ANSWERING REVIEWERS

August 21, 2014

Dear Editor,

Please find enclosed the edited manuscript in Word format.

Title: New aspects in the pathomechanism and diagnosis of LPR – Clinical impact of laryngeal proton pumps and pharyngeal pH metry in extraesophageal GERD

Author: Becker V, Drabner R, Graf S, Schlag C, Nennstiel S, Buchberger AMS, Schmid RM, Saur D, Bajbouj M

Name of Journal: *World Journal of Gastroenterology*

ESPS Manuscript NO: 12572

The manuscript has been improved according to the suggestions of reviewers:

Reviewer 02442330:
Comments: Ad figure 1: the therapy response (bar) should be included in the bars of the diagnostic procedures.

Figure was changed. We thank the reviewer for this suggestion.

Ad discussion, H+K+ATPase: The authors state that laryngeal H+K+ATPase proton pumps are very unlikely the cause of LPR symptoms due to detection in only two LPR patients. However, in the former paragraph the authors state that the low detection rate can be the result of an endoscopic sampling error. The authors should discuss that both patients with detection of laryngeal H+K+ATPase proton pumps responded to PPI therapy.

This was added to discussion.

The authors can be congratulated for investigating systematically the role of the Dx-pH probe in LPR patients. It seems that the Dx-pH probe and pH/MII are measuring different phenomena (Ummarino D, Laryngoscope 2013;123:980-4; Becker V, J Gastrointest Surg 2012;16:1096-101). The authors should discuss that all nine patients who responded to PPI therapy were Dx pH positive (9 out of 14 Dx pH positive patients responded to PPI therapy).

We thank the reviewer for this comment. This was added to the discussion.

How many patients who responded to PPI therapy were pH/MII positive is not stated in the manuscript.

This was added to figure 1.

Minor comments: Ad ?Patients and Results“, last paragraph: The last sentence must be included in the next-to-last paragraph or omitted.

Last sentence was deleted. Again we thank the reviewer for his valuable comments and his support to improve our

manuscript.

Reviewer 02444953:
This paper is a well written study about new aspects of LPR. The study is well designed and the diverse results are well discussed.

We thank the reviewer for his appraisal.

The authors should state that both examinations are performed during the same time period and should list the results of the individual scores of deMeesters, Ryan score and des SAP score (individual symptom score).

This was added to the manuscript (see"appendix").

Whre the any correlation of LPR and impedance measures?

Therapy response of LPR symptoms as correlation parameter was added to figure 1

The should also state the pH scale for indicating reflux in the esophagus and pharynx. If there is a difference they should explain this and correlate this to their results.

We used the widely accepted and used pH parameters as indicated in the literature.

- pH-metry was considered pathological, if pH level was below 4 for more than 4%.
- Impedance monitoring was evaluated pathological when more than 73 fluid and/ or mixed reflux episodes were detected during monitoring period
- Dx-pH was pathological if Ryan Score was >9.4 in an upright position (pH<5.5) or >6.8 in a supine position (pH<5.0)

I think this paper should be accepted after minor revision.

We thank the reviewer for his valuable comments and his support to improve our manuscript.

Sincerely yours,

Valentin Becker