Use of the Quinoline anti-malarial drugs Mefloquine and Tafenoquine in the Australian Defence Force Submission 16 - Response by Professor Brown and Professor Quail to Supplementary Submission 16.9 Comments on the Submission of Mr McCarthy

### Introduction

Professor Brown and Professor Quail, on behalf of the Australasian College of Tropical Medicine, thank the Committee for their efforts in undertaking this enquiry and thank them for the opportunity of responding to additional comments of Mr Stuart McCarthy of 10 September, 2018.

Professor Brown rejects forcibly the assertion that he and Professor Quail gave "false and misleading testimony" at the Committee's hearing in Brisbane on 30 August 2018. He notes again the importance of focusing on evidence from appropriate clinical trials rather than opinion or hypotheses, and that when weighing up evidence, it is important to note that association cannot be equated with causation.

# Malaria mortality in the ADF (McCarthy)

Professor Brown's statement that "we still see it today ... some people listen to certain unwise opinions —'I don't need antimalarials; antimalarials are poison et cetera'—and then they die of malaria" is false.

Professor Brown did not assert that personnel from the ADF died from malaria.

## Purported "Drug Resistance" as a Justification for Introducing Tafenoquine (McCarthy)

Professor Quail and Professor Brown mentioned the problem of resistance of antimalarial drugs and the need for new drugs for treatment. Tafenoquine would be very useful as a means for preventing malaria, thus reducing the chance of requiring therapeutic treatment drugs to which there could be resistance.

They did not discuss resistance to primaquine.

Prof Quail did not say that primaquine was used in WWII.

To highlight the problem of recurrent malaria, he made reference to WWII because listeners may have heard of recurrent malaria occurring in returned soldiers.

#### Metabolism of 8-aminoquinolines

Mr McCarthy's submission refers to published data on the role of the cytochrome enzyme system in metabolism of 8 aminoquinolines that may be relevant in some relapses after treatment. As mentioned above, Professors Brown and Quail did not discuss resistance to primaguine.

Research by the Army Malaria Institute in Australia, and others, provided the data used by regulatory bodies in the USA (FDA) and Australia (TGA) to approve this drug for prevention of malaria. No drug is 100% protective against malaria.

## Long-term neurological symptoms in patients who have taken mefloquine.

The appearance of long-term neurological symptoms in people who have taken mefloquine does not prove they were caused by mefloquine.

## **Tafenoquine Neuropsychiatric Adverse Effects Observed During Clinical Trials**

The quoted evidence (Nasveld et al, 2010) does not indicate that the anti-malaria drugs were the cause of side-effects (as naturally there could not be a control unprotected group in a malaria endemic area). The authors note in the paper that "The majority of these events was mild or moderate in severity, and the events were typical of the type of events expected in a population of soldiers on active duty (e.g., injury or gastroenteritis)". In

Use of the Quinoline anti-malarial drugs Mefloquine and Tafenoquine in the Australian Defence Force Submission 16 - Response by Professor Brown and Professor Quail to Supplementary Submission 16.9 considering side-effects of tafenoquine prior to its approval, US FDA noted mild side-effects that were different from the spectrum that has been attributed to mefloquine.

Professor Brown totally rejects the conclusion from Mr McCarthy that "Much of the testimony provided by Professor Quail and Professor Brown during the Committee's hearing in Brisbane was demonstrably false and misleading" and the disparaging remarks about the expertise of the College.

Mr McCarthy's conclusions from malaria chemotherapy trials are not supported by the facts and do not stand up to scientific scrutiny. His hypothesis regarding causation of long-term neuro-psychiatric adverse effects is not supported by the available evidence.

We do agree however with Mr McCarthy that the health of ADF personnel is a serious matter that needs our attention to ensure that all who have long-term effects following service receive the care and support they deserve and need.

To use parliamentary privilege to suggest that any of our members would be willing to deliberately mislead a Parliamentary inquiry, and incidentally break Australian law, is highly offensive and is totally rejected.

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