



*Figure 1. Using a "nuclear cow" to get technetium from its parent isotope. The cow is being fed saltwater through a tube. The saltwater drains through a high-radiation (hot) isotope. The resultant drip-off is a daughter such as technetium-99m. This new, mild isotope can be mixed with other elements, and these become the day's supply of radioisotopes for other scans. Technetium-99m decays in 6 hours. Thus greater amounts, with less possibility of injury, can be administered and a better picture results.*

These are the short-lived isotopes such as carbon-11, nitrogen-13, oxygen-15, fluorine-18, and others that are of immediate interest for metabolic studies. They permit the use of larger initial amounts of