

# Plasma heating for inactivating Ebola virus

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*To the Editor*—Chong et al<sup>1</sup> reported an interesting study on “Effects of a plasma heating procedure for inactivating Ebola virus on common chemical pathology tests” in the June issue of the *Hong Kong Medical Journal*. They concluded that “heat inactivation results in no significant change in electrolytes, glucose, and renal function tests, but causes a significant bias for many analytes” and recommended “use of a point-of-care device for blood gases, electrolytes, troponin, and liver and renal function tests within a class 2 or above biosafety cabinet with level 3 or above biosafety laboratory practice”.<sup>1</sup> Plasma heating is accepted as a method for virus inactivation and is mainly recommended in transfusion medicine.

Nonetheless the problem in determination of laboratory analytes is not unexpected. As reported by Chong et al,<sup>1</sup> several parameters can be changed after heating so it is not always appropriate. There are alternative methods for virus inactivation. A good example is irradiation that does not alter protein or chemicals in samples.<sup>2,3</sup> Focusing on the need for a high-class biosafety laboratory, the main concern is availability. In many settings, such a laboratory is extremely limited and might not be sufficient if a pandemic of Ebola were to occur.

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Lassa, Marburg, and Ebola viruses by gamma irradiation. *J Clin Microbiol* 1982;16:704-8.

## Authors' Reply

*To the Editor*—We would like to thank Professor Wiwanitkit for his comments. As reported in the article, we aimed to delineate the effect of the plasma heating procedure on common chemical pathology tests. The results indicated that most common biochemical analytes, with the exception of serum enzymes, can be interpreted after the procedure.<sup>1</sup> We believe that the information derived will be useful for laboratories without access to high-class biosafety laboratories, or as suggested, a facility for high-energy irradiation of samples.

Unfortunately, with reference to the suggestion of using high-energy gamma irradiation to inactivate clinical specimens, based on the calculation from the cited article<sup>2</sup> and reported viral load in the literature (up to 10<sup>10</sup> copies/mL),<sup>3</sup> such a facility is not routinely available in clinical laboratories in Hong Kong.

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