

Important and unique One Health paper submitted to the One Health Initiative team / website February 25, 2012...

## GIDEON and One Health

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As of 2012 humans are subject to 347 generic infectious diseases, distributed in a seemingly haphazard fashion among 231 countries and regions. 286 anti-infective drugs and 67 vaccines have been developed to deal with over 2,500 named pathogens. Fifty-five percent of known human infections are associated with an animal reservoir, and awareness of these diseases among health-care workers and the lay public has grown steadily with the appearance of such conditions as Ebola, SARS, Avian Influenza and West Nile virus infection.

Gideon [www.GideonOnline.com](http://www.GideonOnline.com) is an on-line system for diagnosis support and informatics in the field of Human Infectious Diseases. As the user enters any combination of signs, symptoms, exposure history (country, dates of exposure, food, specific animal contact), a ranked differential diagnosis list appears. Additional modules present the descriptive epidemiology of each disease, clinical features, diagnostic tests, therapy, etc.

A second module in Gideon follows the status of every individual disease – in every country. As of 2012, the program includes 19,300 country-specific notes incorporate over 3 million words of text. Data include local vectors, vehicles, populations at risk, all published outbreaks, serological surveys, vaccination uptake, etc. This module is complemented by 5,000 color figures, 59,000 listed outbreaks and surveys, 30,500 graphs and 318,000 linked references.

Descriptive and numerical data for all relevant diseases also include the status of these conditions among animals in every country. A copy of one recent note is available at <http://www.gideononline.com/2012/02/25/a-global-summary-of-influenza/>. This is currently the most extensive note in Gideon – and incorporates an impressive amount of data regarding disease among birds and other vertebrates. As for brucellosis, anthrax and other zoonoses, a chronology of animal outbreaks is integrated into the text.

The third module follows the pharmacology and usage of all antimicrobial agents and vaccines; while the fourth module is designed to identify any human pathogen based on phenotypic tests entered by the user. The entire Gideon program is updated twice weekly. In 2012, Gideon released two series of 419 e-books, one each devoted to every country <http://www.gideononline.com/ebooks/country/> and every disease <http://gideononline.com/ebooks/disease/>. All titles are automatically updated yearly.

Gideon was first released in 1992, and is currently used by W.H.O, C.D.C, European C.D.C, travel clinics, medical schools and Infectious Diseases departments in over 50 countries. Although scientific content to date has been edited by specialists in human infectious diseases, the staff are strongly committed to the One-Health concept. We are currently searching for colleagues to expand Gideon with a parallel module in Veterinary Medicine. The technical

work involved would be rather simple, since necessary computer programming is already in place. The principal task will be creation of a two spreadsheets for diagnosis support (Disease name vs. Symptom occurrence; Disease name vs. Incidence by country) – for each relevant animal species. In a later stage, text regarding country-specific epidemiology, Veterinary drugs/vaccines, pathogens, etc can be added.

Colleagues interested in collaborating on a One Health version of Gideon should contact Dr. Steve Berger at [mberger@post.tau.ac.il](mailto:mberger@post.tau.ac.il)

**\*Dr. Stephen A. Berger** was trained in Infectious Diseases and Clinical Microbiology, and is currently affiliated with the Tel Aviv Medical Center as both Director of Geographic Medicine and the Microbiology Laboratories. He holds the rank of Associate Professor of Medicine at the University of Tel-Aviv School of Medicine. Dr. Berger recently published 419 e-books (100,000 pages) which cover the status of Infectious Diseases in every country. He has also written over 180 professional articles and nine books.