


A red mushroom with white spots, likely an Amanita muscaria, is centered in the background. The mushroom has a bright red cap with numerous white, irregular spots and a thick, white, ringed stem. It is growing in a field of dry, yellowish-brown grass. The text is overlaid on the mushroom and grass.

Welcome to Veterinary Pharmacology, Therapeutics and Toxicology

227.305

A red mushroom with white spots, resembling a fly agaric, is growing in a field of dry, brown grass. The mushroom has a thick, white stem and a slightly flattened, red cap with numerous white, irregular spots. The background is a dense field of dry grass, creating a textured, brownish-yellow environment.

pharmacology why bother?

- treatment options
 - do nothing
 - give drugs
 - surgery
 - change diet
 - euthanasia
- all but first involve drugs!!

administration

- semester 1 – 38 lectures
 - Tuesdays 2 & 3 pm ICLT
 - Thursdays 8 am ICLT
 - Fridays 11 am ICLT
- Library project instead of practicals
- Study guide essential
 - also on web

Course objectives

- have a sound understanding of the effects, mechanism of action and uses of the major groups of drugs used to treat animals (the range of drugs will be extended in 195.409) which will allow you to use these drugs safely and effectively.
- be aware of drugs which are likely to be used in the near future (again, the range of drugs will be extended in 195.409)
- know how and where to obtain further information on drugs
- have a sound understanding of the principles of pharmacokinetics and how these are used to ensure that an animal receives the correct dose of drug
- be able to evaluate scientific and clinical reports of drug trials and apply this knowledge to veterinary practice

Text books

- not necessary
- suggestions in study guide
- study guide is designed for reference
- CALVE web site
 - <http://calve.massey.ac.nz/pharm>

Assessment

- **Semester 1**
 - 30 min computer MCQ exam 10%
 - group essay 10%
- **Semester 2**
 - 2 hour essay exam 40%
 - 4 out of 8 essays
 - 1 hour computer MCQ exam 20%
 - group dissertation 20%

Assessment

- **Essays**
 - Designed to test depth of knowledge
 - Integration with other subjects necessary
- **MCQs**
 - Designed to test breadth of knowledge
 - ie, a large no. of very specific questions

Exam marking

- **Essays**
 - The facts +75%
 - Other pertinent info +10%
 - Concise communication +10%
 - Use of English +5%
 - Minor mistakes -5%
 - Stupid mistakes -10%
 - Dangerous mistakes -30%

Exam marking

- MCQs
 - WebCT



practice tests

- questions in study guide at end of each chapter
 - answers for MCQs provided
 - it is up to you to use these
 - same questions on website
 - same questions on WebCT
 - practice test only!

A red mushroom with white spots, resembling an Amanita muscaria, is growing in a field of dry grass. The mushroom is the central focus of the image, with its bright red cap and white spots contrasting sharply with the dry, brownish-yellow grass. The text is overlaid on the left side of the image.

lectures

- timetable in study guide
- subject to change
 - check notice board
- lectures on CALVE web site

Group work Sem 1

- Choose groups of four
- You will be given the titles of 2 papers
- Go to the library and find your papers
- Decide on the major findings, reliability and relevance to veterinary medicine
- Write a 3000 word review
- hand it in by 20th May
- marks are shared equally

Group work marks

- **10% of total mark**
 - **Analysis of methods 8%**
 - **Analysis of results 5%**
 - **Discussion of relevance 5%**
 - **Clear style of writing 2%**

Analysis of methods

- What are the authors trying to show?
 - Does the experimental design allow them to do this?
- Is the measure of outcome appropriate?
 - Observer bias, drug effects, etc
- Are there suitable controls?
- Were drug doses suitable?
- Are the numbers sufficient?

Analysis of results

- Are the statistical tests appropriate?
- Are the results statistically significant?
- Are the results important?
- Are the conclusions justified by the data?
- How do the results compare to other studies?

Relevance

- How do the findings relate to veterinary practice in NZ?



Style

- **Correct English**
- **Concise, incisive and interesting!!!**



style

- **Never use a long word where a short one will do**
- **If it is possible to cut out a word, cut it out**
- **Never use the passive sense where you can use the active**
- **Never use jargon if there is an English equivalent**
- **Break these rules where necessary**

Info required

- Before using drugs in animals ask
 - Does it work?
 - Is it safe?
 - What side effects are expected?
 - What monitoring is required?
 - What is the best dose and route?
 - How long is it likely to last?
 - Is it expensive?
 - Do the benefits outweigh the risks?

Sources of info

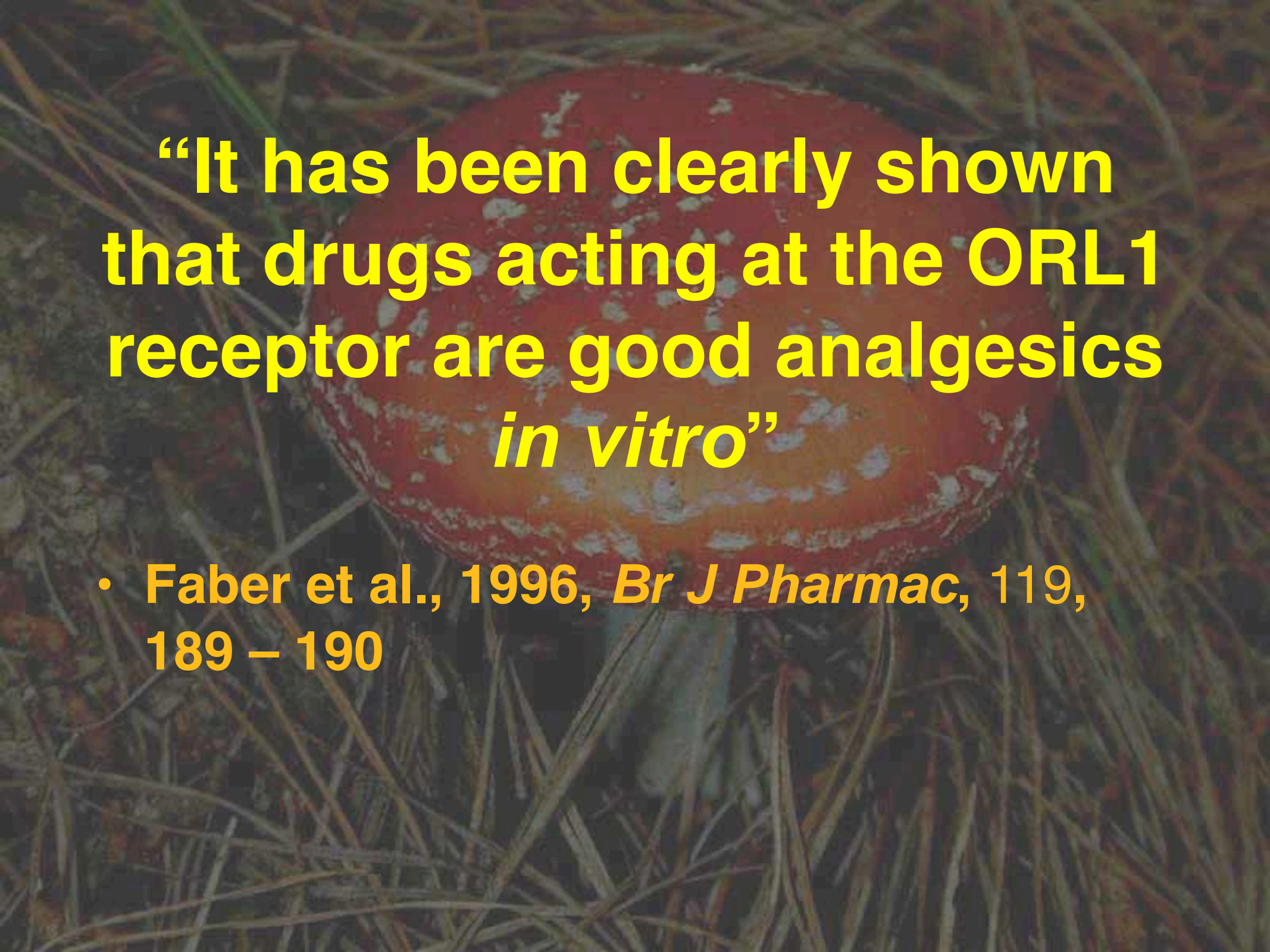
- Scientific literature
- Colleagues
- Textbooks
- WWW
- Drug companies
 - IVS
 - New Ethicals catalogue / MIMS
 - Advertising

A close-up photograph of a red mushroom with white spots, likely an Amanita muscaria, growing in a field of dry grass. The mushroom is the central focus, with its bright red cap and white spots contrasting sharply with the dry, brownish-yellow grass. The text is overlaid on the lower half of the image.

**Reading scientific papers to
extract clinically useful info**

Types of papers

- **Veterinary clinical trials**
 - Science is usually conspicuously absent
- **Human clinical trials**
 - Limited relevance
- **Basic science papers**
 - Usually written by scientists with no idea about clinical problems

A red mushroom with white spots on a grassy background. The mushroom is the central focus, with its cap showing a vibrant red color and white, irregular spots. The background is a dense field of dry, brown grass.

**“It has been clearly shown
that drugs acting at the ORL1
receptor are good analgesics
in vitro”**

- Faber et al., 1996, *Br J Pharmac*, 119, 189 – 190

A close-up photograph of a red mushroom with white spots, likely an Amanita muscaria, growing in a field of dry grass. The mushroom has a bright red cap with numerous white, irregular spots. The stem is thick and appears to have a white or light-colored base. The background is a dense field of dry, yellowish-brown grass.

**When reading papers
be sceptical!!!**

Group work Sem 2

- use the skills you learned in semester 1 to write a publishable review of a subject in depth
- more details next semester
- think about subjects as you do semester 1 work!!

Drug names

- Learn approved names
 - Usually BANs in NZ
 - USANs often different
 - INNs sometimes different again

A red mushroom with white spots is centered in the background, resting on a bed of dry, brown grass. The text "Pharmacology is fun!" is overlaid in a yellow, stylized font. The word "Pharmacology" is in a large, bold, sans-serif font. The word "is" is in a smaller, sans-serif font. The word "fun!" is in a large, bold, sans-serif font with a stylized exclamation mark.

Pharmacology
is
fun!