



**HARVONI™**  
ledipasvir/sofosbuvir  
90 mg/400 mg tablets



**HARVONI™**  
ledipasvir/sofosbuvir  
90 mg/400 mg tablets

NOW  
APPROVED

LEARN MORE

NOW  
APPROVED

LEARN MORE

# Clinical Gastroenterology and Hepatology

AGAJournals.org | RSS Feeds Mobile

Login | Register | Subscribe

Articles & Issues ▾ Multimedia ▾ Int'l Editions ▾ Practice Mgmt ▾ CME For Authors ▾ Journal Info ▾ Resource Centers ▾ AGA ▾

All Content

Search

[Advanced Search](#)

< Previous Article

## Articles in Press

Next Article >



You do not have access to the content that you requested. Please review your options for gaining access at the bottom of the page.

Access this article on  
[ScienceDirect](#)

### Article in Press

## Small Amounts of Gluten in Subjects With Suspected Nonceliac Gluten Sensitivity: A Randomized, Double-Blind, Placebo-Controlled, Cross-Over Trial

Antonio Di Sabatino, Umberto Volta, Chiara Salvatore, Paolo Biancheri, Giacomo Caio, Roberto De Giorgio, Michele Di Stefano, Gino R. Corazza

Published Online: February 19, 2015

Altmetric 722

DOI: <http://dx.doi.org/10.1016/j.cgh.2015.01.029>

Publication stage: In Press Uncorrected Proof

Article Info

Abstract

Full Text

Images

References

Supplemental Materials

### Article Tools

[PDF \(1 MB\)](#)

[Download Images\(.ppt\)](#)

[About Images & Usage](#)

[Email Article](#)

[Add to My Reading List](#)

[Export Citation](#)

[Create Citation Alert](#)

[Cited by in Scopus \(0\)](#)

### Background & Aims

There is debate over the existence of nonceliac gluten sensitivity (NCGS) intestinal and extraintestinal symptoms in response to ingestion of gluten-containing foods by people without celiac disease or wheat allergy. We performed a randomized, double-blind, placebo-controlled, cross-over trial to determine the effects of administration of low doses of gluten to subjects with suspected NCGS.

### Methods

ADVERTISEMENT

GILP0398

**HARVONI™**  
ledipasvir/sofosbuvir  
90 mg/400 mg tablets

NOW  
APPROVED

We enrolled 61 adults without celiac disease or a wheat allergy who believed ingestion of gluten-containing food to be the cause of their intestinal and extraintestinal symptoms. Participants were assigned randomly to groups given either 4.375 g/day gluten or rice starch (placebo) for 1 week, each via gastrosoluble capsules. After a 1-week gluten-free diet, participants crossed over to the other group. The primary outcome was the change in overall (intestinal and extraintestinal) symptoms, determined by established scoring systems, between gluten and placebo intake. A secondary outcome was the change in individual symptom scores between gluten vs placebo.

## Results

According to the per-protocol analysis of data from the 59 patients who completed the trial, intake of gluten significantly increased overall symptoms compared with placebo ( $P = .034$ ). Abdominal bloating ( $P = .040$ ) and pain ( $P = .047$ ), among the intestinal symptoms, and foggy mind ( $P = .019$ ), depression ( $P = .020$ ), and aphthous stomatitis ( $P = .025$ ), among the extraintestinal symptoms, were significantly more severe when subjects received gluten than placebo.

## Conclusions

In a cross-over trial of subjects with suspected NCGS, the severity of overall symptoms increased significantly during 1 week of intake of small amounts of gluten, compared with placebo. Clinical trial no: ISRCTN72857280.

### Keywords:

[Extraintestinal](#), [Gluten](#), [Intestinal](#), [Nonceliac Gluten Sensitivity](#), [Placebo](#)

### Abbreviations used in this paper:

[AGA \(antigliadin antibodies\)](#), [ANOVA \(analysis of variance\)](#), [GFD \(gluten-free diet\)](#), [NCGS \(nonceliac gluten sensitivity\)](#), [W \(week\)](#)

To access this article, please choose from the options below

### Log In

Email/Username:

Password:

Remember me

[Forgot password?](#)

### Register

[Create a new account](#)

### Purchase access to this article

- [\\$30.00 USD | Online access for 24 hours](#)

### Claim Access

If you are a current subscriber with Society Membership or an Account Number, [claim your access now](#).

### Subscribe to this title

[Purchase a subscription](#) to gain access to this and all other articles in this journal.

### Institutional Access

[Visit ScienceDirect](#) to see if you have access via your institution.

LEARN  
MORE

GILP039B

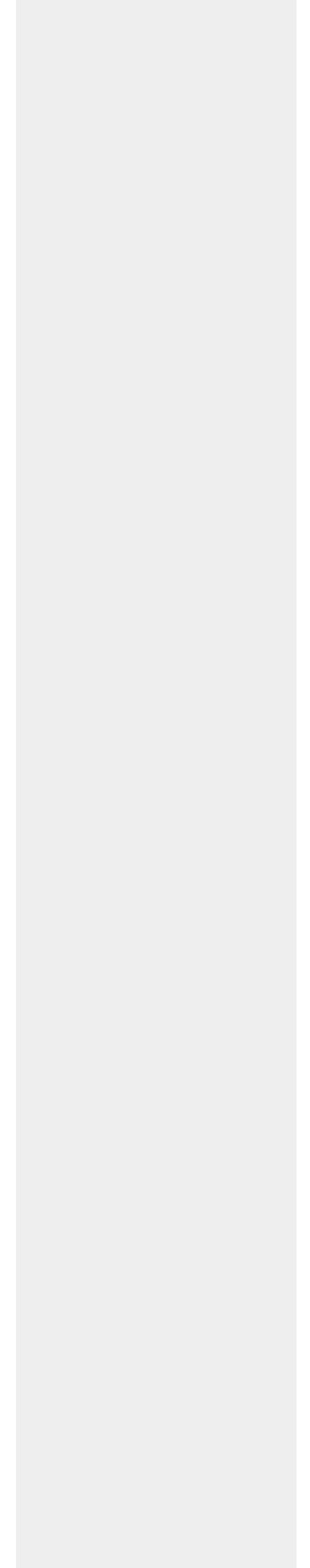


NOW  
APPROVED

LEARN  
MORE

**Conflicts of interest** The authors disclose no conflicts.

© 2015 AGA Institute. Published by Elsevier Inc. All rights reserved.



[< Previous Article](#)

## [\*\*Articles in Press\*\*](#)

[Next Article >](#)

Copyright © 2015 Elsevier Inc. All rights reserved. | [Privacy Policy](#) | [Terms & Conditions](#) | [About Us](#) | [Help & Contact](#)

The content on this site is intended for health professionals.

Advertisements on this site do not constitute a guarantee or endorsement by the journal, Association, or publisher of the quality or value of such product or of the claims made for it by its manufacturer.