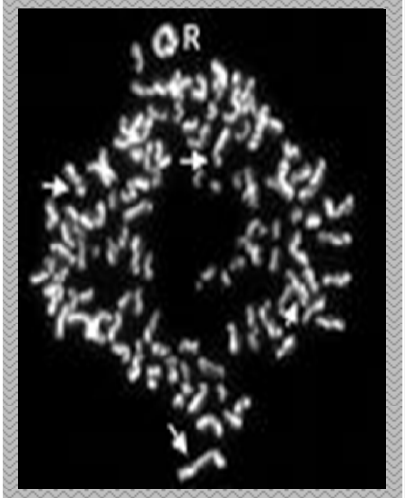

EMGEN Newsletter

Vol. 3, Issue 4, July-August, 2009

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Eastern Mediterranean Health Genomics and Biotechnology Network (EMHGBN) was created in 2004 with collaboration of representatives of selected centre of excellence in (health related) molecular biology, biotechnology & genomics in the Eastern Mediterranean region by recommendations and efforts of WHO/EMRO.

Address:
Biotechnology building, #69, Pasteur Ave., Pasteur Institute of Iran
Tehran, Iran, 13164
Tel: +98-21-66954324
Fax: +98-21-66465132
E-mail: emhgbn@gmail.com, secretariat@emhgbn.net
Website: www.emhgbn.net

Prepared by: A. Shayan, Gh. Ghavami
Page Design: M. Touhidi, S. Sardari, S. Karimzadeh,
Editor: Dr. S. Sardari

Human swine influenza A [H1N1]

Previous to World War I, influenza was not considered to be a serious problem. The enormous pandemic of 1918–1919 caused by influenza changed to a worldwide problem. With the purpose of connecting influenza prevention and control center organized after pointed pandemic, the global influenza surveillance network was associated by World Health Organization (WHO) in 1948 to investigate new influenza viruses, collected data from 110 participating laboratories in 82 countries and four related WHO Collaborating Centers. The data provided by this network facilitates the association to regularly update its World Wide Web (WWW) site (Flu Net), which reports on the circumstances of diseases. Pointed network will also facilitate the WHO to detect a new influenza pandemic as early as possible (1).

The influenza pandemic in the world is coming up and already it has appeared. The first wave of human swine influenza A [H1N1], also referred to as H1N1 Mexico 2009 or "swine flu" that is a viral disease of global width with far above the ground morbidity and mortality in annual epidemics as pandemics which are of infrequent incidence but which have very high attack rates (2). It has transmitted quickly to numerous regions of the world with substantiation of continued transmission within some countries (3).

On April 17 2009, two cases of new type of influenza were also reported in children in California near the Mexican border. Virus samples were acquired and the virus verified to be a novel strain of influenza A of the H1N1 serotype. Beginning tests performed by the Centers for Disease Control and Prevention (CDC) specified that the virus was a new reassortant, enclosing genetic factors of influenza viruses found in swine, birds and human beings. In about one month, hundreds of possible cases of infection by this new virus listed. Influenza H1N1 2009 with 26 deaths, cored about the area of Mexico City. Several hundred more probable cases had been recognized in the United States connected with recent travel to Mexico, and deliberated in California, Texas and New York. Infrequent cases, also connected with travel to Mexico were found in numerous European countries. The World Health Organization (WHO) started to announce higher stages on its "pandemic" scale, delegating the new Influenza H1N1 2009 a potential threat to worldwide health (5). For overcoming on influenza H1N1 2009, it is necessary to be based on the fact and science, following recommendations of public health officials, and not fueled by political, legal or other attentions (4). Influenza A, B and C are the most imperative genera of the Orthomyxoviridae family that are reason of both pandemic and seasonal disease in humans. Influenza A has a negative single-stranded RNA with eight gene segments,

This virus is categorized into subtypes on the basis of the antigenic properties of the hemagglutinin (HA) and neuraminidase (NA) glycoproteins expressed on the surface of the virus. Molecular changes in the RNA genome take place through two key mechanisms: point mutation (antigenic drift) and RNA segment reassortment (antigenic shift). Point mutations source minor changes in the antigenic nature of viruses and are the chief cause of a vaccination program for influenza A is given yearly. Reassortment takes places when a host cell is infected with two or more influenza A viruses, causing the formation of a new subtype. The HA glycoprotein mediates addition and entry of the virus by binding to sialic acid receptors on the cell surface. The binding affinity of the HA to the host sialic acid allows for the host specificity of influenza A. Avian influenza subtypes prefer to bind to sialic acid linked to galactose by α-2,3 linkages, which are found in avian intestinal and respiratory epithelium (7).

Human virus subtypes bind to α-2,6 linkages cited in human respiratory epithelium. Swine contain both α-2,3 and α-2,6 linkages in their respiratory epithelium, permitting for simple co-infection with both human and avian subtypes (7).

The clinical diagnosis of avian influenza infection in humans is complicated. As many infectious diseases in attendance with similar symptoms, the only feature important to the clinician may be contact in an endemic area, during travel or infected poultry, and the clinician should record a detailed patient history (7). The ultimate diagnosis is made from isolation of the virus in culture from clinical specimens. This method not only gives the definitive diagnosis, but the viral isolate is now obtainable for further testing, including pathogenicity, antiviral resistance, and DNA sequencing and analysis. On the other hand, antibody testing can be done, with a standard four-fold titer amplify to the particular subtype of avian influenza virus. Neutralizing antibody titer assays for H5, H7 and H9 are done by the micorneutralization method. Western blot analysis with recombinant H5 is the confirmatory test for any positive microneutralization test. Quick diagnosis can be done with reverse transcription-PCR on clinical samples with primers specific for the viral subtype. This assay should be done just on patients meeting the case definition of possible avian influenza A infection. Any supposed case of avian influenza in a human should be explored by the public health officials in the prefecture or country of origin. In addition, governmental labs are regularly equipped with the appropriate biolevel safety 3 laboratories, primer libraries, and associated expertise to verify the diagnosis rapidly and professionally. Any clinical specimens should be submitted with the support of the public health experts (7).

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2009 International Conference on Food Engineering and Biotechnology (ICFEB 2009)
September 25-27, 2009, Cairo, Egypt

The conference is an international forum for the presentation of technological advances and research results in the fields of Food Engineering and Biotechnology. The conference will bring together leading researchers, engineers and scientists in the domain of interest from around the world. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

For more information, please kindly see: http://www.thesciencejobs.com/events/3452

Abstract

Actions needed to improve maternal health

*The article entitled "*Actions needed to improve maternal health*"focuses on the status of maternal health in the middle east and the world.*
The corresponding author of this article is Di Renzo GC . in Department of Obstetrics and Gynecology, and Centre for Perinatal and Reproductive Medicine, University of Perugia, Perugia, Italy, with collaboration of Eyad Al-Saleh in the Department of Obstetrics and Gynecology, Faculty of Medicine, University of Kuwait, Kuwai. This article has been published in the International Journal of Gynecology and Obstetrics 106 (2009) 115–119.

The health of mothers and their children is of critical importance, both as a reflection of the current health status of a large segment of the world's population and as a predictor of the health of the next generation. A range of indicators of maternal and neonatal health exist-those primarily affecting pregnant and postpartum women, and those affecting the health and survival of infants. Pregnancy outcome may be affected by toxicant exposure, maternal habits, occupational hazards, psychosocial factors, socioeconomic status, racial disparity, chronic stress, and infections. An increase in obstetric pathologies related to lifestyle, environment, aging, and diet has been seen in Western countries. Large segments of the population are obese and this factor is associated with a great number of adverse reproductive health outcomes. In other countries, the most important objective is to reduce the incidence of infectious diseases and their transmission from mother to fetus. AIDS remains the leading cause of death of children worldwide.

Front-Loading Sputum Microscopy Services: An Opportunity to Optimise Smear-Based Case Detection of Tuberculosis in High Prevalence Countries

The article entitled "Front-Loading Sputum Microscopy Services: An Opportunity to Optimise Smear-Based Case Detection of Tuberculosis in High Prevalence Countries"focuses on reducing the time to complete sputum microscopy.
The corresponding author of this article Andy Ramsay in Liverpool School of Tropical Medicine, Liverpool L3 5QA, UK and one of his co-authors Is Nasher Al-Aghbari from National Tuberculosis Institute, Sana'a, Yemen. This article has been published in the Journal of Tropical Medicine, (2009) doi:10.1155, pages: Article ID 398767, pages 1-6.

Setting. Ethiopia, Nepal, Nigeria, and Yemen. Objective. To reduce the time to complete sputum microscopy. Cross-sectional surveys enrolling 923 patients with chronic cough in the 4 countries and using similar protocols. Spot-morning-spot sputum specimens were collected. An additional sputum specimen (Xspot) was collected one hour after the first, and the yields of the first two or the three specimens collected as spot-morning-spot or spot-Xspot-morning were compared. Results. 216 patients had ≥ one positive smear. 210 (97%) were identified by the spot-morning-spot, and 210 (97%) were identified by the spot-Xspot-morning specimens, with 203 and 200 identified by the first 2 specimens of each approach, respectively. Neither difference was significant. Conclusions. The time to complete smear microscopy could be reduced.

Association of *GST* Genes Polymorphisms with Asthma in Tunisian Children

The article entitled "Association of GST Genes Polymorphisms with Asthma in Tunisian Children" focuses on association of GST Ggenes Polymorphisms whit Asthma. The author of this article Chelbi Hanene. from-Homeostasis and Cell Dysfunction Unit Research 99/UR/08-40, Faculty of Medicine, University of Tunis El Manar II, Tunis 1007, Tunisia. This article has been published in Mediators of Inflammation, (2007) doi: 10.1155, Article ID 19564, pages 1-6.

Background. A positive association between genetic polymorphism and asthma may not be extrapolated from one ethnic group to another based on intra- and interethnic allelic and genotype frequencies differences. *Objective*. We assessed whether polymorphisms of *GST* genes (*GSTM1*, *GSTT1,* and *GSTP1*) are associated with asthma and atopy among Tunisian children. *Methods*:112 unrelated healthy individuals and 105 asthmatic (73 atopic and 32 nonatopic) children were studied. Genotyping the polymorphisms in the *GSTT1* and *GSTM1* genes was performed using the multiplex PCR. The GSTP1 ILe105Val polymorphism was determined using PCR-RFLP. *Results*. *GSTM1* null genotype was significantly associated with the increased risk of asthma (P=.002). Asthmatic children had a higher prevalence of the GSTP1Ile105 allele than the control group (43.8% and 33.5%, respectively; P=.002). Also, the presence of the GSTP1 homozygote Val/Val was less common in subjects with asthma than in control group. We have found that *GSTT1* null genotype (*GSTT1**0/*0) was significantly associated with atopy (P=.008). *Conclusion*. Polymorphisms within genes of the *GST* superfamily were associated with risk of asthma and atopy in Tunisia.

EMGEN (EMHGBN) member's university ranking in the web

This article pays attention to EMGEN country's university in web ranking . You can see EMGEN country's university activity and its rank in the world. This report is extracted from "ranking web of world university" web site (http://www.webometrics.info) information for year 2009. you can see more information about raking in end of this report.

Afghanistan

not any university in ranking

Bahrain

not any university in ranking

Djibouti

not any university in ranking

Egypt

Has 10 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
1276	American University in Cairo	2,809	740	1,826	1,794
1627	Cairo University	1,262	2,180	2,187	1,535
3252	Mansoura University	2,345	4,660	3,206	2,837
3603	Ain Shams University	3,406	5,607	3,102	821
4458	Arab Academy for Science & Technology and Maritime Transport	7,080	4,434	4,469	3,815
4950	German University in Cairo	5,793	6,961	2,344	2,345
5248	Arab Open University Egypt Branch	12,567	1,485	6,402	9,238
5431	Zagazig University	4,783	6,586	7,308	2,833
5545	Helwan University	3,985	6,313	4,849	8,014
5594	Assiut University	4,571	8,378	3,559	1,910

Iraq

not any university in ranking

Iran

Has 41 universities in ranking (1-19)

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
990	University of Tehran	1,202	1,382	733	771
1715	Isfahan University of Medical Sciences	1,882	2,050	3,617	453
1793	Tehran University of Medical Sciences	881	3,126	2,251	57
2256	Sharif University of Technology	2,994	2,950	1,731	2,053
2323	Institute for Studies in Theoretical Physics and Mathematics	3,770	2,553	2,374	2,210
2380	Ferdowsi University of Mashhad	2,368	3,442	1,676	2,283
2457	Amirkabir University of Technology	5,412	2,563	1,550	1,705
2650	Iran University of Science & Technology	2,243	3,753	3,091	1,809
2737	University of Isfahan	2,677	3,044	3,899	3,384
2808	Shiraz University of Medical Sciences	3,451	4,163	2,079	935
2842	Khaje-Nassir-Toosi University of Technology	5,168	2,858	2,922	2,395
2870	Isfahan University of Technology	3,581	4,212	2,452	694
2897	Shiraz University	3,084	4,356	2,786	740
2919	Tarbiat Modares University	3,861	3,513	3,871	1,553
2963	Urmia University	3,950	2,311	5,078	4,585
2978	Payame Noor University	6,654	1,363	2,462	6,914
2996	Tabriz University of Medical Sciences	4,153	3,749	3,229	1,639
3110	Mashhad University of Medical Sciences	2,385	5,016	2,220	1,592
3151	Iran University of Medical Sciences	2,239	4,551	4,278	1,568
3247	Shaheed Beheshti University of Medical Sciences	2,582	4,948	3,407	1,335

Iran

(20-41)

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
3268	Imam Sadiq University	5,190	2,486	5,183	4,444
3474	Shahid Beheshti University Tehran	3,389	4,133	3,753	4,199
3751	University of Tabriz	6,595	3,584	3,863	3,489
3963	Zanjan University	4,561	4,901	3,952	2,992
4263	University of Guilan	4,305	5,562	5,956	953
4319	Bu Ali Sina University	4,659	3,935	6,657	5,591
4453	Al Zahra University (Azzahra University)	6,131	4,501	3,129	6,161
4828	University of Sistan and Baluchestan	9,901	3,170	7,617	3,343
5136	Hadith Science College Tehran	3,454	3,107	12,513	9,238
5399	University of Kashan	6,091	5,434	4,600	7,414
5410	University of Mazandaran	7,415	5,387	4,707	5,769
5446	Guilan University of Medical Sciences Rasht	3,236	5,657	6,146	9,238
5497	Kerman University of Medical Sciences	7,701	5,012	4,424	7,414
5522	Yazd University	8,101	4,248	7,691	6,423
5619	Islamic Azad University Sabzevar	5,313	4,930	6,906	9,238
5638	University of Applied Science & Technology	5,571	4,932	6,684	9,238
5652	Lorestan University of Medical Sciences	10,708	3,136	8,606	6,531
5747	Islamic Azad University Tehran South	8,777	3,979	7,487	8,014
5873	Shahid Sadoughi University of Medical Sciences	6,781	6,306	5,981	5,121
5893	Kashan University of Medical Sciences	4,721	7,491	4,103	5,921
5967	Shahid Bahonar University of Kerman	7,610	5,967	6,655	4,977

Jordan

Has 5 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
3853	Jordan University of Science & Technology	6,446	4,586	1,822	2,954
3997	Yarmouk University	4,887	5,250	2,332	3,217
4136	University of Jordan	5,867	4,638	2,962	4,174
5339	Philadelphia University at Jordan Amman	4,368	7,149	4,970	3,307
5820	Arab Open University Jordan	9,997	3,826	5,551	9,238

Kuwait

Has 1 university in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
2373	Kuwait University	3,167	3,561	1,827	599

Lebanon

Has 4 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
1587	American University of Beirut	1,933	2,123	998	1,675
2412	Université Saint Joseph de Beyrouth	1,970	2,959	3,368	2,974
3828	Lebanese American University	5,199	4,313	4,545	2,646
5154	University of Balamand	6,786	3,886	7,394	7,414

Libya

not any university in ranking

Morocco

Has 6 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
3412	Université Cadi Ayyad	5,112	3,798	1,953	4,370
4183	École Mohammadia d'Ingenieurs	2,459	4,911	4,006	7,071
4571	Al Akhawayn University Ifrane	5,258	5,981	2,229	3,969
4937	Institut Agronomique et Veterinaire Hassan Ii	7,466	4,737	4,041	5,675
5155	Université Abdelmalek Essaadi	6,237	6,389	2,971	4,228
5344	Université Mohammed Premier Oujda	6,868	5,949	2,683	6,280

Oman

Has 1 university in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
2551	Sultan Qaboos University	3,363	3,495	3,074	478

Palestine

Has 5 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
1774	Birzeit University	2,249	1,691	2,076	3,075
2665	Al Quds University the Arab University in Jeru-	2,913	2,172	4,203	5,166
3361	Islamic University of Gaza	4,284	4,367	3,524	1,684
3641	An-Najah National University	4,216	3,976	4,981	3,495
4552	Bethlehem University	5,453	4,499	5,474	5,294

Pakistan

Has 9 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
1907	Lahore University of Management Sciences	2,092	2,766	852	1,966
3857	Aga Khan University	5,166	3,367	5,399	5,166
4515	Allama Iqbal Open University	7,079	2,658	6,553	8,014
4612	University of the Punjab	4,291	6,692	3,527	1,816
4783	Pakistan Institute of Development Economics	8,275	5,026	5,848	812
5071	Shaheed Zulfikar Ali Bhutto Institute of Science & Technology	7,748	4,794	8,324	1,667
5326	National University of Sciences and Technology Institute of Information Technology	6,048	6,985	3,072	3,421
5366	Comsats Institute Of Information Technology Islamabad	8,593	4,109	5,845	7,071
5956	Ned University of Engineering & Technology	6,766	7,467	5,144	2,558

Qatar

Has 1 university in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
3399	University of Qatar	4,591	4,274	2,225	3,132

Somalia

not any university in ranking

Sudan

Has 2 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
5299	University of Khartoum	4,543	6,418	5,715	4,444
5693	Sudan University of Science & Technology	4,506	7,797	3,801	4,349

Saudi Arabia

Has 16 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
292	King Saud University	309	378	454	98
302	King Fahd University of Petroleum & Minerals	565	324	343	152
1203	King Abdulaziz University	1,086	1,612	1,063	1,317
1712	King Faisal University	3,917	1,117	3,075	1,358
1788	Imam Muhammad bin Saud University	1,518	127	3,422	8,014
2644	Umm Al-Qura University	3,666	2,206	4,778	3,314
2813	King Khalid University	6,671	1,101	4,179	4,783
4091	Islamic University of Al Madinah	4,844	2,194	7,142	9,238
4138	Prince Sultan University	8,764	2,179	3,460	8,014
4399	Taibah University	8,837	1,980	7,056	6,697
4629	Naif Arab University for Security Sciences	8,158	2,367	8,524	6,161
4814	College of Nursing and Allied Health Sciences	6,765	2,166	9,141	9,238
5073	Arab Open University Saudi Arabia	11,068	1,116	8,624	9,238
5178	Institute of Public Administration	9,850	1,671	8,997	9,238
5273	King Abdullah University of Science & Technology	8,979	1,765	10,370	9,238
5715	University of Ha'il	12,039	3,413	5,805	7,071

Syria

Has 1 university in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
5901	Institute Français du Proche-Orient Damas	7,788	5,722	7,200	4,706

Tunisia

Has 1 university in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
5001	Université Virtuelle de Tunis	6,698	5,514	4,390	4,212

UAE

Has 5 universities in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
1929	U A E University	3,179	2,604	1,309	810
2032	Higher Colleges of Technology	2,869	2,106	1,581	3,427
3888	American University of Sharjah	2,924	5,357	3,362	3,802
4658	University of Sharjah	5,960	4,914	6,362	3,001
4777	Zayed University	6,779	5,510	3,545	3,481

Yemen

Has 1 university in ranking

WORLD RANK	UNIVERSITY	SIZE	VISIBILITY	RICH FILES	SCHOLAR
5571	Yemeni University of Science & Technology	8,115	2,277	11,713	9,238

Note About web ranking

Objectives of the Webometrics Ranking of World's Universities
The original aim of the Ranking was to promote Web publication, not to rank institutions. Supporting Open Access initiatives, electronic access to scientific publications and to other academic material were the primary targets. However web indicators are very useful for ranking purposes too as they are not based on number of visits or page design but global performance and visibility of the universities.
As other rankings focused only on a few relevant aspects, specially research results, web indicators based on

ranking reflects better the whole picture, as many other activities of professors and researchers are showed by their web presence.

The Web covers not only formal (e-journals, repositories) but also informal scholarly communications. Web publication is cheaper, maintaining the high standards of quality of peer review processes. It could also reach much larger potential audiences, offering access to scientific knowledge to researchers and institutions located in developing countries and also to third parties (economic, industrial, political or cultural stakeholders) in their own community.

The Webometrics ranking has a larger coverage than other similar rankings (see table below). The ranking is not only focused on research results but also in other indicators which may reflect better the global quality of the scholar and research institutions worldwide.

We intend to motivate both institutions and scholars to have a web presence that reflect accurately their activities. If the web performance of an institution is below the expected position according to their academic excellence, university authorities should reconsider their web policy, promoting substantial increases of the volume and quality of their electronic publications.

Candidate students should use additional criteria if they are trying to choose university. Webometrics ranking correlates well with quality of education provided and academic prestige, but other non-academic variables need to be taken into account.

Comparison of the main World Universities' Rankings

CRITERIA	WR (webometrics)		ARWU (Shanghai)	
Univ's Analyzed	15000		3000	
Univ's Ranked	5000+		500	
Quality of Education			Alumni Nobel&Field	10%
Internazionalization				
Size	Web Size	20%	Size of Institution	10%
Research Output	Rich Files	15%	Nature & Science	20%
	(Google) Scholar	15%	SCI & SSCI	20%
Impact	(Link) Visibility	50%	Highly Cited Res'ers	20%
Prestige			Staff Nobel&Field	20%

Coverage of the Webometrics Ranking of World Universities

This table summarize the actual coverage of the Ranking, in terms of number of countries and higher education institutions around the world.

Design and Weights of Indicators

The unit for analysis is the institutional domain, therefore, only the universities and research centers with an independent web domain are considered. If an institution has more than one main domain, two or more entries are used with the different addresses.

The first Web indicator, Web Impact Factor (WIF), was based on link analysis that combines the number of external inlinks and the number of pages of the website, a ratio of 1:1 between visibility and size. This ratio is used for the ranking, adding two new indicators to the size component: Number of documents, measured from the number of rich files in a web domain, and number of publications being collected by Google Scholar database.

Four indicators were obtained from the quantitative results provided by the main search engines as follows:

Size (S). Number of pages recovered from four engines: Google, Yahoo, Live Search and Exalead.

Visibility (V). The total number of unique external links received (inlinks) by a site can be only confidently obtained from Yahoo Search, Live Search and Exalead.

Rich Files (R). After evaluation of their relevance to academic and publication activities and considering the volume of the different file formats, the following were selected: Adobe Acrobat (pdf), Adobe PostScript (ps), Microsoft Word (doc) and Microsoft Power point (ppt). These data were extracted using Google, Yahoo

Search, Live Search and Exalead Scholar (Sc). Google Scholar provides the number of papers and citations for each academic domain. These results from the Scholar database represent papers, reports and other academic items.

The four ranks were combined according to a formula where each one has a different weight but maintaining the ratio 1:1.

The inclusion of the total number of pages is based on the recognition of a new global market for academic information, so the web is the adequate platform for the internationalization of the institutions. A strong and detailed web presence providing exact descriptions of the structure and activities of the university can attract new students and scholars worldwide.

The number of external inlinks received by a domain is a measure that represents visibility and impact of the published material, and although there is a great diversity of motivations for linking, a significant fraction works in a similar way as bibliographic citation.

REGIONS/COUNTRIES		TOTAL
EUROPE	52	4,216
France		630
Russia		490
Germany		377
United Kingdom		228
NORTH AMERICA	6	3,545
Usa		3,348
ASIA	44	3,692
China		891
Japan		671
India		326
LATINAMERICA	33	2,806
Brazil		1,576
Mexico		341
AFRICA	47	516
OCEANIA	9	101
WORLD	191	14,876

WEBOMETRICS RANK		
VISIBILITY (external inlinks) 50%	SIZE (web pages)	20%
	RICH FILES	15%
	SCHOLAR	15%

The success of self-archiving and other repositories related initiatives can be roughly represented from rich file and Scholar data. The huge numbers involved with the pdf and doc formats means that not only administrative reports and bureaucratic forms are involved. PostScript and Power point files are clearly related to academic activities.

19th Iranian congress of physiology and pharmacology, Shahid Beheshti University of Medical Sciences, Tehran, Iran

The 19th Congress will highlight basic research in both physiology and pharmacology. The refresher-course will be making further steps to latest news and update findings in this era. Symposiums will provide real scientific discussions including all interdisciplinary aspects.

For more information, please kindly see:
http://www.phypha.ir/cong19/index.php?&slct_pg_id=10&sid=1&slc_lang=en

09 Jul 2009

Melatonin Shown to Inhibit the Effects of Aging

Scientists have found that a treatment based on melatonin can delay the first signs of aging in a small mammal.
Known as the "time-keeping" hormone, melatonin is naturally secreted by the body during the night. It is, herefore, a sort of biologic signal for nightfall, allowing an organism to synchronize itself with the day/night rhythm.
At the Laboratoire Arago in Banyuls sur Mer (France), Dr. Elodie Magnanou and her coworkers examined the long-term effects of melatonin on the Greater White-toothed shrew (*Crocidura russula*), a small nocturnal insectivorous mammal. Under normal conditions, this animal shows the first signs of aging after reaching 12 months, chiefly through the loss of circadian rhythm in its activities. By continuously administering melatonin, starting a little before 12 months, the appearance of these first signs was delayed by at least three months, which is a substantial period in relation to the lifespan of this shrew. (The Greater White-toothed shrew has a lifespan of 12 to 18 months in the wild and up to 30 months in captivity. Captivity does not change the time at which signs of aging appear it simply lengthens life.)
Melatonin is now known to play several beneficial roles. These include being an antioxidant, an antidepressant, and helping to remediate sleep problems. The next step will be to understand the mode of action of the hormone on aging, so researchers can possibly foresee its use on humans.
The study's findings appeared in the journal PLoS, on June 15, 2009.

08 Jul 2009

Analysis of Virus Peptide Genomic Data Shows

Lethality of Influenza A(H1N1) Increasing

An analysis of the latest peptide genomic data for the *influenza A virus* H1N1, once known as the swine flu, indicates that the current global outbreak of influenza A(H1N1) is increasing in its capacity for lethality.
The new sequence data on *PubMed*, a service of the U.S. National library of medicine, of the weeks of May through June 10, 2009, showed an increase in the Replikin count (a newly discovered group of peptides related to the rapid replication function in viral and other diseases) of the Replikin lethality gene in the pB1 genomic area from a mean of 2±0.2 in 2008 to a mean of 3.2±3.7 in 2009 ($p < 0.001$). The Replikin count of the lethality gene in 836 previous *influenza A virus* H1N1 isolates has remained essentially unchanged (at 2) since 1933.These analyses were conducted by the biotech firm Replikins, Ltd. (Boston, MA, USA) using its FluForecast software. About a year ago (4/7/08), using the same software, the firm predicted the current influenza A(H1N1) outbreak, and in May 2009 (5/23/09) an increase in the Replikin count of the Replikin infectivity gene in the hemagglutinin area indicated a marked increase in infectivity of the evolving *influenza A virus* H1N1."Last month [May 2009] the H1N1 genomic data indicated some bad and some good news. While it

indicated an increase in the infectivity of the H1N1 virus, its lethality appeared to remain relatively low," noted Sam Bogoch, M.D., Ph.D., chairman of Replikins. "However, the FluForecast analysis of new data of the past few weeks, through June 10th, on 144 new specimens published on *PubMed*, indicate an increase in the current H1N1 outbreak's capacity for lethality. Since the software also permitted the automated analysis of all sequence data available on *PubMed* for all previous years, it was noted that this is the first such significant increase in the Replikin count of the H1N1 lethality gene in 76 years. This is cause for concern and an accelerated vaccine effort

For both the infectivity gene and the lethality gene, a significant increase in Replikin count has invariably been followed by an increase in infectivity or lethality in influenza. While both the Replikin infectivity gene and the Replikin lethality gene have been found to act independently in all common influenza strains in human, swine, and bird hosts, both of these genes have been inhibited by the Two-Punch vaccine system--designed to be concurrently directed at both genes.

The company recently announced that it has made available for testing against influenza A(H1N1) a Two-Punch PanFlu vaccine. The same vaccine system has been successfully tested against the *influenza A virus* H5N1 (avian flu) in chickens.

08 Jul 2009

Lipid Nanoparticles Make Membrane Proteins Available for Drug Development

A nanoparticle approach that allows researchers to solubilize and then stabilize integral membrane proteins may open the way to 30% more proteins being available as potential targets for drug development. Membrane proteins, especially receptors that span the cell membrane, are among the most desirable of drug targets. However, difficulties in isolating and stabilizing these proteins have prevented drug developers from making significant progress in this regard. Membrane proteins generally lose their biological activity when the purification process destroys their three-dimensional structure.

Investigators at the University of Birmingham (United Kingdom) and the University of Warwick (United Kingdom) believe they have found a method that solves membrane protein problem. They created bilayer disks formed by phospholipids and styrene maleic anhydride copolymer (SMALPs for short). These nanoparticles are 11 nm in diameter, monodispersed in aqueous solution, biocompatible, and thermostable. A solution containing these particles is able to both solubilize membrane proteins and preserve their functional and structural integrity. These properties, as reported in the May 18, 2009, edition of the *Journal of the American Chemical Society (JACS)*, extend to even alpha-helical and beta-barrel transmembrane proteins.

Senior author Dr. Michael Overduin, professor of structural biology at the University of Birmingham, said, "We have shown how a polymer can wrap around and preserve membrane proteins intact in stable nanoparticles. Membrane proteins are the most valuable but technically challenging targets for drug discovery. Finding a gentle solution that preserves their structure and activity, yet is robust enough for experimental interrogation, has eluded scientists for decades, but is now available."

http://www.biotechdaily.com

Cover picture

Title: Sister chromatid exchange
Description: Sister chromatid exchange (SCE) is the exchange of genetic material between two identical sister chromatids. It was first discovered by using the giemsa staining method on one chromatid belonging to the sister chromatid complex before anaphase in mitosis. The staining revealed that few segments were passed to the sister chromatid which were not dyed. The giemsa staining was able to stain due to the presence of bromodeoxyuridine analogous base which was introduced to the desired chromatid. The reason for the (SCE) is not known but it is required and used as a mutagenic testing of many products. Four to five sister chromatid exchange is in the normal distribution, 14-100 exchanges is not normal and presents a danger to the organism. Bloom syndrome is closely related to it, having 100 to 160 s.c.e. SCE. may also be related to tumors.
Source: en.wikipedia.org/wiki/Sister_chromatid_exchange

Title: Adaptive immune system

Description: The adaptive immune system is composed of highly specialized, systemic cells and processes that eliminate or prevent pathogenic challenges. Thought to have arisen in the first jawed vertebrates, the adaptive or "specific" immune system is activated by the “non-specific” and evolutionarily older innate immune system (which is the major system of host defense against pathogens in nearly all other living things). The adaptive immune response provides the vertebrate immune system with the ability to recognize and remember specific pathogens (to generate immunity), and to mount stronger attacks each time the pathogen is encountered. It is adaptive immunity because the body's immune system prepares itself.

Source: en.wikipedia.org/wiki/Adaptive_immune_system

Title: Atrial natriuretic peptide

Description: Atrial natriuretic peptide (ANP), atrial natriuretic factor (ANF), atrial natriuretic hormone (ANH), or atriopeptin, is a powerful vasodilator, and a protein (polypeptide) hormone secreted by heart muscle cells. It is involved in the homeostatic control of body water, sodium, potassium and fat (adipose tissue). It is released by muscle cells in the upper chambers (atria) of the heart (atrial myocytes), in response to high blood pressure. ANP acts to reduce the water, sodium and adipose loads on the circulatory system, thereby reducing blood pressure.
Source:en.wikipedia.org/wiki/Atrial_natriuretic_peptide