



PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 85818

Title: Exhaled volatile organic compounds for diagnosis and monitoring of asthma

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03731081

Position: Peer Reviewer

Academic degree: MD

Professional title: Professor

Reviewer's Country/Territory: Russia

Author's Country/Territory: Italy

Manuscript submission date: 2023-05-17

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-05-17 10:25

Reviewer performed review: 2023-05-18 14:47

Review time: 1 Day and 4 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The authors of the manuscript presented very interesting information on the specific diagnosis of bronchial asthma. The manuscript is written in the format of a mini-review. A diagnostic method for GAS CHROMATOGRAPHY and MASS SPECTROMETRY is presented. The manuscript contains a description of the detection of bronchial asthma markers, volatile organic compounds using electronic noses. This is a very promising, highly specific and highly sensitive method. The method can be used for screening studies for the mass detection of asymptomatic patients with bronchial asthma and preclinical stages of bronchial asthma. This scientific topic needs to be continued of clinical assau. The manuscript is recommended for publication in WJCC.



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Reviewer's code: 00053419

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: Spain

Author's Country/Territory: Italy

Manuscript submission date: 2023-05-17

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-05-19 07:59

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Review time: 4 Days and 4 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
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	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The authors have performed an in depth review of two methods for the diagnosis and follow-up of asthma based on the detection of volatile compounds. While there is still a long way to consider the analyzed technologies for routine clinical applications, the strengths and drawbacks of each approach have been thoroughly debated. There are a few questions for the authors: 1. From the different studies the authors extract a number of compounds that might have value for the stratification of the patients according to the application of diverse regression methods. The degree of feature overlapping across studies is not clear. Is there a consensus across GC-MS or e-nose analyses? Considerations on overlapping between GC-MS and e-nose studies is mentioned. Perhaps a table with the most relevant compounds detected and their potential application could be included. 2. Intro first paragraph: "Notsurprisingly, only the measurement of exhaled nitric has become part of international guidelines". Do the authors mean nitric oxide? 3. Page 5. revise the sentence "Here, the separation of molecules, the "stationary phase," the critical component of the system, occurs" 4. Page 6. m/c should be m/z. Page 6 and 7. references are needed to support the observations in



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the sentence "(Mass spectrometry (MS) is commonly used to rapidly and accurately identify chemical compounds for a wide range of applications such as drug detection, pollution monitoring, petrochemical processing, and disease diagnosis through biomarkers.)"