

Landes Highlights

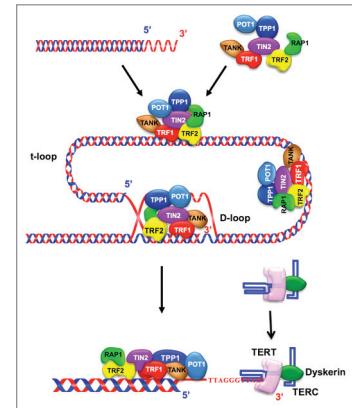
JAK-STAT and intestinal mucosal immunology

The intestinal mucosal immune system is challenged with bacteria, viruses, and parasites, in addition to food and environmental antigens, that require dynamic immune responsiveness for homeostasis. A recent review by Dr Kenneth Kudsk and coworkers highlights the recognized roles of JAK-STAT signaling in the intestinal mucosal immune system in the regulation of both, adaptive and innate mucosal immune function, as well as epithelial repair and regeneration. Adaptive immunity includes lymphocyte mediated secretion of specific

antibodies, while innate immune responses include secretion of non-antigen specific compounds. Effects of specialized nutrition support on JAK-STAT in innate immune function and in lymphocyte modulation and epithelial antibody transport in gut-associated lymphoid tissue are discussed.

Reference

Heneghan AF, Pierre JF, Kudsk KA. JAK-STAT and intestinal mucosal immunology. *JAK-STAT* 2013; 2:e25530; PMID:24416649; <http://dx.doi.org/10.4161/jkst.25530>



Correlate of protection for rotavirus vaccines

Rotavirus (RV) infection is the principle cause of severe gastroenteritis (GE) in young children. Before the introduction of routine immunization, RV was responsible for more than 450,000 deaths annually worldwide. Currently two RV vaccines are available and recommended for infants, but both vaccines are less efficacious in some countries in Africa and Asia. The improvement of available vaccines or the development of new RV vaccines is hindered by the lack of a widely accepted immunological correlate of protection. RV-specific secretory immunoglobulin (RV-SIg) in serum has been proposed as an alternate method for indirectly measuring intestinal Ig. A new study by Juana Angel and colleagues confirmed the presence of plasma RV-SIg in children with natural RV infection, and further addressed

its occurrence in children vaccination with the attenuated human RV vaccine Rotarix. They reported that vaccinees have higher RV-SIg titers than placebo recipients after each of the two administered doses, and that RV-SIg titers increase after the second dose. RV-SIg measured after dose 2 correlated with protection when vaccinees and placebo recipients were analyzed jointly. The study authors propose that plasma RV-SIg may serve as a valuable correlate of protection for RV vaccines.

Reference

Herrera D, Vásquez C, Corthésy B, Franco MA, Angel J. Rotavirus specific plasma secretory immunoglobulin in children with acute gastroenteritis and children vaccinated with an attenuated human rotavirus vaccine. *Hum Vaccin Immunother* 2013; 9; PMID:23839157; <http://dx.doi.org/10.4161/hv.25610>

Editor-in-Chief
Ronald Ellis
Nancy Lee
John Zeman, Editor

humanVACCINES & IMMUNOTHERAPEUTICS

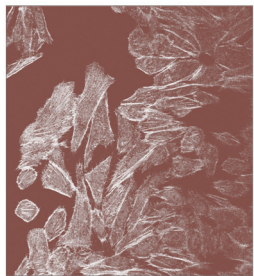
Volume 9 • Issue 11 • November 2013


Editorial Board

Sudhakar Agrawal, Karl Hellstrom
Ruth Annan, David C. Kozlov
Steven Black, Maryam M. Levine
Robert T. Chan, Alf Lindberg
Ron Dagan, Thomas P. Monath
Paul A. O'Beirne, Paul A. O'Beirne
Anne S. De Groot, Stanley A. Rubinstein
Gordon Douglas, Regina Rubinstein
Kathryn M. Edwards, Philip Russell
Jodi Garcia, David Salisbury
Ian H. Frazer, Yinying Shao
Jiang Guadagni, Hans Kogut
Dan Granoff, Bing Sun
Brian Greenwood, John J. Grayson
Markan Gruber, Alexander von Gabain
Ian Gurt, David B. Weiner
Scott A. Halperin, Howard S. Wiener
Michael G. Hanna, Howard S. Wiener

Associate Editors

Robert J. Anderson, Hiroshi Ohno
Martin F. Bachmann, Alexey Gudkov
David Baxter, Prasad S. Kulkarni
Sudhakar Bhattacharya, Thomas Van Elsland
Joel Bozovic, C. Russell Middaugh
David Cobble, Philippe Moreau
Arlid David, Mark J. Newman
Robert S. Dourm, Charles Nicolette
Shepherd Davis, Miguel O'Ryan
Robert Edelman, Michael E. P. F. de Sa
Susanna Espinosa, Gerald Pier
Jean-Louis Escher, John T. Schiller
Sarf Fawcett, Tom Shimidzu
Kristina A. Fraumeni, Jo Southern
Chaoxi Fu, Daniel Sperber
Randy Galley, Larry Steinman
Nathalie Garçon, James Tartaglia
Madeline Gill, Kenneth E. Slyen
Gregory Glenn, Jeffrey Ulevsky
Jacobus Goolbsy, Matthew D. van Herenth
Carlos A. Guzman, Bin Wang
Leonard C. Harrison, Brian J. Ward
Gennadiy Kochegoroff, Michael Wilson
Rodrigo Jimenez-Garcia, Bruce G. Winger
Mark A. Kane, Feng Gu Zhu
Kevin P. Kilian





Efficacy of Rotarix in Chinese infants

Rotavirus (RV) infection is a major cause of severe gastroenteritis (GE) in children under 5 years of age. For the first time in China, Dr Rong-cheng Li and colleagues assessed the efficacy of two oral doses of the human RV vaccine Rotarix in infants during the first two years of life. In this study, more than 3330 healthy infants aged 6–16 weeks were randomized to receive two oral doses of either the vaccine or placebo, given one month apart. Vaccine efficacy (VE) against severe RVGE was assessed from two weeks post-dose 2 up until the end of the second RV season. Unsolicited symptoms reported following vaccination and serious adverse events (SAEs) reported throughout the study were also assessed. The authors found that over two

consecutive RV seasons, fewer severe RVGE episodes occurred in the vaccine group (n = 21) compared with the placebo group (n = 75). VE against severe RVGE was 72%. The number of unsolicited symptoms and SAEs reported was similar between both groups. In conclusion the Chinese study showed that two oral doses of Rotarix provides a substantial level of protection against severe RVGE in Chinese children during the first two years of life.

Reference

Li RC, Huang T, Li Y, Luo D, Tao J, Fu B, Si G, Nong Y, Mo Z, Liao X, et al. Human rotavirus vaccine (RIX4414) efficacy in the first two years of life: A randomized, placebo-controlled trial in China. *Hum Vaccin Immunother* 2013; 10; PMID:24013441

human

VACCINES

Editor-in-Chief
Ronald Eddy
Health Care
The Zone, Inc.

& IMMUNOTHERAPEUTICS

Volume 10 • Issue 1 • January 2014

Editorial Board

Karl Hellstrom
David C Kaelin
Miyon M Levine
Aif Lindberg
Thomas P Monath
Paul A Offit
Stanley A Plotkin
Regina Redwood
Philip Russell
David Salisbury
Yinying Shao
Haruo Sugiyama
Bing Sun
John J Treanor
Alexandre von Gabain
David B Weiner
Howard C Weiner

Associate Editors

Hiroshi Kiyono
Alex Kuznetsov
Prasad S Kulkarni
Tapan Venkiah
C Russell Muddough
Philippe Mangonon
Mark J Heptinstall
Charles Nicolleto
Miguel O'Ryan
Michael P Fitchew
Gordell Pele
John T Schiller
Tom Shimabuzuro
Jo Struelens
Daniel Spitzer
Lars Stenman
James Tarraga
Kawant S Ugan
Jeffrey Ulevi
Mathias C von Herrath
Ben Wang
Brian J Ward
Michael Wallace
Bruce G Wangerter
Feng Cai Zhu



