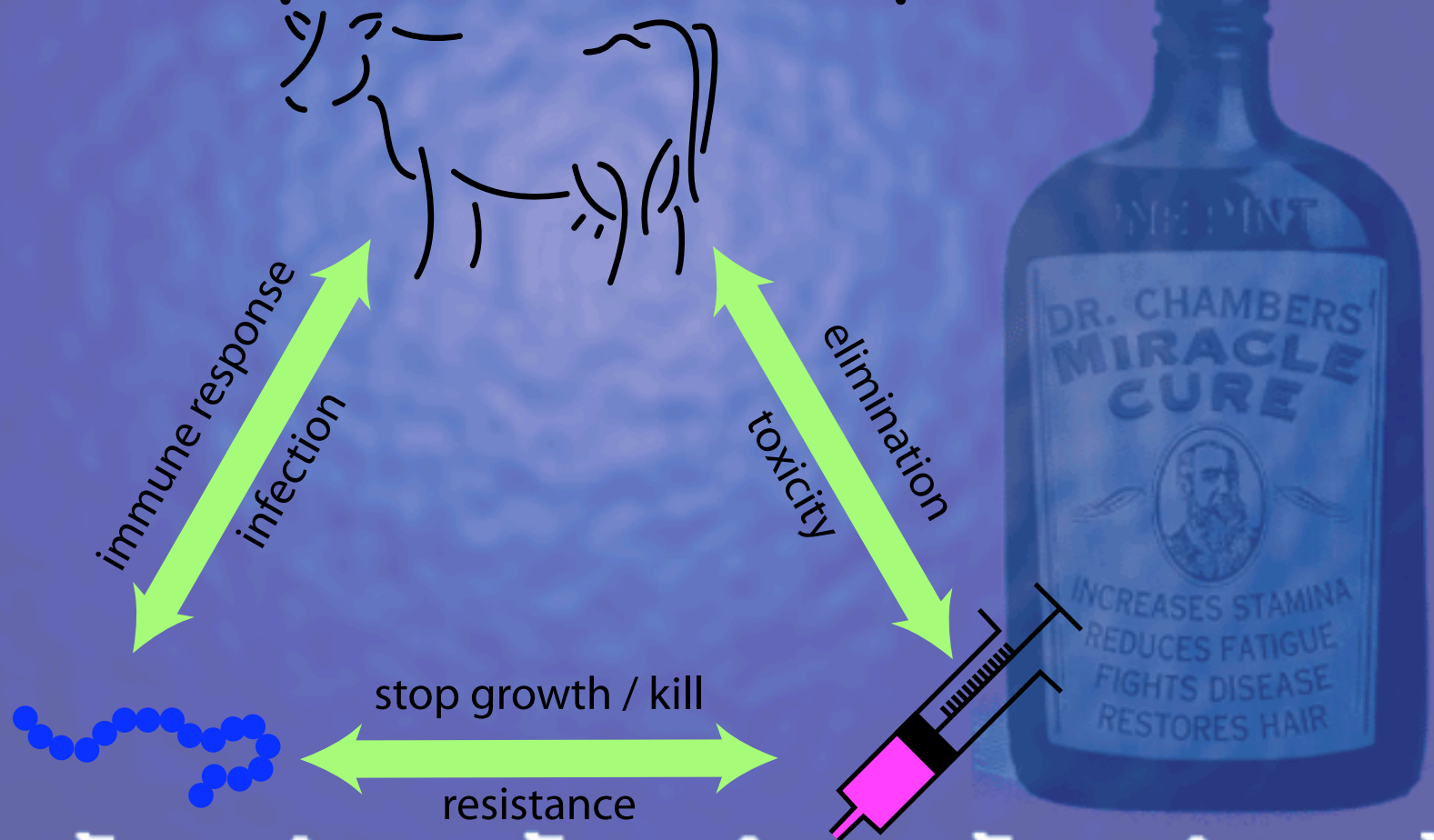


ANTIBIOTIC THERAPY

Therapeutic Principles

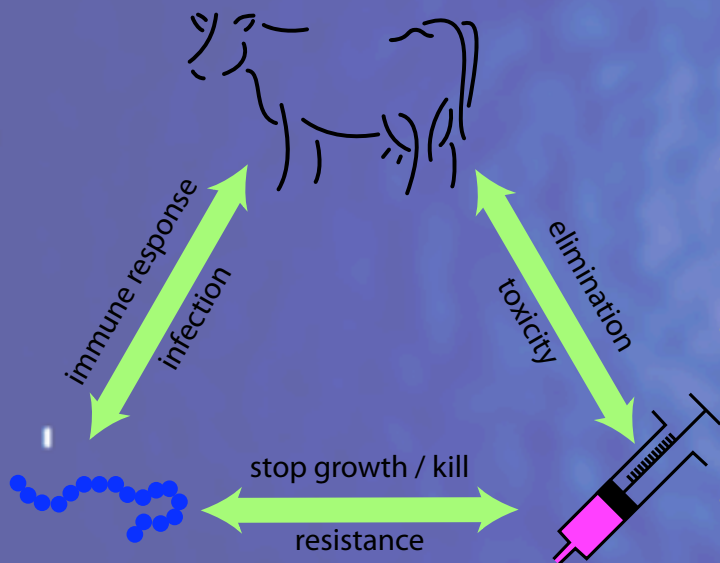


ANTIBIOTIC THERAPY

Therapeutic Principles

Antimicrobials/host:

- No effect
- Allergic reactions
- Residues
- Toxicity/adverse reaction
- Drug interactions

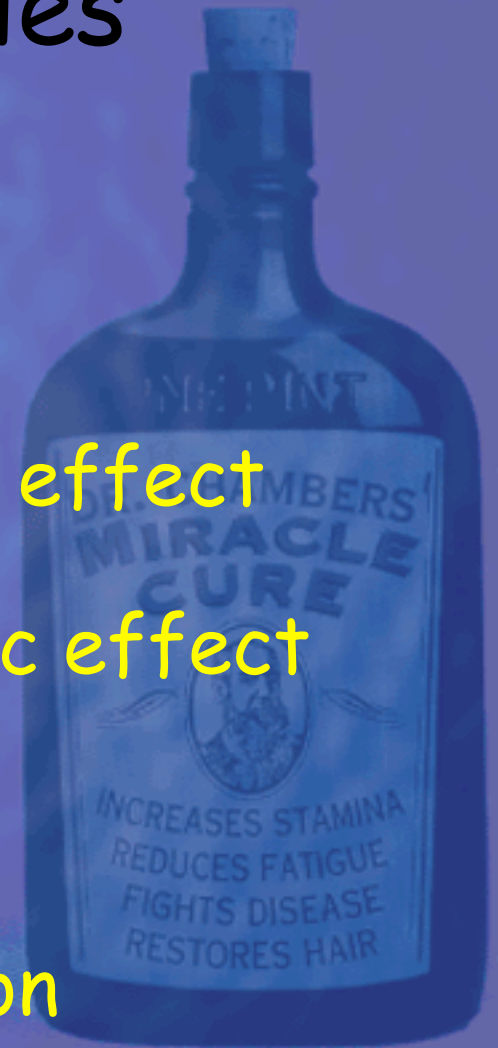
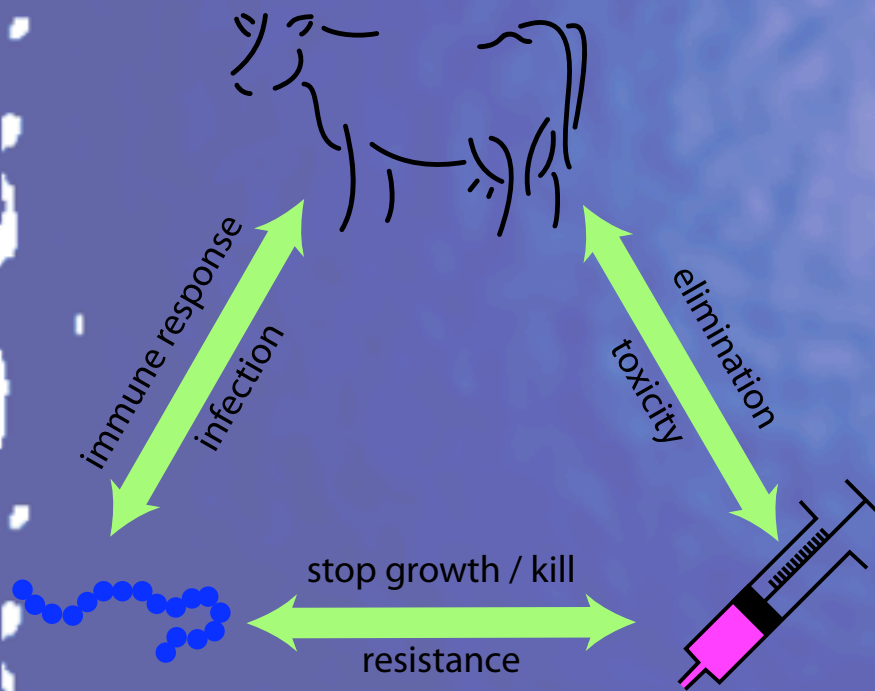


ANTIBIOTIC THERAPY

Therapeutic Principles

Antimicrobials/bacteria:

- No effect
- Bacteriocidal effect
- Bacteriostatic effect
- Resistance
- Superinfection



ANTIBIOTIC THERAPY

Therapeutic Principles

Antimicrobials/bacteria/ animal interaction:

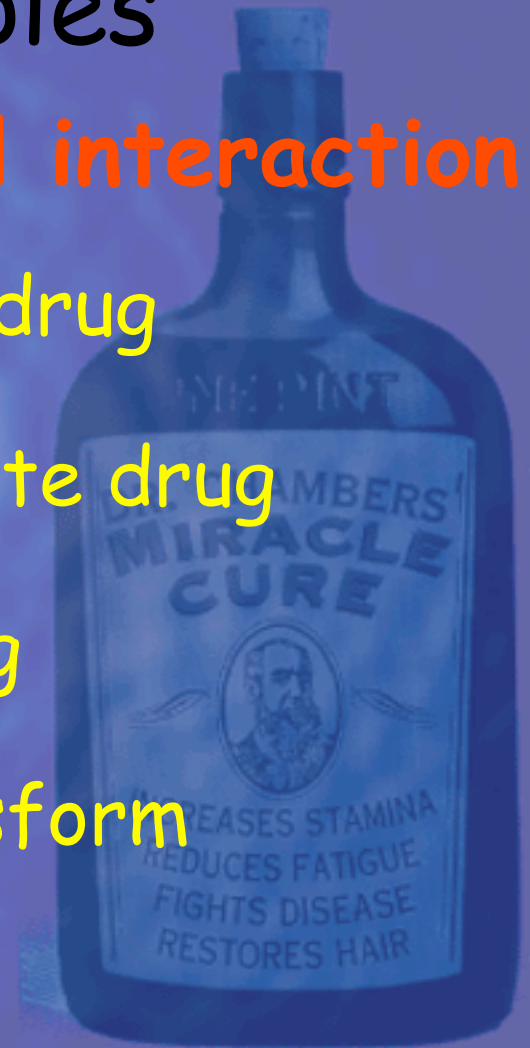
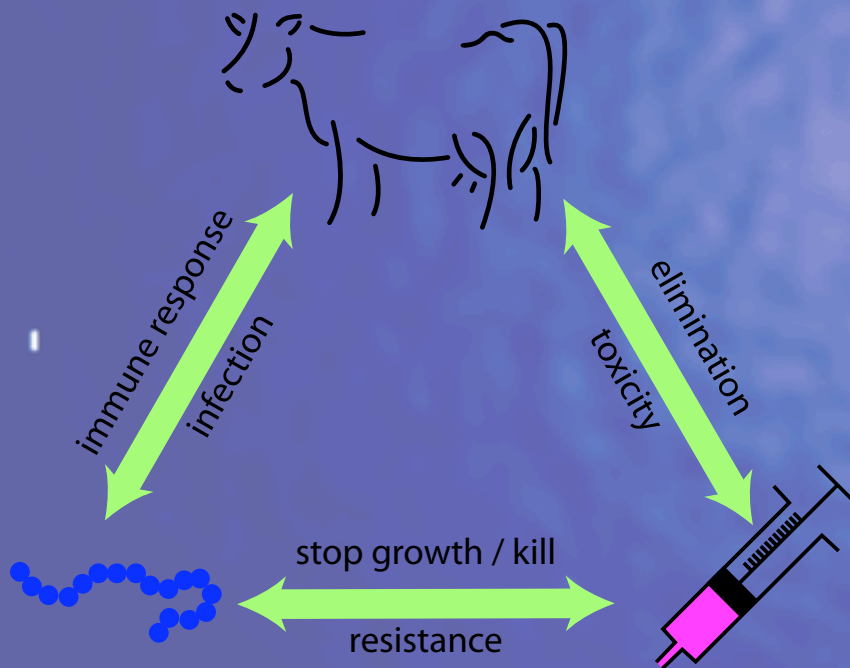
- Bacteria to drug

Inactivate drug

- Host to drug

Biotransform

Excrete



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Make a diagnosis
- Identify the bacteria
- Pharmacokinetics
- Resistance?



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Host factors

Species and licensed PARs

Withholding times

Performance animal (race....)

Routes of administration



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Host factors

Pregnant or lactating?

Age/Weight

Hydration/renal function



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Host factors

Liver function

Biliary blockage

Immune status?



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Mechanism of action
- Toxic effects
- Interactions
- Superinfections



ANTIBIOTIC THERAPY

Therapeutic Principles

DRUG SELECTION PROCESS

- Ease of administration
- Cost
- Supportive care
- Evaluate efficacy

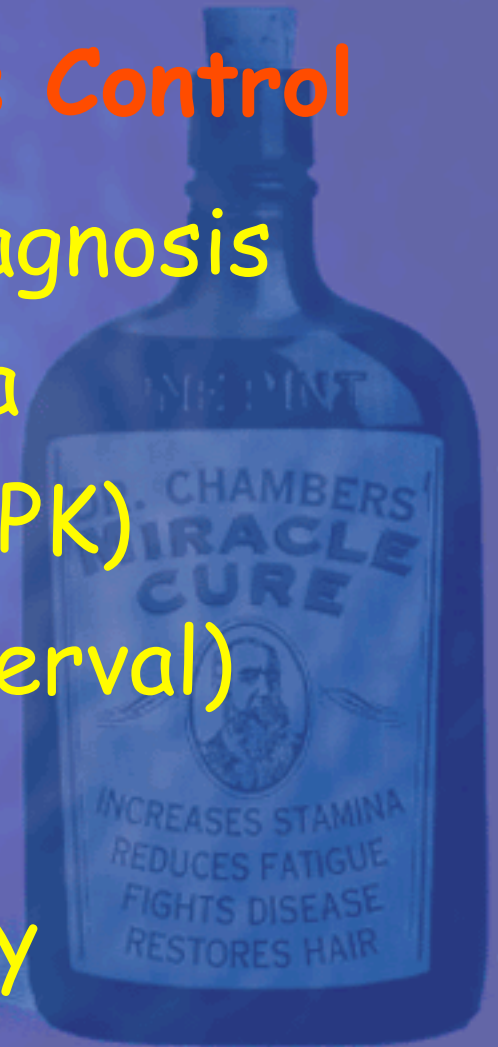


ANTIBIOTIC THERAPY

Therapeutic Principles

COMMON PROBLEMS-Vet's Control

- Failure to make an accurate diagnosis
- Isolation of the wrong bacteria
- Wrong antimicrobial selected (PK)
- Inappropriate dosing (dose/interval)
- Owner compliance
- Insufficient supporting therapy



ANTIBIOTIC THERAPY

Therapeutic Principles

COMMON PROBLEMS

Not under Vet's Control

- Bacterial resistance
- Mixed infections
- Poor correlation of in vitro to in vivo sensitivity
- Side effects - cessation of therapy



ANTIMICROBIAL SENSITIVITY TESTING

Kirby-Bauer Test Limitations:

- In vitro vs in vivo
- Interpretation of Results
- MIC vs R or S data
- Interference by treatment



ANTIMICROBIAL SENSITIVITY TESTING

PROPHYLAXIS

- FEW APPLICATIONS:
 - Risk - immunocompromised patient
 - Risk - surgery e.g. implants
- GUIDELINES:
 - Bacteriocidal antimicrobials



THERAPEUTIC PRINCIPLES

SUMMARY

- Make a diagnosis
- Select the appropriate therapy
- Treat until the animal is normal

