## New facility at Guelph gives researchers a different angle

The University of Guelph has become the first Canadian university offering veterinary and animal science programs to have the clinical and research capacity for magnetic resonance imaging (MRI), a non-surgical, radiationfree technology that offers new levels of diagnostic information.

The \$1.3 million MRI facility, under the direction of Prof. Edward Janzen, is located in the department of biomedical sciences in the Ontario Veterinary College.

Like X-rays or ultrasound, MRI offers researchers an opportunity to look inside the body without using surgery. But most similarities stop there.

Whereas X-rays involve low-level radiation and are essentially snapshots of dense matter such as bone, MRI "pictures" are obtained through the use of harmless magnetism, by recording how the body's hydrogens align in the presence of a magnetic field produced by the MRI unit. This alignment can be translated into unprecedented pictures of areas like the brain, heart or the lungs wherever there's soft tissue or fat, which has high concentrations of hydrogens.

Like MRI, ultrasound also offers more than pictures of bone, but ultrasound technology has not advanced to the point where it can pro-

vide the kind of detail obvious in MRI images. By using a sensor that can be pinpointed anywhere along the axis of an animal placed inside a magnetic chamber, magnetic resonance imaging can isolate and depict extremely thin "slices" of the subject. Tissue and fat appear as distinctly different bright areas in the MRI image.

Hesearch projects directed by Prof. Janzen, Prof. Tammy Bray, department of nutritional sciences, and Prof. Fred Brauer, department of chemistry and biochemistry, are already under way at the university's MRI facility. The first series involves rats as models for liver and hing diseases, including the effect on

the liver of alcohol and toxic chemicals like the chlorocarbons found in dry cleaning fluids, and the influence of mineral-deficient diets on the lung. The availability of the MRI unit means the progress of diseases can be studied without having to euthanize the animals or conduct invasive surgery.

Prof. Janzen says magnetic resonance imaging will become an important tool for enhancing animal research and diagnostic work at Guelph.

"The procedures we are developing will advance the welfare of animals by enabling veterinarians to better and more quickly diagnose problems like neurological disease,"

he says. "Some of the problems that will be studied here could be models for human diseases and afflictions

The limiting factor in the MRI facility's ability to conduct research and offer diagnosis is the size of the unit's magnet and its associated frequency. At present, the chamber where animals are placed can accommodate nothing larger than cats or pupples. Prof. Janzen is applying for funding to increase the chamber's size by 30 per cent, which he says will enable the facility to accommodate most pets requiring MRI diagnostic services and render better MRI images through the use of higher frequencies.



Buy Any One Of The GoldStar Items Listed Below And We'll Give You A Free Christmas Gift\*

\* Excludes 14" & 20" Models CMX-4200 and CMA-9160.



Lingalsk medick CM1 1408, CM1 9408

- Frequency synthesized tuning system
- Anti-glare tint screen
- Wireless remote control
- 139 channel cable ready
- Time/Channel on-screen display
- Earphone jack
- Remote sleep timer

Remote

349<sup>95</sup>

**\$399**95 Remote BUY EITHER REMOTE CONTROL COLOUR TELEVISION AND WE'LL GIVE YOU A GOLDSTAR PORTABLE STEREO CASSETTE

FREE!









ACRYLIC DOOR

Model ER-654M \$349<sup>95</sup>

**BUY THIS MICROWAVE AND** WE LL GIVE YOU THE DISHES

FREE!







Model CMX-4200 **BIG SCREEN FOR BASIC BUDGETS!** 

20" Colour TV Model CMR-9180

SALE PRICE \$2995

- Both Models Feature. · Auto Colour Control System
- (APSIAFT) . Quick Start Picture Tube
- · Memory Fine Tuning
- Automatic Degauster - Automatic Gain Control . 100 % Solid State Circulty

Smert Compact Design

## **FAMILY SIZE** MICROWAVE OVEN

Multiple & Combination Cooking System

- Steintess Steel Interior • 5 Way Cooking • 850 Watt Cooking Power
- 1300 Wall Convection Cooking Power
- . Turntable Cooking Automatic Defroet
- · Auto Delayed Start (Up To 12 Hours) . 10 Power Levels
- . 29 Min . 89 Bac Times . Heat & Hold Function . Built-In Digital Clock

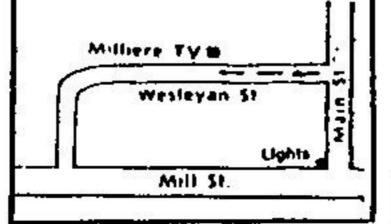




877-3405

We Service What We Sell

14 Wesleyan Street (Just Off Main St) **NOW IN OUR 34th YEAR** 



**January Prices** In December!

**SHOP NOW** AND SAVE!

