

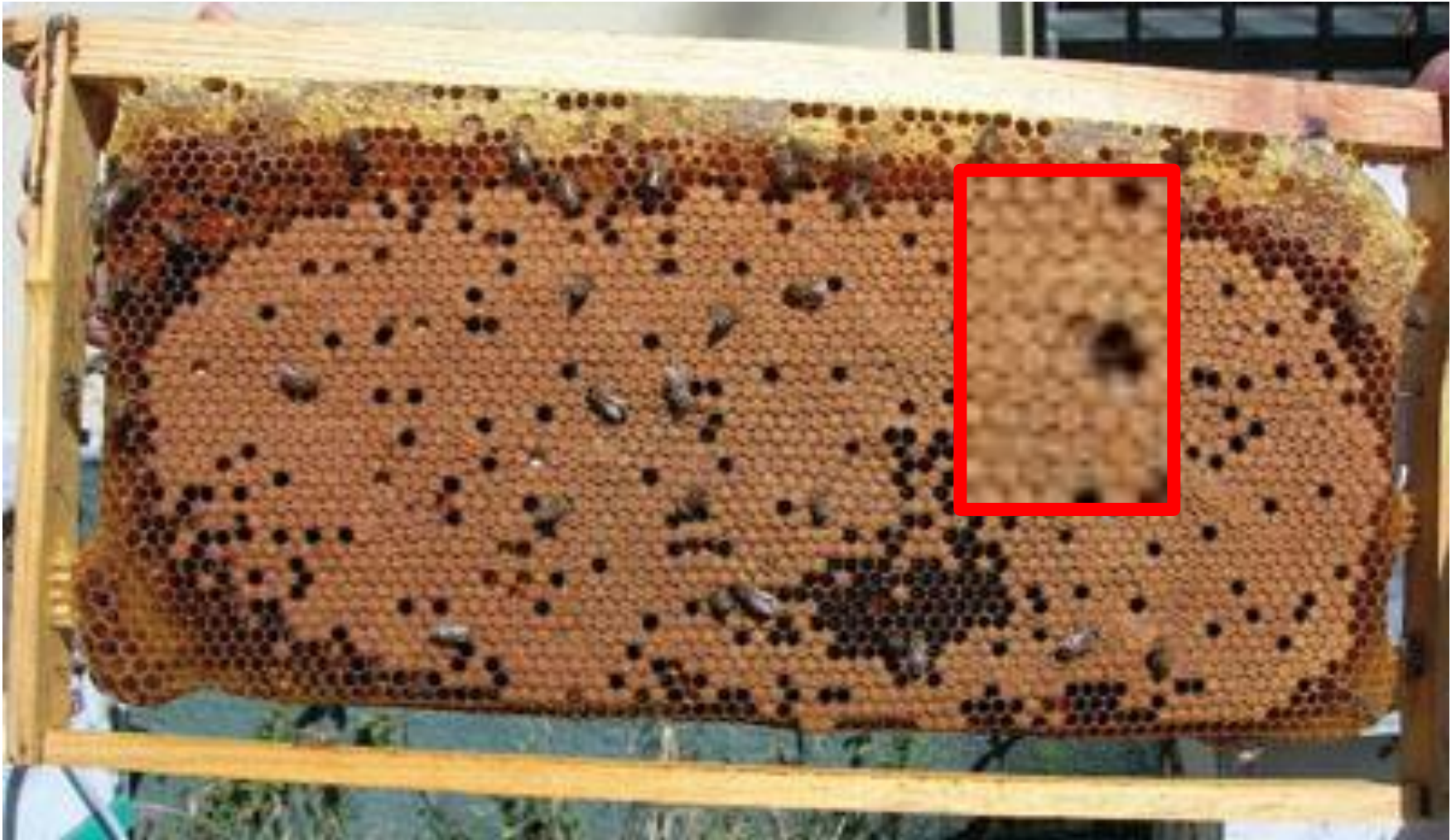
Emerging Technologies for AFB detection



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American Foulbrood



American Foulbrood

- Disease being missed ?
- Other diseases can mimic symptoms



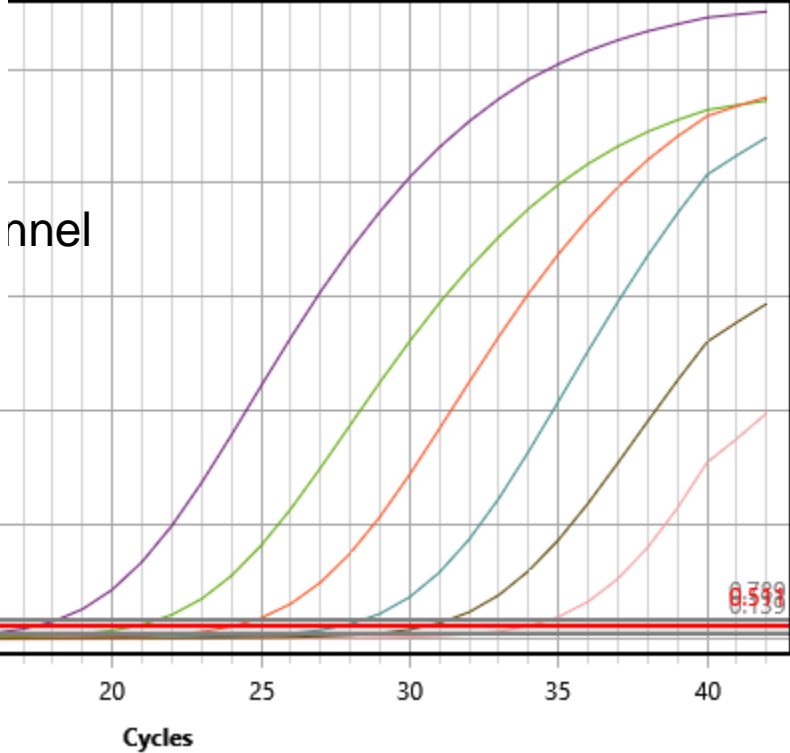
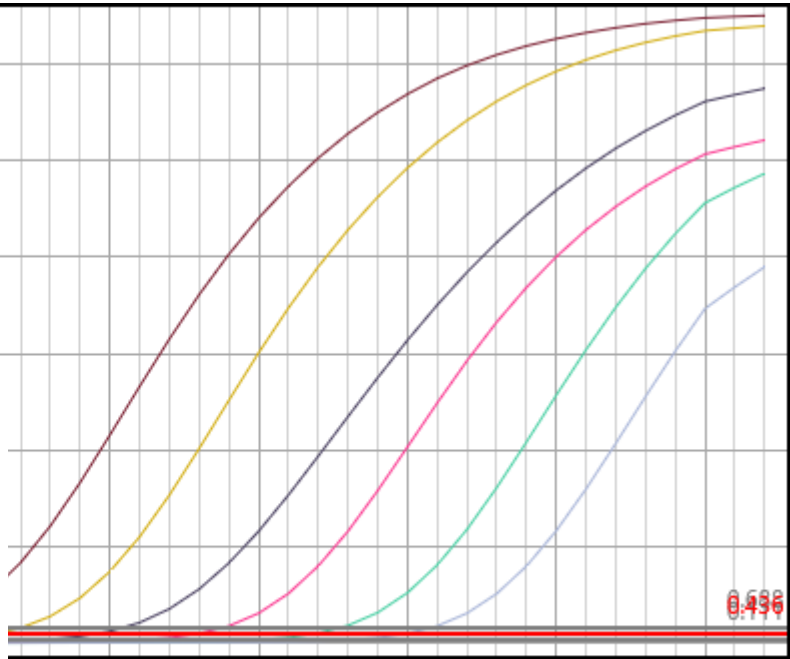
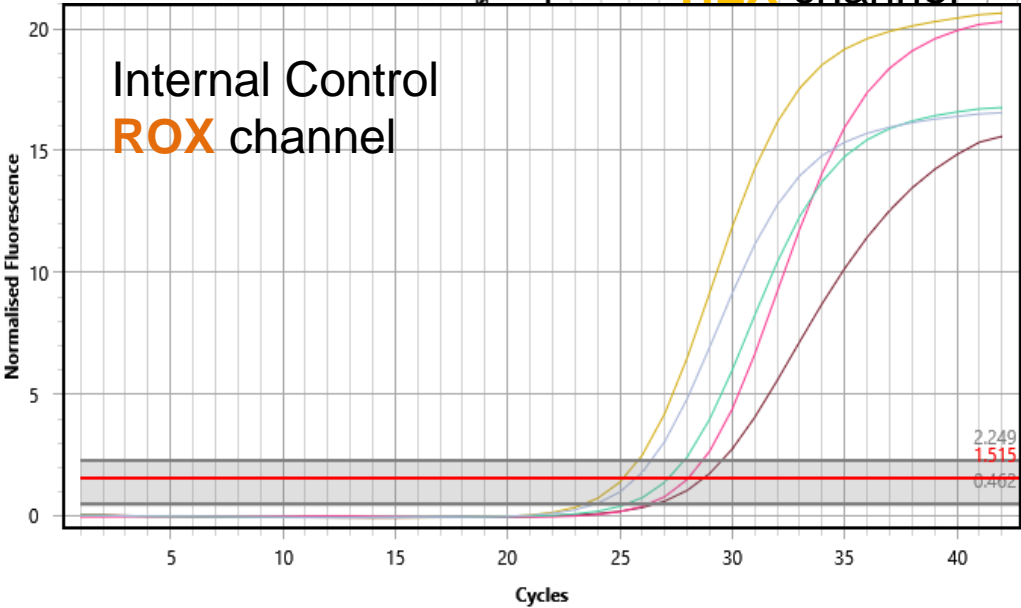
caused
by
varroa
(PMS)

American Foulbrood

- Development of dual target qPCR for American Foulbrood
- Why dual target ?

Chlamydia

AFB duo real-time PCR



Comparative test sensitivities

Limit of detection AFB PRCs

Another commercial qPCR

dnature Duo

Assay

Dobbel

Govan

Piccini

0

1

2

3

4

5

6

7

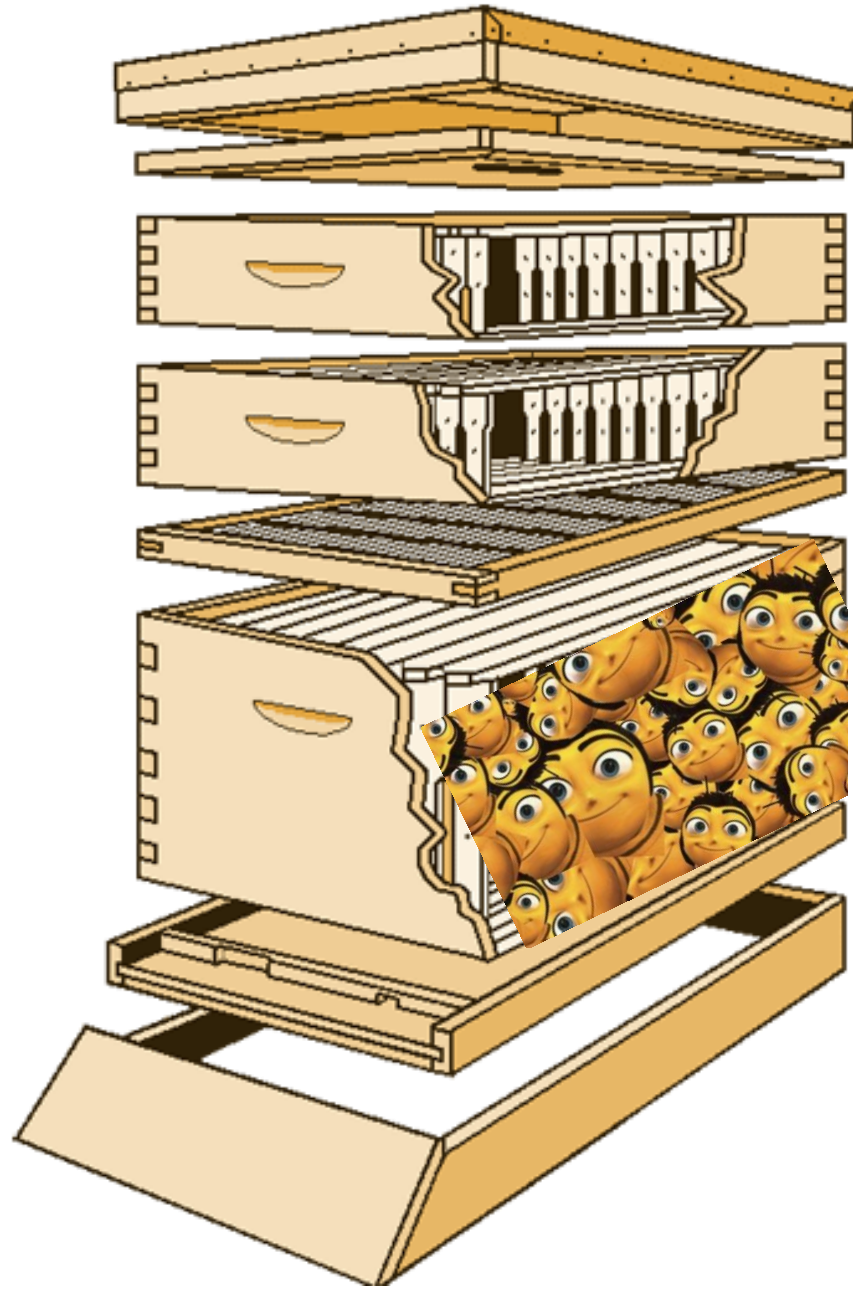
Dilutions detected

American Foulbrood

- Current testing done by culture
 - Can be difficult to get spores to germinate
- Limited sample type (ropy material and honey)
- Laborious to get samples



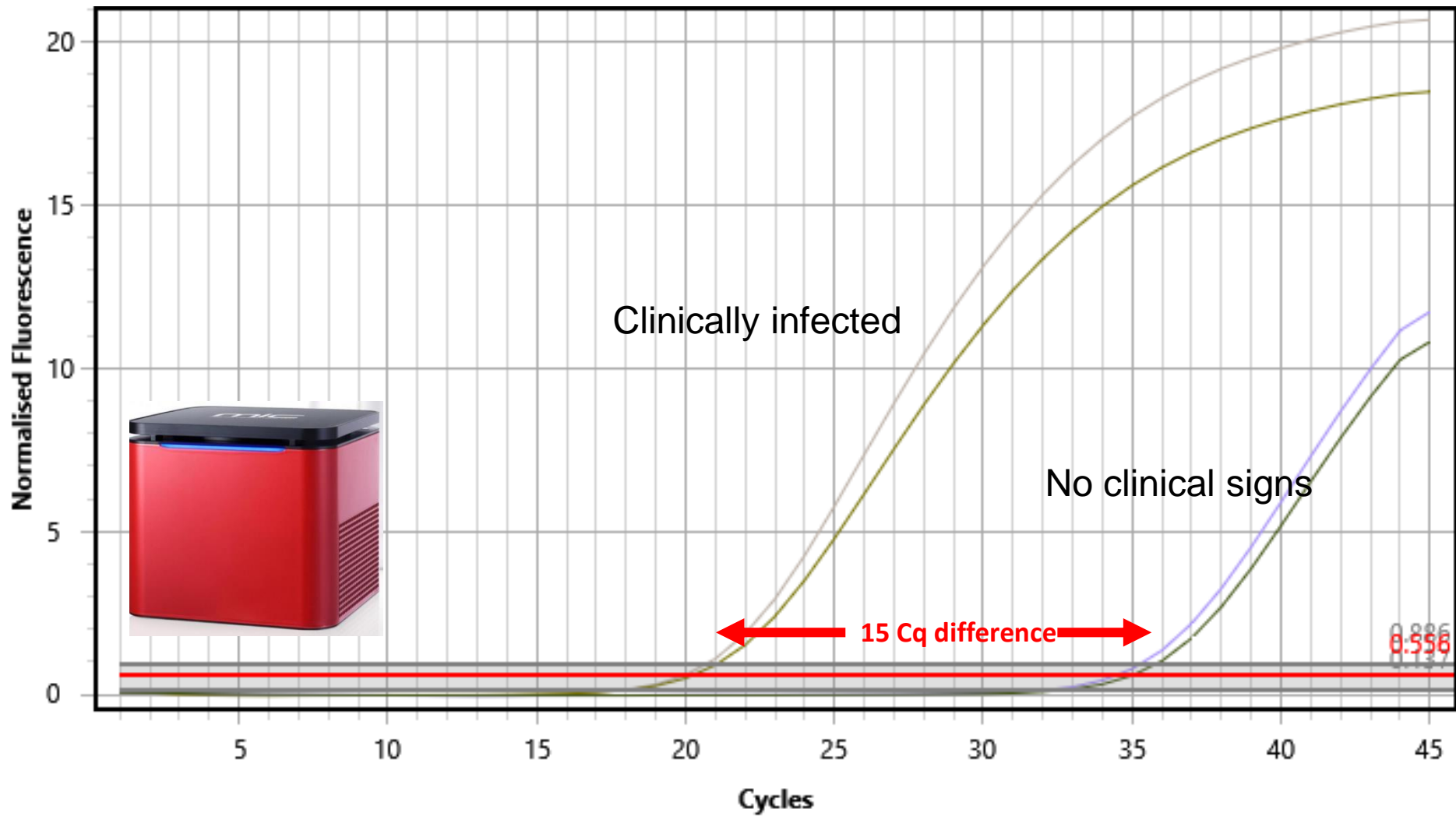
American Foulbrood



American Foulbrood

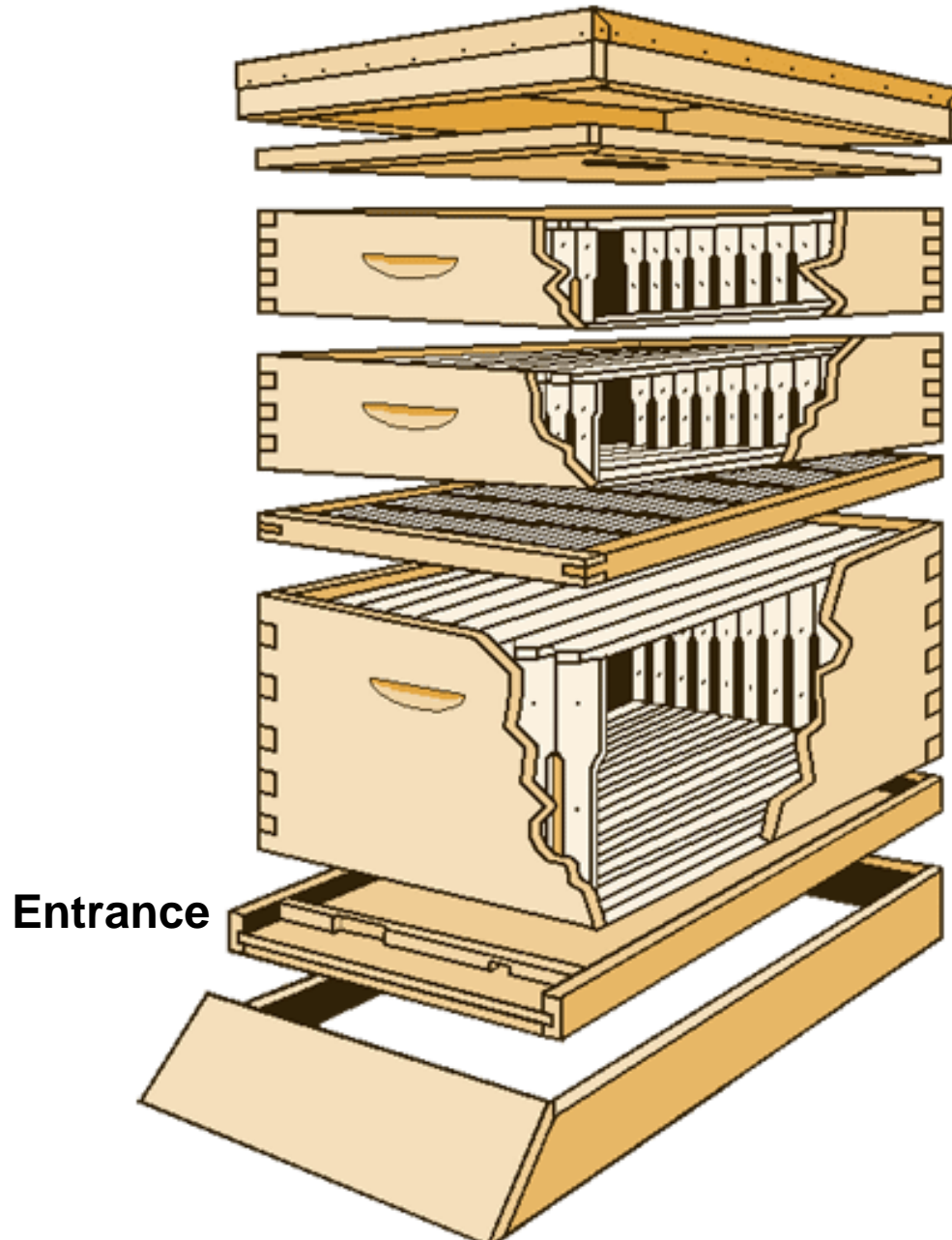
- Current research project to test alternative sampling method
 - Faster
 - Does not disrupt hive
 - Larger scale testing

But does a positive lead to clinical infection ?

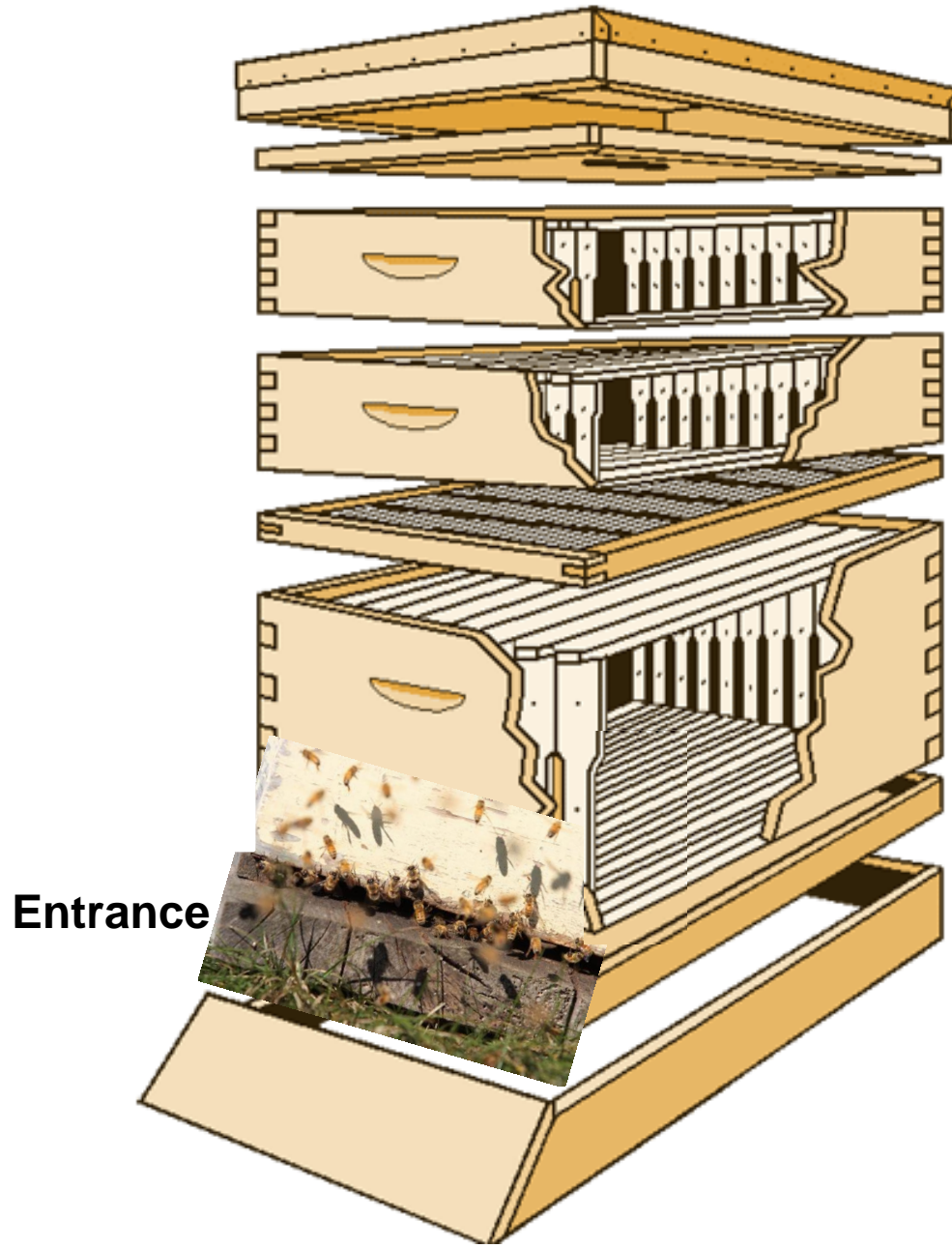


~32,000–fold difference in levels

American Foulbrood



American Foulbrood

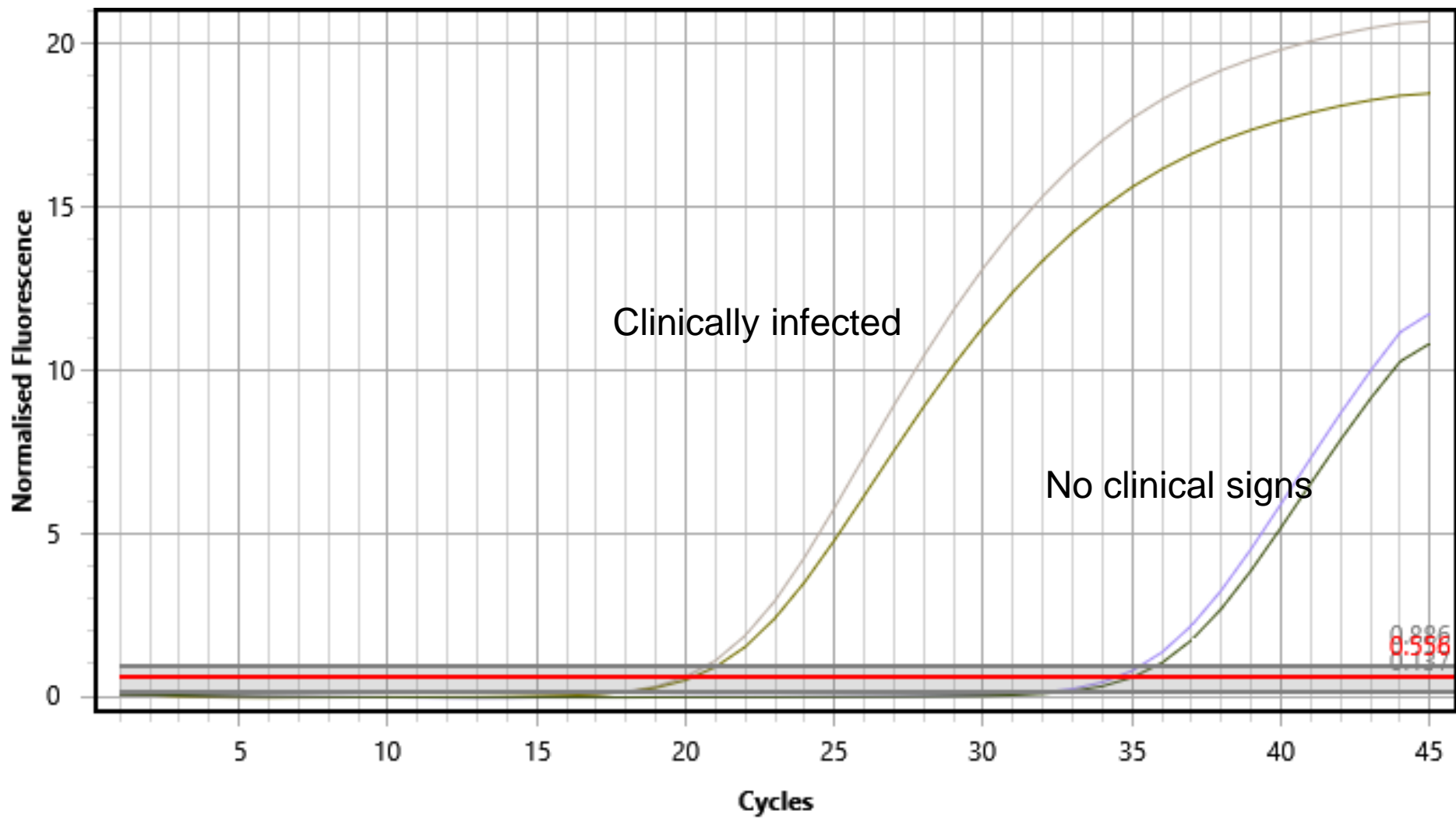


Current Projects

- Comparison of bee testing vs rapid hive sampling methods
- Otago Southland Clean Hive Project

Plant and Food Research

- Inspected 133 'high risk' hives
- Identified 12 early stage clinical hives
- All bee samples with lower AFB Cq's (higher AFB levels)
- Another 12 had low level detection (no clinical signs)



American Foulbrood

- Kit developed due to industry demand



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AFB DUO qPCR KIT
STORE AT -20°C • 100 TESTS



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john@dnature.co.nz



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