Author's response to reviews

Title: Adipose energy stores, physical work, and the metabolic syndrome: lessons from hummingbirds

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Author's response to reviews:

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Dear Dr. Kumagai:

Thank you for obtaining a review for manuscript#1375896107721483, Adipose energy stores physical work, and the metabolic syndrome: lessons from hummingbirds. I appreciate the difficulty in finding a suitable reviewer, and am happy to make the changes suggested. If I understand correctly, the procedure is to resubmit electronically with the changes and the same manuscript number. I will do that shortly and resubmit when I send this cover letter to you.

Here are the changes I have made:
1. The title page has been changed to Nutrition Journal format.
2. My name, affiliation and contact information are listed under the title in the required format.
3. In relation to the referee's comments about a better definition of diabetes, I have indicated the definition as follows: "Despite hyperglycemia and seasonally elevated body fat, the birds are not known to become diabetic in the sense of developing polyuria (glucosuria), polydipsia and polyphagia." (p. 2, lines 6-8). On page 5, lines 15-18, this is stated as follows (the change is underlined below):

"Although these levels would be classified as diabetic in humans, nectivorous birds do not become diabetic in the traditional sense of spilling glucose into the urine with symptoms of polyuria, polydipsia and polyphagia. Also, they do not develop the degree of glycated hemoglobin seen in humans [23]."

This is the classical definition given by endocrinologists and should suffice for this article. I do not think it requires a new citation because it is the definition used in textbooks. With this definition stated on pages 2 and 5, I did not find a place on page 7 that needed changing.

4. The units for oxygen consumption have been changed on pages 4 and 6 so they are all congruent.
5. On page 9, lines 7-9, I have restated the message that hummingbirds avoid metabolic syndrome by their need to maintain close feedback between energy intake and energy expenditure.

Sincerely yours,

James L. Hargrove, Ph.D.