



International Conference on  
**PHARMACEUTICS AND NOVEL  
DRUG DELIVERY SYSTEMS**

&

19<sup>th</sup> International Conference on  
**CELLULAR AND  
MOLECULAR MEDICINE**

&

19<sup>th</sup> Annual Congress on  
**PSYCHIATRY AND PSYCHIATRIC  
DISORDERS**

October 19-20, 2018 | Tokyo, Japan

**DAY 1**

**Keynote Forum**



## Archakov A I

Institute of Biomedical Chemistry  
Russian Federation

### Biography

Archakov A I Scientific Advisor of Institute of Biomedical Chemistry, Was born January 10, 1940, in Kashin, Kalinin (Tver) region – scientist, biochemist. A.I. Archakov had organized a scientific school to study molecular organization and functioning of oxygenase cytochrome P450-containing systems, molecular mechanisms of the structure and function of membranes and biological oxidation. Under the guidance of A. I. Archakov, the institute's members have developed a fundamentally new pharmaceutical composition "Phosphogliv" with antiviral activity for the treatment of liver diseases of various etiology. A.I. Archakov's present-day/current areas of expertise relate to research in the field of post-genomic technologies, nanobiotechnologies, proteomics, development of approaches to create personalized medicine of the future. A.I. Archakov is the pioneer in the development of proteomics in Russia.

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## PHOSPHOLIPID MICELLES AS THE MEDICINES THEMSELVES AND DRUG DELIVERY SYSTEM

Phospholipids, especially phosphatidylcholine, are very commonly used in medicine as a drug delivery system: most investigated of them are liposomes. The aim of work was the use of phospholipid micelles rather liposomes as drug delivery systems and as drugs themselves. To obtain the phospholipid micelles are extremely small size we used homogenization under high pressure, ultrafiltration and freeze-drying. Phosphogliv is Russian original drug, which includes the phospholipid micelles with a size of 30-50 nm in diameter with incorporated glycyrrhizinic acid, which possesses weak detergent properties and the ability to induce the synthesis of  $\alpha$ -interferon was used for the treatment of liver diseases including viral hepatitis (B and C). Phosphogliv exists on pharmaceutical Russian market with volume of ~ 2 bln. of dollars. Since 2016 the other phospholipids micelles with size of 15-25 nm in diameter without glycyrrhizinic acid were produced for improvement of reverse cholesterol transport and normalization of lipid metabolism. Phospholipid micelles as drug delivery system are biodegradable, biologically inert, do not cause allergic, antigenic, or pyrogenic reaction. The new technology was created to produce phospholipid micelles with such particle's diameter in the form of lyophilic powder, which is stable at storage. The main principles of incorporation of pharmacologically active substances such as doxorubicine, arbidole, rifampicine etc. into phospholipid micelles considerably increased their bioavailability and therapeutic efficiency.



Note:



## Hiroshi Ohruai

Yokohama University of Pharmacy, Japan

### Biography

Hiroshi Ohruai has joined Riken in the year 1966 and moved to Tohoku University (1981) and to Yokohama University of Pharmacy (2006). He worked for Dr J J Fox at Sloan-Kettering Institute for Cancer Research (1972-1973) and Dr J G Moffatt at Syntex Research (1973-1974). He received several awards including The Japan Society for Analytical Chemistry Award (2004), and Japan Academy prize (2010). His research interests cover organic synthesis, chemical biology and chiral discrimination.

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## EFdA: A VERY EXCELLENT ANTI-HIV MODIFIED NUCLEOSIDE FROM DESIGN TO THE CURRENT CLINICAL RESULTS

EFdA prevents the emergence of resistant HIV mutants, and is over 400 times more active than AZT and several orders of magnitude more active than the other clinical reverse-transcriptase inhibitor y 2', 3'-dideoxynucleoside drugs, very low toxic, very long acting, and very useful for prophylaxis. EFdA is now under clinical investigation by Merck & Co. as MK-8591. In the beginning, a general idea for the development of anti-viral modified nucleosides will be resented, and next, the development of EFdA is discussed and then the current results of the clinical trials reported by Merck will be presented. For the design of the modified nucleoside which could solve the critical problems that the clinical drugs have (emergence of drug-resistant HIV mutants, adverse effect by drugs, necessity to take considerable amount of drugs), four working hypotheses were proposed. They are the way to prevent the emergence of drug-resistant HIV mutants, the way to decrease the toxicity of modified nucleosides, the way to provide the modified nucleoside with stability to both enzymatic and acidic glycolysis for long acting and it is possible to develop selectively active to HIV and very low toxic to human based on the difference of the substrate selectivity between RT and human nucleic acid polymerases. 4'-C-substituted-2'-deoxy nucleoside (4'SdN) was designed as the nucleoside which could satisfy these hypotheses. The study based on 4'SdN successfully developed EFdA [modified at the two position (2 and 4') of the physiologic 2'-deoxyadenosine] having extremely excellent anti-HIV activity.



Note:



## Mohammed Zubayer Miah

Shaheed Tajuddin Ahmad Medical College  
Bangladesh

### Biography

Mohammed Zubayer Miah completed MBBS degree in 2009 from Rajshahi Medical College, Rajshahi, Bangladesh. He completed post-graduation degree M.Phil (psychiatry) in 2009 from Banga Bandhu Sheikh Mujib Medical University, Bangladesh. He had been serving under Ministry of health & family welfare of Bangladesh Government since 2003. He worked as a consultant in Mental Hospital, Pabna, Bangladesh for about 5 years. His present position is assistant professor of psychiatry & serving for about 8 years in Pabna Medical College & Shaheed Taj Uddin Ahmad Medical College of Bangladesh. He delivers specialist consultation & clinical service to the mentally ill patients including women & children at both tertiary level & community level on inpatient & outpatient basis. He organises workshops, seminars & symposium on mental health issues in home & abroad. He involves in research programs especially on community mental health issues.

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## A CASE REPORT OF AN EPILEPSY PATIENT IN BANGLADESH

Mr. A, 50 years old, graduate, unemployed, middle aged person hailing from a low socioeconomic family of rural area from a northern District of Bangladesh. He complains of convulsion two to three times per week for about one & half year. According to care giver (Wife), convulsion is associated with unconsciousness, trauma in different parts of the body during fall, frothy discharge through mouth. Convulsion is aggravated during long wakeful night. There is no family history of any psychiatric or neurological abnormalities. He was reasonably well during childhood. He has two daughters. No significant history of medical illness. He is smoker but no history of any other substance use. He is extroverted. He used to play cards in leisure time. General physical examination was revealed normal. Systemic examinations including nervous system was normal. Routine investigations was normal. CT scan & MRI was revealed normal. EEG was revealed slow wave. Mental state examination was revealed: Middle aged person with average body build, kempt, appearance & behaviour was normal, social behaviour was maintained, eye to eye contact was present, rapport was established. Speech was normal in rate, rhythm & volume. Mood was euthymic. There was no suicidal or obsessional thought. He was conscious, oriented to time, place & person. His memory was intact, his judgement was intact. His insight was present. Diagnosis was Generalized Tonic Clonic Seizure.

I started oxcarbazepine 300 mg single dose orally for seven days. After one week, he came to me and complaints that convulsion occurred one time only but experienced no side effects of drug. Then I advised to take oxcarbazepine 300 mg bid & told him to come after one month. There was no history of convulsion after one month. At the time of third visit, I advised him to take medications with 600 mg daily for 3 years. After 2 two years he came to me & was happy to say that he had no convulsion till now.

In conclusion it is observed that oxcarbazepine is also effective in Generalized Tonic Clonic Seizure as well as Partial Seizure.



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# DAY 2

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## MOLAR CONCENTRATION WELCOMES AVOGADRO IN POSTGENOMIC ANALYSIS

The researchers working with high-throughput methods of genomics, transcriptomics, and proteomics reconsider the concept of concentration and evaluate the data obtained in the number of copies of biomacromolecules. Measurement of copy number reflects a steady trend in increasing the sensitivity of postgenomic analytical methods, up to the level of a single molecule. In this paper we review the physical meaning of the terms "molar concentration" and "Avogadro's number" to establish a relationship between them. The relationship between the molar concentration and the number of copies of that same macromolecule in a certain volume is set through the reverse Avogadro's number, the value of which ( $\approx 10^{-24}$  M) characterizes the molar concentration of a single molecule in one liter. Using the reverse Avogadro's number, we deal with situations in analyzing homogeneous biological solutions and heterogeneous cellular material.