OLEG NIKOLAEVICH CHUPAKHIN –

Seventieth Birthday

On June 9, 2004, Professor Oleg Nikolaevich Chupakhin, Director of the Institute of Synthesis at the Urals Branch of the Russian Academy of Sciences, Full Member of the Russian Academy of Sciences, and Doctor of Chemical Sciences, celebrated his seventieth birthday.

O. N. Chupakhin, who is one of the outstanding organic chemists and founder of a prominent scientific school, continues to foster the traditions placed upon him by his tutor Academician I. Ya. Postovskii. His work in the field of organic, heterocyclic, and medical chemistry has received wide recognition.

Oleg Nikolaevich finished in 1957 with distinction at the Chemical Technology Faculty of Urals Polytechnical Institute (UPI) and after post-graduate studies worked at the department of organic chemistry of the institute. In 1976 he defended a doctor's thesis on "Nucleophilic substitution of hydrogen in azines" and headed the Department of Organic Chemistry and the Problem Laboratory of Physiologically Active Substances. In 1989 he was head of the Department of Fine Organic Synthesis at the Institute of Organic Chemistry, Urals Branch of the Russian Academy of Sciences. In 1993 by resolution of the Presidium of the Russian Academy of Sciences the Institute of Organic Synthesis was created from the Department of Fine Organic Synthesis. The Institute was created in a most complicated period of the economic crisis in Russia with the aim of preserving the scientific expertise accumulated by the efforts of I. Ya. Postovskii's school. Today it is possible to state that the Institute has been able to survive and continues on the ascent.

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Chupakhin is the founder of a new scientific trend. Under his leadership a wide range of pioneering researches were initiated on the nucleophilic aromatic substitution of hydrogen (S_N^H), previously considered "abnormal" or largely unrealistic. As a result of a comprehensive study of these reactions, their kinetics, intermediates, orientation effects, and side processes the concept of nucleophilic substitution was developed as a fundamental characteristic of aromatic systems, and the broadest synthetic possibilities of S_N^H transformations were demonstrated. In the first review in worldwide literature [O. N. Chupakhin and I. Ya. Postovskii, Nucleophilic substitution of hydrogen in aromatic systems, *Usp. Khim.*, **45**, 908-937 (1976)] and the first monograph [O. N. Chupakhin, V. N. Charushin, and H. C. van der Plas, *Nucleophilic Aromatic Substitution of Hydrogen*, Academic Press, New York (1994), 368 p.] the principles of the theory and practise of nucleophilic aromatic substitution were formulated. Universal techniques for direct C–C_{sp^3}, C–C_{sp^2}, C–C_{sp}, C–N, C–O, C–P, and C–S couplings not catalyzed by metals and involving attack by a nucleophile on an unsubstituted atom of π-deficient heteroarenes and arenes were reviewed. Original and also fundamentally novel single-stage methods for the construction of complex heterocycles, including unusual framework and alkaloid-like assemblies of hetarenes and supramolecular structures, were proposed. A weighty contribution was made to the chemistry of heteroaromatic cations, and features of their similarities and differences compared with arenonium ions were brought to light. In addition to this, Academician O. N. Chupakhin is actively engaged in the chemistry of fluorine-containing compounds, including heterocyclic compounds, and in the chemical aspects of environmental protection and has worked successively in the creation of drugs. He discovered a new group of antiviral preparations with a wide spectrum of activity, developed techniques for the synthesis of the antibacterial products pefloxacin, levofloxacin, and other fluoroquinolones, introduced the novel antiviral agent lisomustin in conjunction with the Oncological Scientific Center of the Russian Academy of Medical Sciences, and carried out researches into cardiotropic, antitubercular, and other substances.

Distinguishing features of Chupakhin's activity are his creativity, the advancement of heterocyclic chemistry, and close collaboration with foreign partners (scientists in Germany, Poland, Portugal, Spain, USA, and others) and also the active involvement of young scientists. Participant in numerous conferences and symposia on heterocyclic chemistry, he was himself the initiator of the organization in 1998 of an international conference on organic chemistry, dedicated to the 100th anniversary of the birth of I. Ya. Postovskii, and also of the young scientists schools on organic chemistry that have become an annual event in Russia.

O. N. Chupakhin is well known in the chemical community, and his monograph entitled "*Nucleophilic Aromatic Substitution of Hydrogen*," published in the USA, is constantly cited in the literature. The symbol S_N^H that he proposed for these reactions is widely used in the world literature. He is the author of 11 monographs, more that 550 papers and scientific communications, and more than 100 patents and inventions.

Chupakhin continues his excellent scientific teaching activity as head of the Department of organic chemistry at Urals State Technical University (USTU-UPI) and is a professor of the Soros fund. His work is used in chemistry courses at Moscow State University, Rostov, Novosibirsk, Urals, and other technical universities and has been incorporated in text books and study aids. Chupakhin has paid particular attention to the training of highly skilled specialists. Among his students there are about 40 candidates and seven doctors of sciences. From the Institute of Organic Chemistry he organized and successfully developed branches of the Department of Organic Chemistry at Urals State University and Urals State Technical University and a branch of the laboratory of high-molecular compounds of Urals State University.

Chupakhin is chairman of the United Scientific Council of the Urals branch of the Russian Academy of Sciences on chemical sciences, member of the National Committee of Russian chemists, member of the editorial board of "Journal of Organic Chemistry", member of the editorial council of "Bulletin of the Urals Branch of the Russian Academy of Sciences," member of the International Heterocyclic Society, member of the International Union of Antiviral Compounds, and member of the Interdepartmental Scientific Council on Chemical and Biological Warfare.

Chupakhin is a winner of the prize of the Council of Ministers of the USSR, the prize of the D. I. Mendeleev All-Union Chemical Society, and the prize of the International Academic Press "Nauka" and was awarded the Russian Order of Friendship and Honor.

Academician V. N. Charushin
and Professor V. I. Saloutin

The Publishers of the journal "Chemistry of Heterocyclic Compounds" congratulate Oleg Nikolaevich on seventy years of activity and wish him good health and new scientific achievements.