



# VECTRON™ T500

MITSUI CHEMICALS AGRO, INC.



Presenter:  
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VCWG  
3<sup>rd</sup> May, 2022



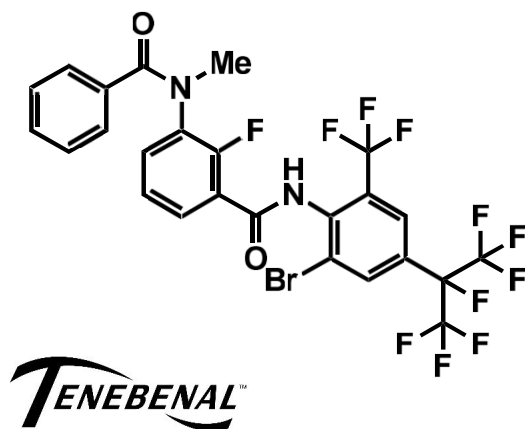
## Product Description

VECTRON™ T500

# VECTRON™ T500

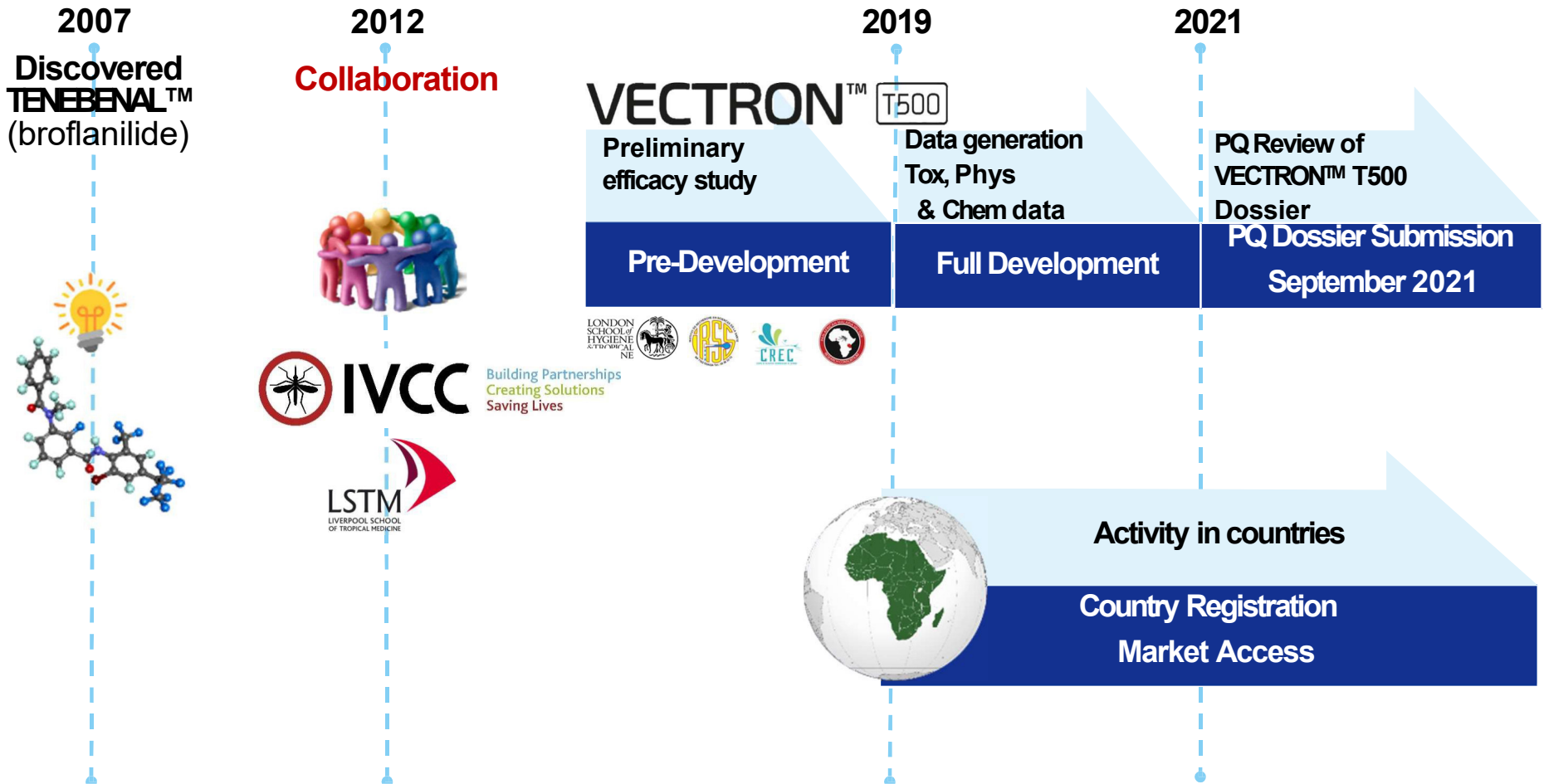
A wettable powder formulation

Formulation Type	Wettable Powder
AI Concentration	50 %
Dose	100 mg a.i./m <sup>2</sup> .
Packaging	50 g / sachet



<b>Active Ingredient</b>	<b>TENE BENAL™</b>
ISO Name	broflanilide
Chemical Name	<i>N</i> -[2-bromo-4-(perfluoropropan-2-yl)-6 (trifluoromethyl)phenyl]-2-fluoro-3-( <i>N</i> methylbenzamido)benzamide)
<b>Chemical Class</b>	<b>Meta – diamides</b>
Mode of Action	GABA-gated chloride channel allosteric modulators <b>IRAC Group 30</b>

# VECTRON™ T500 project supported by **IVCC**



## Features – VECTRON™ T500

A new Formulation of TENEBENAL™ for Indoor Residual Spraying



**Novel Mode of Action**

**New target site of action.  
Ideal for insecticide resistance management**



**Performance**

**Good residual efficacy on all relevant surfaces, comparable to other 3<sup>rd</sup> generation IRS. Initial data suggesting long residual activity.**



**Acceptability**

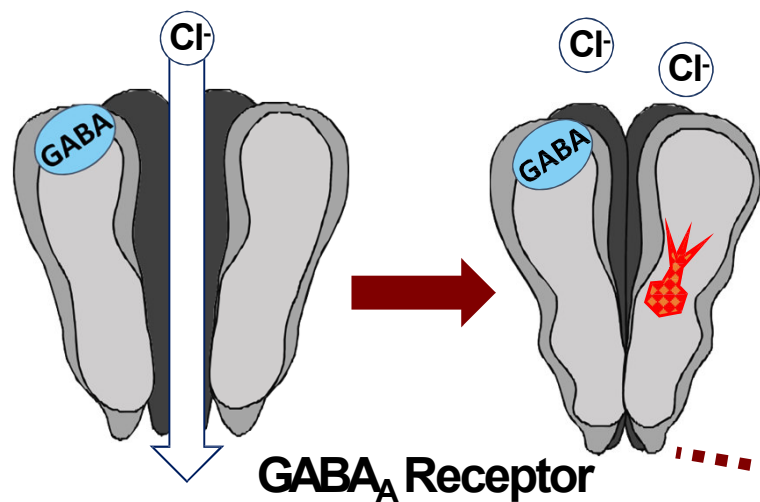
**Odorless and Stainless formulation**



**Easy to transport, store and handle**

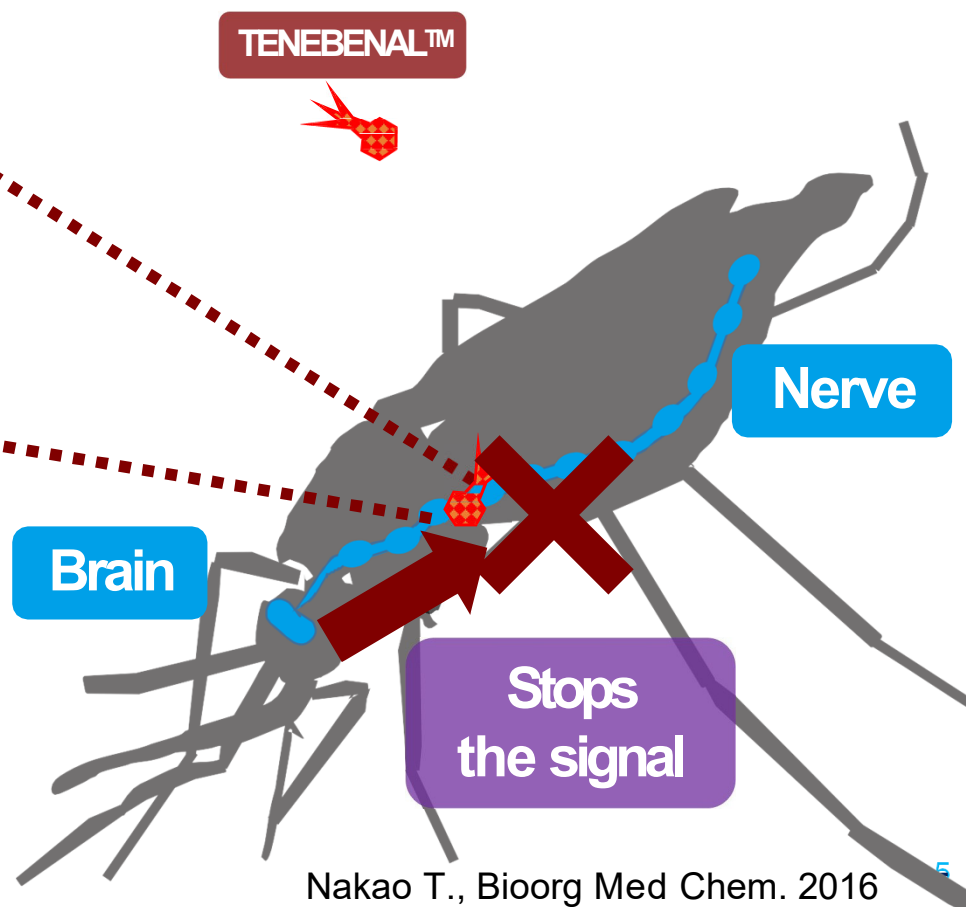
**50 g sachets, easy to handle**

## New Mode of Action



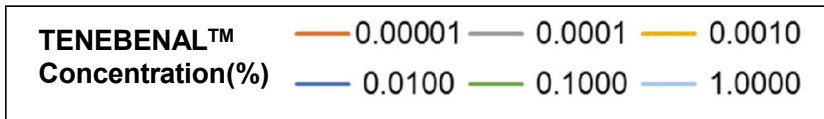
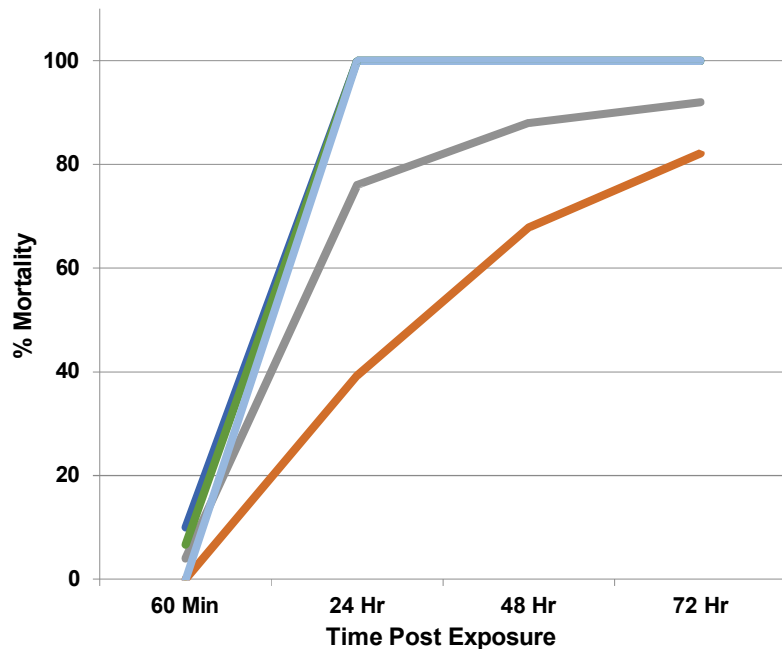
TENEBENAL™ affects a newly discovered site on the GABA<sub>A</sub> receptor of the insect nerve.

Therefore, not affected by the target site mutations that lead to resistance to other insecticide classes including those which also interact with the GABA receptor.

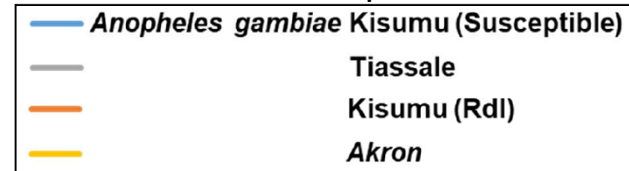
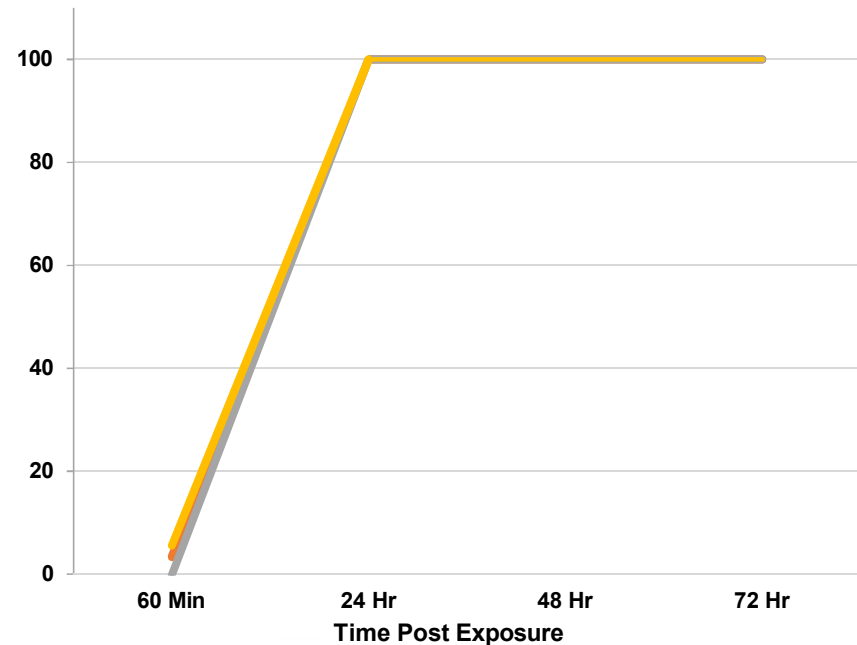


## TENEBENAL™ shows activity to various resistant mosquitoes Tarsal contact assay

*Anopheles gambiae* (Kisumu)



0.0010% TENEENAL™ activity  
against various mosquitoes

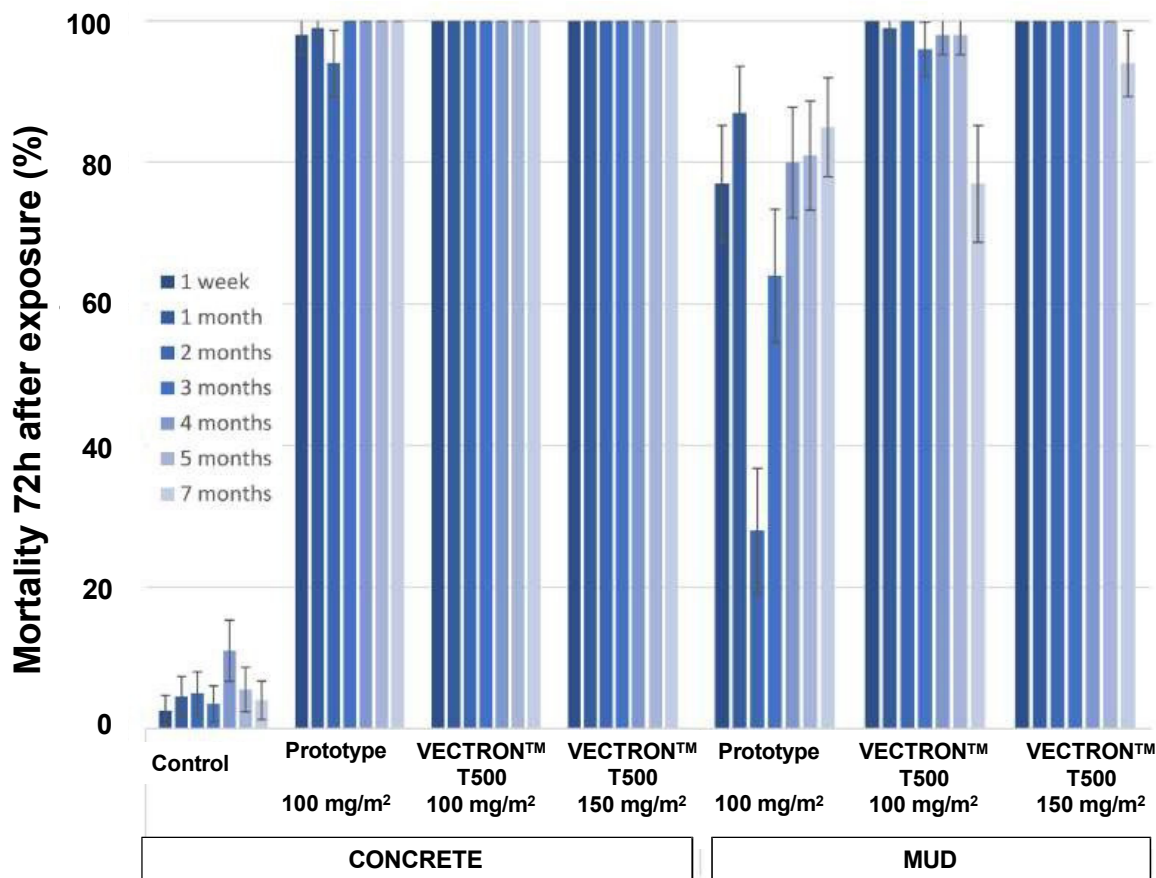


## Experimental hut study in Tanzania

Comparing two IRS formulations containing TENEBENAL™ ; a prototype and VECTRON™ T500.

Residual efficacy was determined through monthly cone assays with susceptible An. gambiae s.s. Kisumu mosquitoes.

For each time point, substrate and treatment tested the mean 72h mortality  $\pm$  95% CI is given.



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& TROPICAL  
MEDICINE

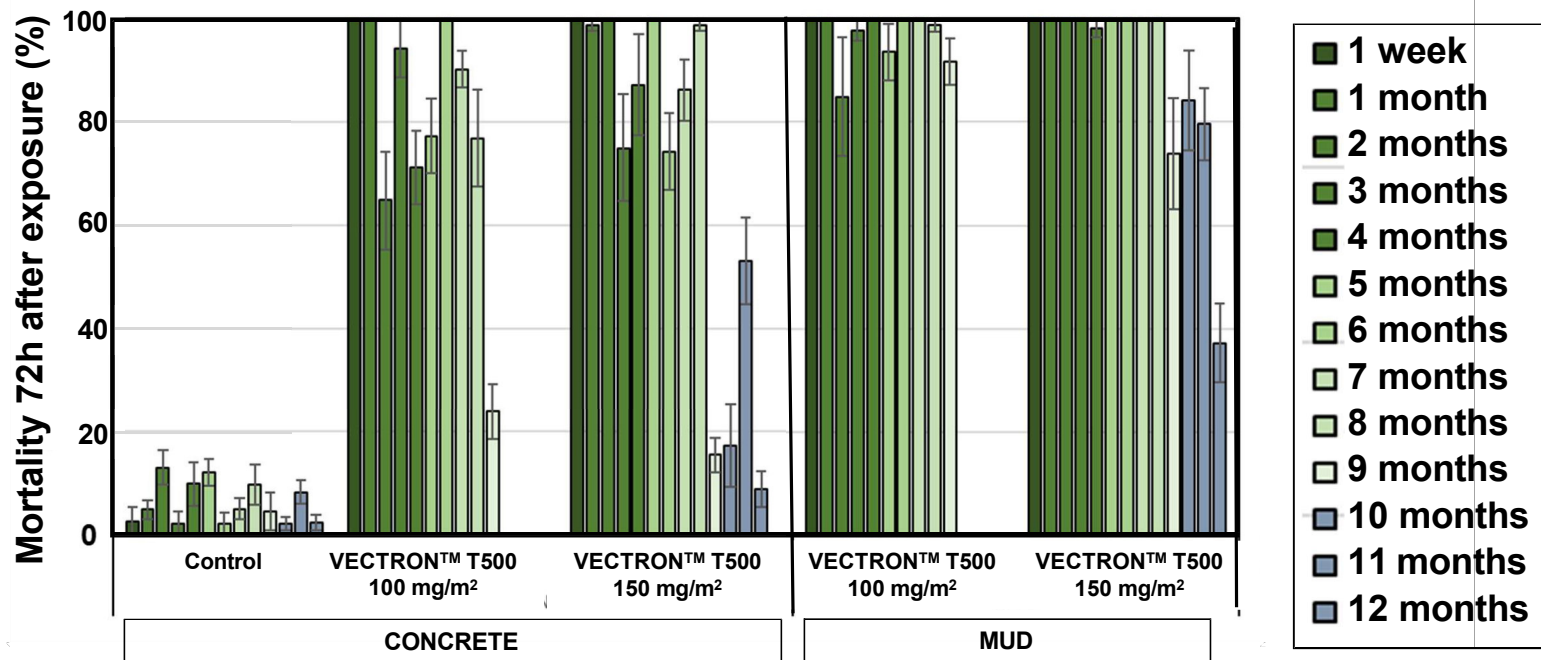


LSHTM, London UK

Snetselaar, J. et al., PLOS one, 2021

## Experimental hut study in Burkina Faso

Mortality of *Anopheles gambiae* s.l. VK; 72 hours after exposure on treated walls using in situ cones tests. Each bar represents mean of mortality rate  $\pm 95\%$ CI and mean 80 mosquitoes were exposed

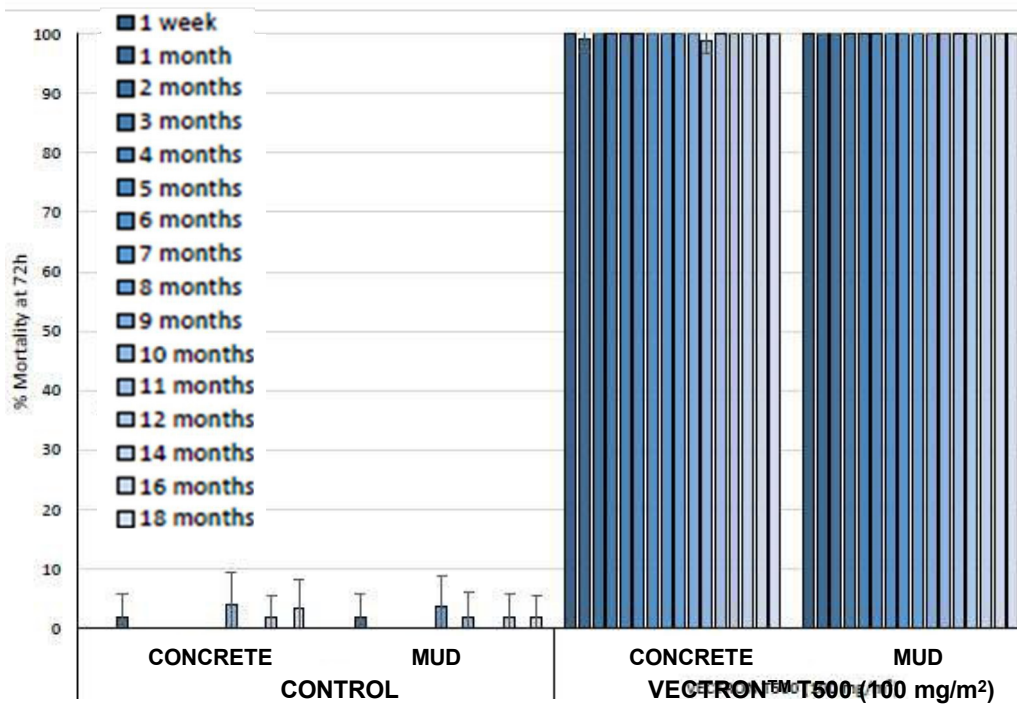


IRSS, Burkina Faso  
Bayili K. et al., (In press)

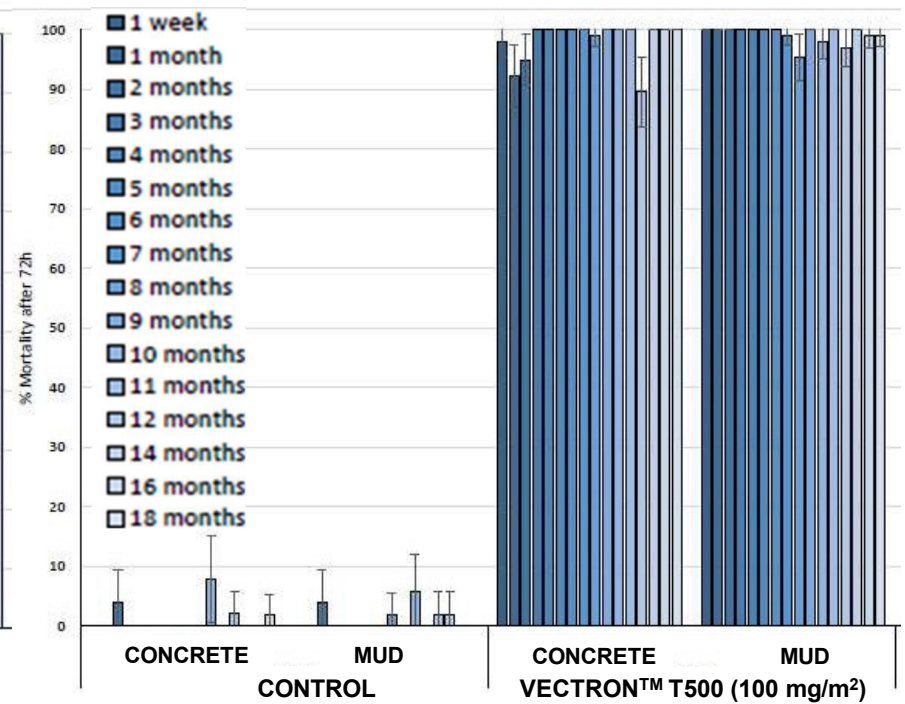


# Experimental hut study in Benin

*An. gambiae* Kisumu



*An. gambiae* Kisumu s.l. Cové



## Recap – Salient Points

# VECTRON™ T500

- A new tool for IRM strategies  
with novel Mode of Action ; TENEBENAL™
- Easy to handle; small 50g sachet ,  
odorless and stainless
- Long residual activity on relevant wall surfaces

# Thank you



# DISCUSSION – SESSION TWO

## Question

What are your suggestions to WS1 facilitators and team leads for further topics to explore or actions to consider following today's second session?

*Please share your suggestions in the chat, thank you!*