of them out for a romp and they promptly burrowed under the earth.

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first add armadillo

"We didn't know what to feed them at first," confided Dr. Neaves, who is associate dean of the Graduate School of Biomedical Sciences.

"Then one of our Texas culture-wise faculty members told us they loved to eat Purina dog chow. Problem is they get diarrhea."

So what do you do for an armadillo with turista?

Remembering that the armadillo is the only animal known other than man to have leprosy and that there was armadillo research at the Carville, La., leprosy facility, Neaves and Billingham called to inquire about possible remedies for the diarrhea.

"Mud, they need a side-dish of mud with every meal," said Dr. Billingham.

"Of course," explained Neaves, "they get their food by rooting around in the dirt, so in the natural course of events, they eat a lot of dirt."

Dr. Billingham arranged to show the armadillos and the experiment to a former associate, Sir Peter Medawar and Lady Medawar on a recent visit to the health science center. The British Nobel Prize winner and his wife were presented with a plastic armadillo as a memento.

The researchers admit that working with armadillos isn't an entirely delicate matter.

"They, er, have a smell about them," said Dr. Billingham. "We understand they're rather difficult to raise."

A lot of questions remain about the habits of the strange creatures which seem to be spreading northward from the Southwest.

Although it is known that the armadillo has a curious "delayed deposit" of the fertilized ovum which apparently guarantees delivery in the spring, not much is known about the mating habits of novemcinctus.

The Dallas scientists are going to leave that one alone.

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