Vector Resistance to insecticides in Africa

Courtesy:

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Interventions for Malaria Control

- Early diagnosis and effective case management
- Prevention
  - Vector control
    - IRS
    - LLINs
    - Other locally appropriate methods
  - Intermittent Preventive Treatment

African Network on Vector Resistance: ANVR

- Created: Decembre 2003 by AFRO

Coordinatior at AFRO

Sub-coordinators:

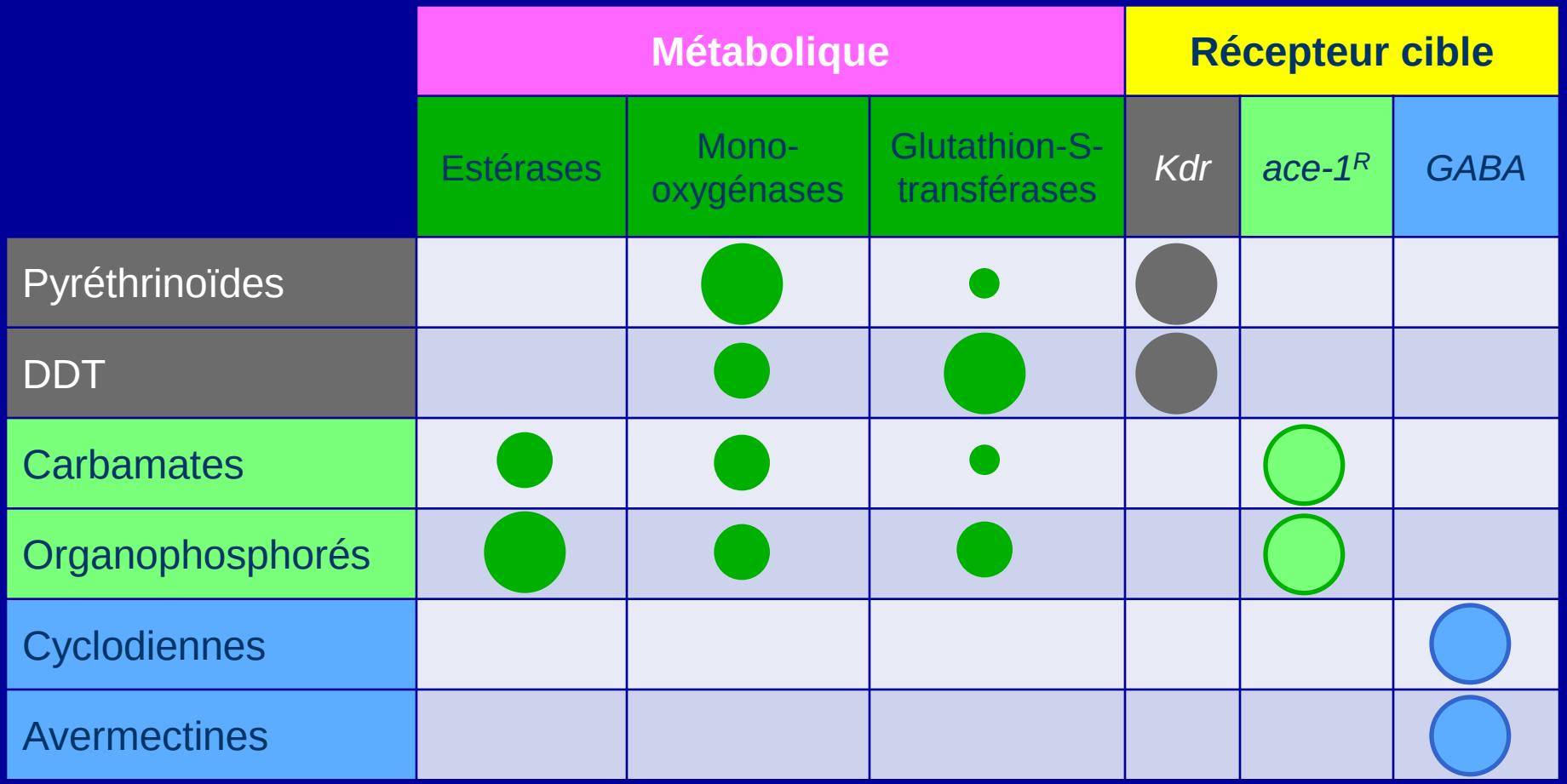
Central, West, East & South Africa

What is Resistance

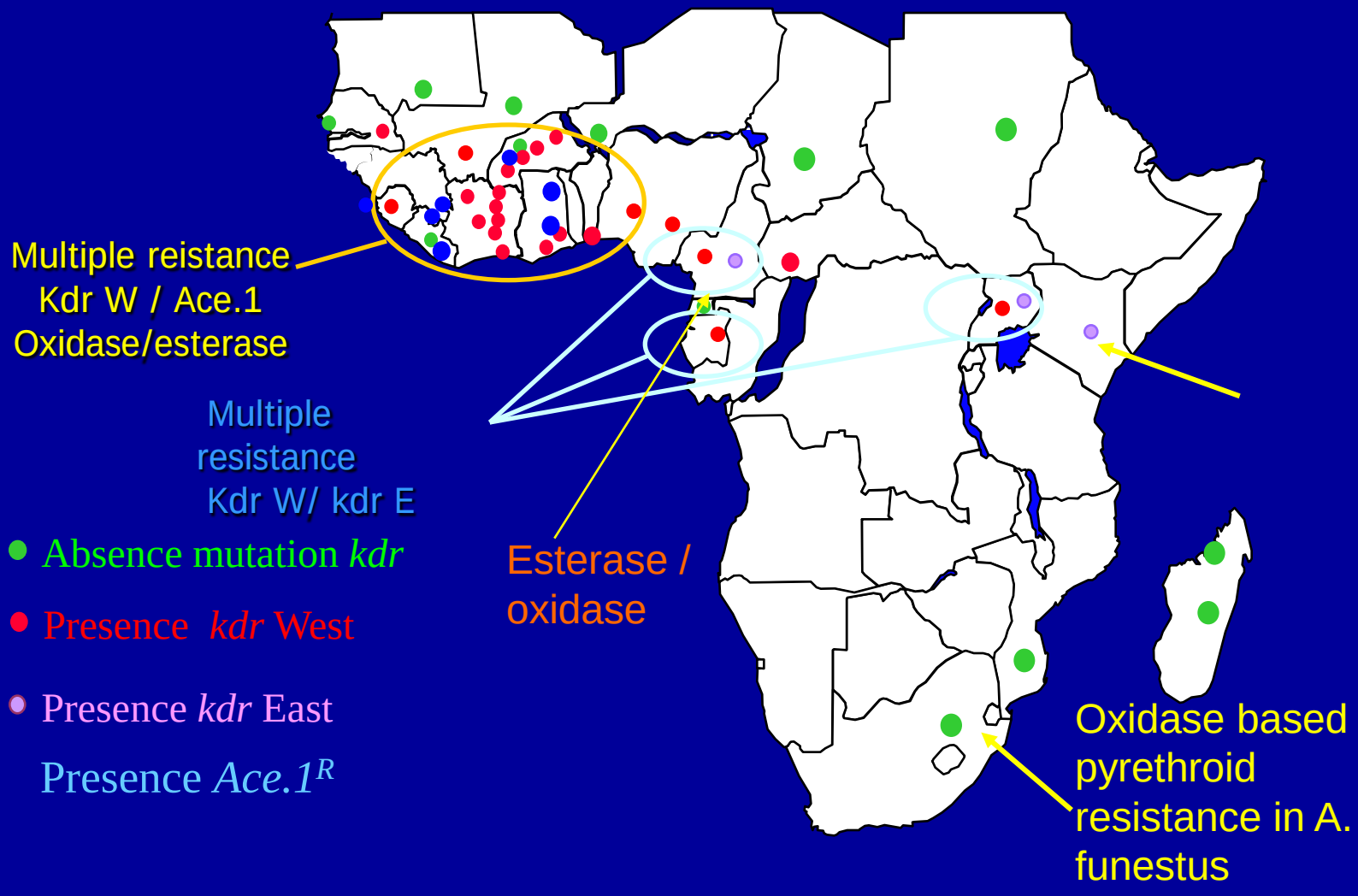
- The ability of a vector to survive an adequate dose of insecticide that normally cause its death when the insecticide come into contact with the vector and penetrate the cavity reaching the reception site

MECANISMS OF RESISTANCE

- **Modification of vector behaviour**
- **Modification of rate of absorption or excretion of the insecticide**
- **Modification of reception site by mutation**
- **Metablolic changes**
  - **Esterases**
  - **Mono-oxygenases**
  - **Glutathion-S-transferases**


Métabolique
Récepteur cible
Estérases
Mono-oxygénases
Glutathion-S-transférases
Kdr
ace-1R
GABA
Pyréthrinoïdes
DDT
Carbamates
Organophosphorés
Cyclodiennes
Avermectines

Distribution of resistance in *Anopheles gambiae*



What is the problem of vector resistance?

It threatens the strategy of individual protection

Pyrethroides: It is the only class of insecticide used for the treatment of bednets