

GEOGRAPHY OF INVISIBLE WORLD AND ITS GIS-EXPLANATION

D. NIKOLAENKO

The aim of report is to extremely briefly reveal the fact that now there goes very fast and successful formation of a new direction of geographical and epidemiological cognition. It has dialed with geography of invisible world. I mean the world of microorganisms and display of their infectious properties. Fundamental geographic research, oriented not only towards medical problems started to develop in respect of pathogens.

In fact, this direction is being developed for rather long period. There can be found works, written some time ago, but which can be viewed from this particular point of view. However, specificity of contemporary approach is that new scientific paradigm is being taken as a basis. **It's name is determined as "Environmental Epidemiology"**.

There are some fundamental distinctions of traditional medical geography, geographical epidemiology and landscape epidemiology from the approach what we call “Environmental Epidemiology”.

There is no any possibility to get involved into detailed analysis, nevertheless we do emphasize thoroughly. New terminology is being introduced. For example, **EpiGeoSystem** – this term has got fundamental meaning. It can be abbreviated as EGS.

Probably, the most systematic description of specific new approach is given in the articles:

- Nikolaenko D. America of Knowledge: the case of HIV/AIDS epidemic // Environmental Epidemiology 2008, № 3, – P. 320 - 326.
- Nikolaenko D. Two Paradigms: Comparative Analyses // Environmental Epidemiology, 2008, № 3, – P. 327 - 344.
- Nikolaenko D. Two Paradigms: Dynamics of Changes // Environmental Epidemiology, 2008, № 3, – P. 433 - 447.
- Nikolaenko D. Research of HIV/AIDS epidemic as a fixed routine in modern science // Environmental Epidemiology, 2008, № 3, – P. 448 - 496.

There were some other publications later, but the foundation of our approach did not change.

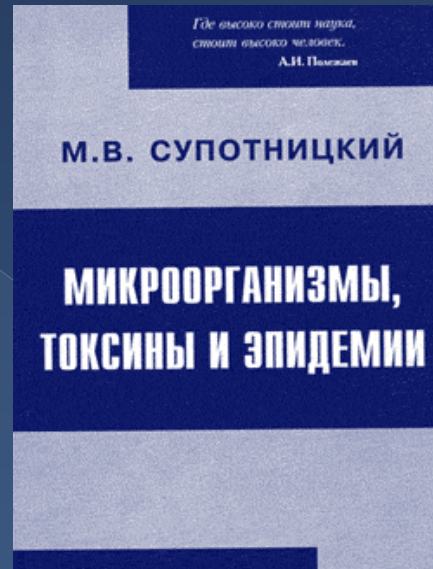
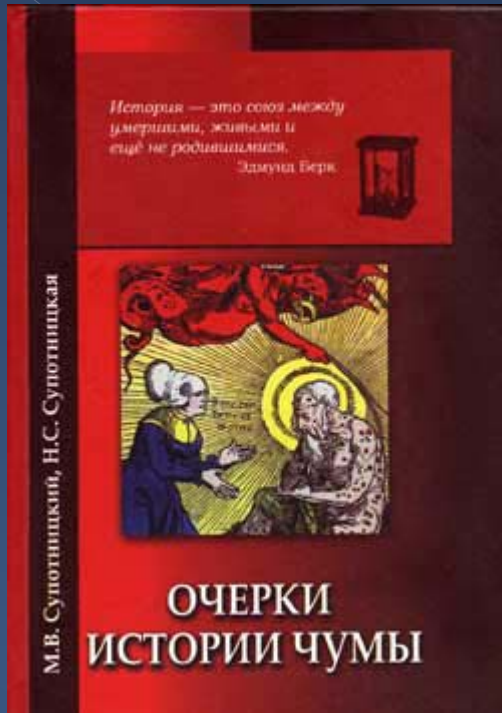
I'm not pretend on systemically examining this problem. I'm talking only about research, being done by me personally and by my colleagues.

In development of Environmental Epidemiology, there can be evolved two ways, differing from each other.

The first one is related with activity of Dr (PhD) Mikhail V. Supotnitskiy.

The second one is connected with my own works. Since 2005 year our research are being done in close connection, nevertheless preserve specifics of their own.

Supotnitskiy M. V. After AIDS // Mendeleev Chemistry Journal. – 1995. – Vol. 40, № 2. – P. 189 – 208.

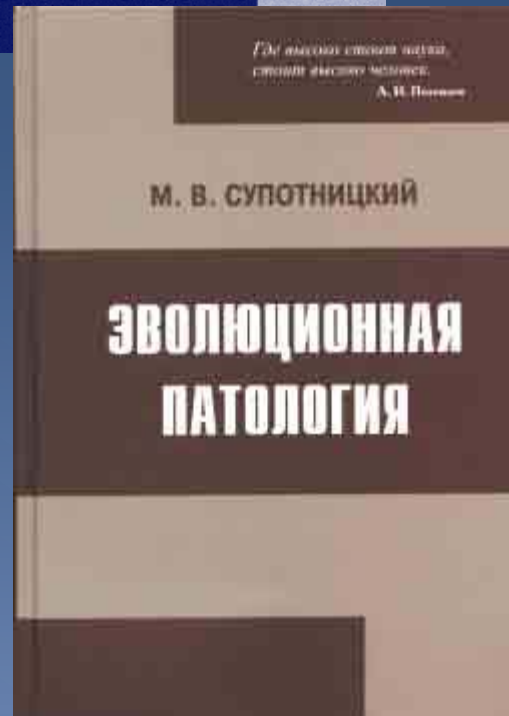


BOOKS OF DR. M. SUPOTNITSKIY
RELATED TO ENVIRONMENTAL
EPIDEMIOLOGY

Information on :

<http://supotnitskiy.ru/>

<http://www.hiv-aids-epidemic.com.ua>



Publications and reports of Dr (PhD), Prof. Dmitry Nikolaenko and his colleges related to Environmental Epidemiology (2004 – 2010)

During 2004 – 2010 published :
4 monographs and not less then 85 articles. Made not less then 25 – 30 reports. Actively running expedition`s work in South Africa and Ukraine.

Results of 2009 year on the project of research of HIV/AIDS and Tuberculosis epidemic chains in Odesskaya oblast' (region) are published in journal «Environmental Epidemiology»:

Nikolaenko D., Boyko O. Epidemical Chains transmission of HIV/AIDS/Tuberculoses. 2009 Seasons in Odessa . // Environmental Epidemiology. 2009, volume 3, №3, p. 275 - 736

<http://www.hiv-aids-epidemic.com.ua>

Journal

“Environmental Epidemiology” registered in Ministry Justice of Ukraine 26 of June 2007. Registered # KB, № 12801 - 1685 P

Founder & Chief Editor:

Dr. (PhD), Prof. Dmitry Nikolaenko

Deputy Editor: Dr. (PhD) Michail Supotnitskiy



УКРАЇНА
МІНІСТЕРСТВО ЮСТИЦІЇ

СВІДОЦТВО
ПРО ДЕРЖАВНУ РЕЄСТРАЦІЮ
ДРУКОВАНОГО ЗАСОБУ МАСОВОЇ ІНФОРМАЦІЇ
Серія KB № 12801 - 1685 P

“Енвайронментальна епідеміологія”
“Environmental Epidemiology”

Видання журнал

Статус видання вітчизняне

Мова (мови) видання паралельним випусками: українська, російська, англійська
Видання за кількістю призначеним науковим, науково-популярним

Обсяг, періодичність до 15 ум. друк. арк., 6 разів на рік

Сфера розповсюдження та категорія читачів загальнодержавна, зарубіжна
науковий та медичний працівники

Засновник (засновники) Громадянин України – Ніколаєнко Дмитро Васильович, паспорт серія ЕС 073796, виданий Київським РВ Сімферопольського МУТУ МВС України в Криму 16 лютого 1996 року

Програмні цілі (основні принципи) або тематична спрямованість осмислення світового досвіду розвитку епідеміології та його адаптація до умов України

Міністр Олександр Заверювач

Environmental epidemiology, 2010, Vol. 4, №1

Dmitry V. Nikolaenko. Environmental epidemiology and failures of geographical and cartographic processing of epidemiological data // Environmental epidemiology, 2010, Vol. 4, №1, p. 4 – 31.
Dmitry V. Nikolaenko. Resort type of HIV/AIDS epidemical chains. The Lady with the Dog – 2010. // Environmental epidemiology, 2010, Vol. 4, №1, p. 32 – 69.
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Nikolaenko D., Lychak A., Romanovskiy A., Boyko O. Semantics of Urban Territory and place of cartography in explanation of encyclical epidemic processes // Environmental epidemiology, 2010, Vol. 4, №1, p. 78 – 83.
Nikolaenko D., Lychak A., Romanovskiy A., Boyko O. SEMANTICS OF URBAN TERRITORY AND PLACE OF CARTOGRAPHY IN EXPLANATION OF ENCYCLICAL EPIDEMIC PROCESSES // Энвайронментальная эпидемиология, 2010, том 4, №1, С. 84 - 90.
D. Nikolaenko, A. Lychak, A. Romanovskiy, O. Boyko. Epidemic context of international migrations and new threats for EU. // Environmental epidemiology, 2010, Vol. 4, №1, p. 91 – 96.
Nikolaenko D., Lychak A., Boyko O. Slow epidemical processes in (HIV/AIDS, Tuberculosis, Hepatitis) // Environmental epidemiology, 2010, Vol. 4, №1, p. 97 – 101.
Dmitry V. Nikolaenko. Geoinformational modeling of appearance especially dangerous pathogens and hypothesis of infection – property // Environmental epidemiology, 2010, Vol. 4, №1, p. 102 – 105.
Dmitry V. Nikolaenko. GIS essential principles. Program of course, lectured in 2007 – 2009 year in Kyiv. // Environmental epidemiology, 2010, Vol. 4, №1, p. 106 – 127.

Idea of Infection-Property and its GIS-explanation

Environmental paradigm of epidemiology is oriented on understanding of appearance of inflectional (pathogen) properties of microorganisms in their habitats.

Pathogenic properties of microorganisms is interpreted not as constant (permanent) characteristics, but as a reaction on specific conditions (status) of EpiGeoSystem. The essence of infection-property idea consists in revelation of this specific reaction of microorganism. This reaction serves as foundation of appearance infectious diseases at specimen of some biological species.

Theoretically, it's possible to say that microorganism can't be explain as a permanent pathogen neither for specimen of Homo sapiens, nor for any other biological species. **Pathogenic properties of microorganisms can be a reaction on strictly definite conditions of EpiGeoSystem, vital for microorganism. A pathogenic property can be is a very specific and temporary status.**

Environmental interpretation of microorganisms' pathogenic properties also pays attention to the fact, that ecosystems of microorganisms can be very vulnerable.

The most significant is that in context of environmental paradigm the research of infections (pathogens) related with ecosystems of microorganisms. **Ecology of microorganisms is a brand new and extremely perspective direction of scientific development.**

New scientific tasks required new methodology. Infection-property is rather delicate subject and it is not easy to realize it. On the assumption of it, a specific methodology of gathering and processing data needs to be developed.

During explanation of infection-property, besides investigating long-term (slow) natural trends, **it needs to be ready to register information on sudden and very small-period expression of infectious diseases.**

Difficulties of such kind of tasks is partly compensated by using GIS-technology and geoinformational modeling of appearance pathogenic properties of microorganisms.

GIS-diagnostics of territories and investigation of microorganisms' pathogenic properties (particularly from infection-property hypothesis point of view) is extremely important. **Probably, infection-property is a phenomenon with quiet short duration.** As a result, the most part of infection generating by EpiGeoSystem is simply not being registered.

GIS-technology can be effectively used for territorial diagnostics. By using GIS-technology, it is possible to make space precision of subjects and to determine territories, which are the most perspective for monitoring the expression of microorganisms' ecosystem properties. By solving this problem, appear some hardships of theoretical, methodological and practical character. I'll refer to my colleague's report (O. BOYKO. THE QUALITY OF EPIDEMIOLOGICAL INFORMATION AND USAGE GPS AND GIS TECHNOLOGY IN UKRAINE).

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In conclusion I'll notice, that

- Research, being done according to standards of environmental paradigm is going on in a very active form. We have some problems of practical character, but the current conditions allow us to survive and to run research, oriented on the new paradigm development.
- In 2004-2009 years, the major efforts were directed on explanation of slow epidemic processes. Mainly, it was related with HIV/AIDS and Tuberculosis epidemics. Strictly speaking, multi-parametric encyclical epidemic process was examined. Research activity were in Republic of South Africa and Ukraine.
- By now, we are ready to carry out research, related with natural-focal (zoonotic) diseases on a new theoretical and methodological level. I mean new level of gathering and processing data about pathogens.



Thanks for your attention!

Dr. (PhD), Professor Dmitry Nikolaenko

Kiev, Ukraine

Head of Laboratory Thematic Cartography and Epidemical Processes;
Senior Researcher of Ukrainian Anti Plague Institute, Odessa, Ukraine.

e-mail: dmitry.nikolaenko@gmail.com