Dear Editors,

I write in regards to the article “Method Comparison Using 2 Point-of-Care Meters and a Reference Analyzer for Measuring Blood Triglycerides in Psittacine Birds” 33(3):229–234 by Irvine, KL, Mans, C, and Friedrichs, KR. I am concerned by some of the conclusions made by the authors regarding blood triglyceride levels, clinical importance, and the relationship of triglyceride to estrogen levels in psittacine birds. I believe this could lead some readers to draw incorrect conclusions of their own and that this paper may be cited in future papers, thereby magnifying my concerns.

I appreciate that the authors seek to describe how in-house versus commercial blood chemistry analyzers can create poor correlations. However, they state that “in female birds, blood triglyceride concentrations increase in response to increased estrogen levels and can therefore be used as an alternative measure for estrogen concentration, and in turn, ovarian activity.” They appear to consider bird species in a very general way in this regard and are not specifically focused on psittacine birds. There are few, if any previous references to triglycerides and estrogen levels in psittacine birds. To my knowledge, other than my presentation at the 2010 AAV conference, there have been no papers correlating elevated plasma triglycerides with clinical conditions specifically in psittacine birds. The authors infer that blood triglyceride levels are directly correlated to estrogen levels, but blood triglyceride levels are controlled by hepatic metabolism, and while liver metabolism can be influenced by ovarian activity, it can also be due to other processes that affect the liver.

I think the authors’ work confirms the importance of measuring plasma triglycerides in psittacine birds and that further analyses will reveal important correlations. However, at least in US veterinary laboratories, despite my efforts, plasma triglycerides are not routinely offered as a component of standard avian blood panels.

Larry Nemetz, DVM  
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Authors’ Response,

The authors would like to thank Dr. Nemetz for his comments in regards to our recently published manuscript reporting on a method comparison study performed in psittacine birds using point of care meters to measure blood triglyceride levels. Dr. Nemetz raises concerns that there is no evidence for a correlation between increased estrogen levels and blood triglyceride levels in psittacine birds and that we made such claims in our manuscript. We would like to point out that in our manuscript we did not refer to this correlation in psittacine birds specifically, since there are currently no peer-reviewed publications available that have investigated this topic. Therefore, studies performed in chickens were referenced. These studies overwhelmingly showed that increased levels of estrogen result in increased blood triglyceride levels. As we stated in the publication, other factors can also influence blood triglyceride levels, and non-estrogen related increase in triglyceride needs to be considered by clinicians interpreting blood triglyceride results. We believe that Dr. Nemetz indeed raises an important issue regarding limiting extrapolation between species, and the need for target population- (i.e. psittacine) specific studies. We wholeheartedly agree with his concerns, and hence, had performed and published this method comparison study using samples from psittacine birds in addition to another published paper by the authors using chicken samples. We strongly encourage Dr. Nemetz to publish the data he mentions on psittacines and triglycerides so that it can made available to others and be cited by other peer-reviewed publications, and in doing so, advance avian medicine.

Respectfully

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