RUSSIAN-FRENCH LINKS IN BIOLOGY AND MEDICINE

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Organizers

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The colloquium ñRussian-French Links in Biology and Medicineò was conjointly organized by two institutions ï St. Petersburg Branch of the Institute for the History of S cience and Technology RAS and Centre National de Recherche Scientifique[1] (CNRS, France). Hosted at the St. Petersburg Scientific Centre on the 13th-14th September 2011, the colloquium reunited not only Russian and French scientists, historians and philosophers of science representing various universities and institutions, but also participants from the USA and the UK. The colloquium had five working sessions covering a wide range of subjects on the Russian-French links in biology and medicine ranging from the early 19th until the late 20th centuries.

JEAN-CLAUDE DUPONT (University of Picardie, Amiens, France) discussed some neurological interactions of *fin de siècle* among Russia, France, and Germany. The main point of Dupontôs paper was that besides German input on Russian medical thought in the 19th century, the contacts between French and Russian scientists were decisive on the formation of Russian neurological and psychiatric schools, represented by Alexis Kozhevnikov (1836-1902) and Vladimir Bekhterev (1857-1927) both of them being J.-M. Charcotôs students in Paris. **LIVA PORMALE** (Université de Picardie) analyzed the German vs. French influence in embryology and nervous research in the first half of the 19th century at the Faculty of Medicine of Dorpat (nowadays Tartu). **CÉLINE CHERICI** (University of Picardie) examined the history of electroencephalography in Russian-French context. The first improved electroencephalogram (EEG) on dogôs brain was recorded by the physiologist Vladimir Pravdich-Neminsky (1879-1952) in 1913. Pravdich-Neminsky was followed by other scientists on an international level. By the late 30s and especially after the WWII the electroencephalography started to develop actively in Marseille and Paris. C. Chériciôs presentation was aimed to show the development of EEG concerning the brain activity and mental mechanisms. **YURI P. GOLIKOV** and **VICTOR M. KLIMENKO** from the Russian Academy of Medical Science (Research Institute for Experimental Medicine ï RIEM) gave an update on the cooperation between

[1] National Centre for Scientific Research

the RIEM and French scientists (R. Dantzer). Financed by INTAS[2] and International Scientific Foundation, V. M. Klimenko took part in the study of proinflammatory cytokinesô influence on the functions of the central nervous system (St. Petersburg).

ELENA V. BIRYUKOVA (Institute of Higher Nervous Activity and Neurophysiology ï IHNAN, Moscow) presented the Russian-French collaboration in space medicine: the BION space program (1973-1997). The program included eleven biosatellites BION and several other biological satellites (Cosmos) carrying various specimens (primates, reptiles, rodents) and samples of cells, plants, and insects. **FRANÇOIS CLARAC** (CNRS, Marseille) retraced the history of nervous automatisms and its relation to the notion of the central pattern generator (CPG). The first physiological proof of an automatic activity was discovered in relation to respiration as early as in the 18th century. During the 19th and the 20th centuries, more automatisms have been described, including very complicated motor activities (locomotion). **JEAN MASSION** (CNRS, Marseille) gave an insight into some sensorimotor concepts in the teaching of Alfred Vulpian (1826-1887). Vulpian noticed that the sensory nociceptive stimuli could provoke motor acts (such as scratch reflex) or ómovementsô. These ómovementsô could be triggered by various effectors, and were susceptible to adaptation and óimprovementô by practice or training. **MARAT E. IOFFE** from the IHNAN (Moscow) gave an account on the studies of Nicolai Bernstein (1896-1966) related to movement automation. One of the main contributions of Bernstein to the understanding how movement automation works ï he proposed a mechanism which involves several technical components which are in charge of automation. Different levels of óconsciousnessô control these technical components, the main component remaining under the cortical control.

ANASTASIA A. FEDOTOVA (St. Petersburg Branch of IHST) presented a paper on a óveterinaryô research trip to Paris of the Russian soil scientist Pavel Kostychev (1845-1895). A. Fedotovaôs presentation was based on archival documents and aimed to explain how Kostychevôs work on the anthrax vaccine became relevant to his soil studies. **LLOYD ACKERT** from the Drexel University (USA) portrayed the last period in the career of the Russian microbiologist and soil scientist Sergei Winogradsky (1856-1953). In 1922, Winogradsky accepted a leading position at the Pasteur Instituteôs experimental station at Brie-Compte-Robert in France. This period in Winogradskyôs career was significant by return to his previous research on nitrification and by adapting the ócycle of lifeô theory to a broader vision, i.e., ecology. **SERGEY I. FOKIN** (St. Petersburg State University, Univerity of Piza) reviewed the connection with France of two Russian scientists ï Sergey I. Metalnikov (1870-1946) and Konstantin N. Davydov (1877-1960). In 1919, Metalnikov installed in Paris and started to work at the Pasteur Institute; he contributed to the advance of psychoneuroimmunology. Davydov was already an established scientist in comparative embryology before he settled in France after 1922. Among Davydovôs publications, one should stress the *Manual in Comparative Embryology of Invertebrates* (1928) and a number of treatises in French that appeared in the *Traité de zoologie* (1948-1959).

IRINA E. SIROTKINA (IHST, Moscow) introduced the audience with the less known biographic and professional details of the French-born Russian

[2] International Association for the promotion of cooperation with scientists from the independent states of the former Soviet Union

physiologist and chemist Victor Henri (1872-1940). **TATIANA A. KURSANOVA** (IHST, Moscow) showed the link between the Russian botanist and geneticist Nikolay Vavilov (1887-1943) and the French plant breeders. French colonies and plant breeding school represented a great value for Valivov since he was responsible for the coordination of the selection stations and experimental fields all across Russia. He worked at the *Vilmorin-Andrieux* enterprise and organized an exchange of seed material between the two countries. **GALINA A. ZHOURAVLEVA** (St. Petersburg State University) stressed some major successes in French-Russian cooperation to study the regulation of protein synthesis involving the genes *SUP45* and *SUP35*. The collaboration began in 1992 with the University of Rennes 1 (Prof. M. Philippe) and during this leap of time several young scientists from both sides have participated at the project and three doctoral dissertations have been defended. **NADEZHDA V. SLEPKOVA** (Zoological Institute, St. Petersburg) reviewed the main directions of scientific contacts between the Zoological Institute and the French zoologists from 1950 to 1986.

EDUARD I. KOLCHINSKY explored the reception of the main French catastrophism theoreticians, like Georges Cuvier (1769-1832), in Russian-speaking space, and their influence on the development of neo-catastrophism movement in Russia in the early 20th century. **STÉPHANE TIRARD** from the University of Nantes (France) analyzed the book of the French biologist Marcel Prenant (1893-1983) *Biology and Marxism* that was first published in 1936 and repeatedly in 1948. Prenant was asked by the French Communist Party to defend the ideas of the Soviet agronomist Trofim D. Lysenko (1898-1976). S. Tirard showed how Prenant adapted his own biological discourse to the restraints of the Marxist methodology of science. **MIKHAIL B. KONASHEV** (St. Petersburg Branch of IHST) examined the reception of the evolutionary theories of Pierre Teilhard de Chardin (1881-1955) and Theodosius Dobzhansky (1900-1975) including such countries as the USSR, the USA, and France.

At the end of the colloquium, E. I. Kolchinsky addressed a final speech in which he expressed his satisfaction about the results and rich discussions of the colloquium that reunited participants alltogether from fourteen universities and institutions. After the colloquium a meeting was held in order to determine the future actions of the cooperation.