

Caption: Vibrant, night time view of Hong Kong Island from Kowloon. See inside the excellent article by Zuo et al on the role of bacteriophage in FMT for C. difficile infection.

An international journal of gastroenterology and hepatology

Impact Factor: 16.658 Editor

Emad El-Omar (Australia)

Deputy Editor (Hepatology)

Alexander Gerbes (Germany) **Deputy Editor (Luminal**

Gastroenterology) William Grady (USA)

Deputy Editor (Endoscopy) Thomas Rosch (Germany)

Associate Editors

Matias Avila (Spain) Guy Boeckxstaens (Belguim) Patrice Cani (Belgium) Jean-Francois Dufour (Switzerland) Thomas Gress (Germany) Arthur Kaser (UK) Ernst Kuipers (The Netherlands) Siew C Ng (Hong Kong) Herbert Tilg (Austria) Fabien Zoulim (France)

Editorial Office

BMJ Journals BMA House, Tavistock Square London, WC1H 9JR, UK

T: +44 (0)20 7383 6394 F: +44 (0)20 7383 6668

E: info.gut@bmj.com

ISSN: 0017-5749 (print) ISSN: 1468-3288 (online)

Disclaimer: Gut is owned and published by BMJ Publishing Group Ltd, a wholly owned subsidiary of the British Medical Association and the British Society of Gastroenterology. The owners grant editorial freedom to the Editor of *Gut. Gut* follows guidelines on editorial independence produced by the World Association of Medical Editors and the code on good publication practice of the Committee on Publication Ethics.

Gut is intended for medical professionals and is provided without warranty, express or implied. Statements in the Journal are the responsibility of their authors and advertisers and not authors' institutions, the BMJ Publishing Group, the British Society of Gastroenterology or the BMA unless otherwise specified or determined by law. Acceptance of advertising does not imply endorsement.

To the fullest extent permitted by law, the BMJ Publishing Group shall not be liable for any loss, injury or damage resulting from the use of *Gut* or any information in it whether based on contract, tort or otherwise. Readers are advised to verify any information they choose to rely on.

Copyright © 2018 BMJ Publishing Group Ltd and British Society of Gastroenterology. All rights reserved; no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without prior permission

Gut is published by BMJ Publishing Group Ltd, typeset by Exeter Premedia Services Private Ltd, Chennai India and printed in the UK on acid-free paper.

Gut (ISSN: 0017-5749) is published monthly by BMJ Publishing Group and is distributed in the USA by Air Business Ltd. Periodicals postage paid at Jamaica NY 11431 POSTMASTER: send address changes to *Gut*, Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA

Leading article

595 Global elimination of viral hepatitis and hepatocellular carcinoma: opportunities and challenges C-I Chen

Commentaries

599 Minimal access necrosectomy: the newest advance of many in the treatment of necrotising pancreatitis M G Sarr

600 High on drugs: lessons from opiates in pancreatitis V P Singh

Deciphering the biology of IgG4-related disease: specific antigens and disease? OPEN ACCESS D Haldar, G M Hirschfield

Oesophagus

606 Aspirin prevents NF-κB activation and CDX2 expression stimulated by acid and bile salts in oesophageal squamous cells of patients with Barrett's oesophagus

> X Huo, X Zhang, C Yu, E Cheng, Q Zhang, K B Dunbar, T H Pham, J P Lynch, D H Wang, R S Bresalier, S J Spechler, R F Souza

Inflammatory bowel disease

616 Are random biopsies still useful for the detection of neoplasia in patients with IBD undergoing surveillance colonoscopy with chromoendoscopy?

> D Moussata, M Allez, D Cazals-Hatem, X Treton, D Laharie, J-M Reimund, P Bertheau, A Bourreille, A Lavergne-Slove, H Brixi, J Branche, J-M Gornet, C Stefanescu, J Moreau, P Marteau, A-L Pelletier, F Carbonnel, P Seksik, M Simon, J-F Fléjou, J-F Colombel, A-L Charlois, X Roblin, S Nancey, Y Bouhnik, F Berger, B Flourié, and the GETAID

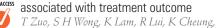
Gut microbiota

625 The microbiome of professional athletes differs from that of more sedentary subjects in composition and particularly at the functional metabolic level

W Barton, N C Penney, O Cronin, I Garcia-Perez, M G Molloy, E Holmes, F Shanahan, P D Cotter, O O'Sullivan

Bacteriophage transfer during faecal microbiota transplantation in Clostridium difficile infection is





W Tang, J Y L Ching, P K S Chan, M C W Chan, JCYWu, FKL Chan, JYu, JJY Sung, SCNg

Coeliac disease

644 T-cell repertoires in refractory coeliac disease



J Ritter, K Zimmermann, K Jöhrens, S Mende, OPHACCSS A Seegebarth, B Siegmund, S Hennig, K Todorova, A Rosenwald, S Daum, M Hummel, M Schumann

GI bleeding

654 Acute lower GI bleeding in the UK: patient characteristics, interventions and outcomes in the first nationwide audit

> K Oakland, R Guy, R Uberoi, R Hogg, N Mortensen, M F Murphy, V Jairath, on behalf of the UK Lower GI Bleeding Collaborative

Colon

663 MED12 is recurrently mutated in Middle Eastern



colorectal cancer

OPEN ACCESS A K Siraj, T Masoodi, R Bu, P Pratheeshkumar, N Al-Sanea, L H Ashari, A Abduljabbar, S Alhomoud, F Al-Dayel, F S Alkuraya, K S Al-Kuraya

672 Long-term use of antibiotics and risk of colorectal adenoma

Y Cao, K Wu, R Mehta, D A Drew, M Song, P Lochhead, L H Nguyen, J Izard, C S Fuchs, W S Garrett, C Huttenhower, S Ogino, E L Giovannucci, A T Chan

Socioeconomic and ethnic inequities within organised colorectal cancer screening programmes worldwide

> C M de Klerk, S Gupta, E Dekker, M L Essink-Bot, on behalf of the Expert Working Group 'Coalition to reduce inequities in colorectal cancer screening' of the World Endoscopy Organization

> > **MORE CONTENTS** ►



This article has been chosen by the Editor to be of special interest or importance and is freely available online.



This article has been made freely available online under the BMJ Journals Open Access scheme.

See http://authors.bmj.com/open-access/



This journal is a member of and subscribes to the principles of the Committee on Publication Ethics

www.publicationethics.org.uk





Development and external validation of a nomogram and online tool to predict bowel dysfunction following restorative rectal cancer resection: the POLARS score

> N J Battersby, G Bouliotis, K J Emmertsen, T Juul, R Glynne-Jones, G Branagan, P Christensen, S Laurberg, B J Moran, on behalf of the UK and Danish LARS Study Groups

Endoscopy

697 Minimally invasive and endoscopic versus open necrosectomy for necrotising pancreatitis: a pooled analysis of individual data for 1980 patients

> S van Brunschot, R A Hollemans, O I Bakker, M G Besselink, T H Baron, H G Beger, M A Boermeester, T L Bollen, M I Bruno, R Carter, I I French, D Coelho, B Dahl, M G Dijkgraaf, N Doctor, P I Fagenholz, G Farkas, C F del Castillo, P Fockens, M L Freeman, T B Gardner, H van Goor, HG Gooszen, G Hannink, R Lochan, CJ McKay, J P Neoptolemos, A Oláh, R W Parks, M P Peev, M Raraty, B Rau, T Rösch, M Rovers, H Seifert, A K Siriwardena, K D Horvath, H C van Santvoort

Pancreas

707 c-Myc downregulation is required for preacinar to acinar maturation and pancreatic homeostasis

> V J Sánchez-Arévalo Lobo, L C Fernández, E Carrillo-de-Santa-Pau, L Richart, I Cobo, I Cendrowski, U Moreno, N del Pozo, D Megías, B Bréant, C V Wright, M Magnuson, F X Real

719 Morphine worsens the severity and prevents pancreatic regeneration in mouse models of acute pancreatitis

> U Barlass, R Dutta, H Cheema, J George, A Sareen, A Dixit, Z Yuan, B Giri, J Meng, S Banerjee, S Banerjee, V Dudeja, R K Dawra, S Roy, A K Saluja

Hepatology

728 Annexin A11 is targeted by IgG4 and IgG1 autoantibodies in IgG4-related disease L M Hubers, H Vos, A R Schuurman, R Erken, RPO Elferink, B Burgering, SFJ van de Graaf, U Beuers

736 **(**

Humanisation of a claudin-1-specific monoclonal antibody for clinical prevention and cure of HCV infection without escape

C C Colpitts, R G Tawar, L Mailly, C Thumann, L Heydmann, S C Durand, F Xiao, E Robinet, P Pessaux, M B Zeisel, T F Baumert

ERK activation and autophagy impairment 746 are central mediators of irinotecaninduced steatohepatitis

> A Mahli, M Saugspier, A Koch, I Sommer, P Dietrich, S Lee, R Thasler, I Schulze-Luehrmann, A Luehrmann, W E Thasler, M Müller, A Bosserhoff, C. Hellerbrand

757 Genome-wide association study identifies HLA-DR variants conferring risk of HBV-related acute-on-chronic liver failure

W Tan, J Xia, Y Dan, M Li, S Lin, X Pan, H Wang, Y Tang, N Liu, S Tan, M Liu, W He, W Zhang, Q Mao, Y Wang, G Deng

Recent advances in basic science

767 Liver sampling: a vital window into



HBV pathogenesis on the path to functional cure

U S Gill, L J Pallett, P T F Kennedy, M K Maini

JournalScan

776 Gl highlights from the literature M H McLean

PostScript

778 Letters



Correction

782 Correction: Discoidin domain receptor 2 deficiency predisposes hepatic tissue to colon carcinoma metastasis

Editor's quiz: GI snapshot

Tears of colonoscopy M McFarlane, B Disney, J Eaden