

Curriculum Vitae of Dr. Vadim J. Birstein

PERSONAL DATA: I am married and have one grown child

BORN: 10/10/44 Moscow, Russia

CITIZENSHIP: American and Russian

EDUCATION

B.S.	Moscow State University	1966 Biological Sciences
Ph.D. (Candidate of Biological Sciences, an equivalent of Ph.D.)	Moscow State University	1971 Biology (Genetics)
Doctor of Biological Sciences	Koltsov Institute of Developmental Biology, Russian Academy of Sciences, Moscow	1988 Biology (Genetics)

PREVIOUS RESEARCH EXPERIENCE and POSITIONS

1966 – 1970	Kurchatov Institute of Atomic Energy, Radiobiology Department, post graduate student
1971 – 1974	All Union Research Institute of Restoration, Applied Biochemistry Department, Research Scientist
1975 – 1983	Belozersky Laboratory of Molecular Biology and Bioorganic Chemistry, Moscow State University, Moscow, Research Scientist
1984 – 1985	Koltsov Institute of Developmental Biology, USSR Academy of Sciences, Moscow, Research Scientist
1986 – 1989	Murmansk Institute of Marine Biology, USSR Academy of Sciences, Kola Peninsula, Senior Research Scientist
1990 – 1998	Koltsov Institute of Developmental Biology, Russian Academy of Sciences, Moscow, Senior Research Scientist (on leave since 1992)
1991	W. Averell Harriman Institute for the Advanced Study of the Soviet Union, New York, Visiting Scholar
1992-2000	American Museum of Natural History, New York, NY, Visiting Scientist
1993 – 1996	University of Massachusetts, Amherst, Department of Biology, Adjunct Professor of Biology
1997	National Museum of Natural History, Paris (France), Visiting Scientist
1994 – 1998	Sturgeon Specialist Group, Species Survival Commission, IUCN, Chairman
1995 – 1998	The Sturgeon Society, Inc., NY, Director of Scientific Programs

AWARDS

Moscow Society of Naturalists (established in 1805):

1989, Molecular cytogenetics of vertebrates

AMNH Lerner Gray Memorial Fund Grant (New York):

1992-1993, Chondrosteian phylogeny

GRANT SUPPORT

National Science Foundation
Hudson River Foundation (New York)
The Sturgeon Society (New York)

TEACHING EXPERIENCE

1991 Lectures on comparative cytogenetics and molecular genetics at Uppsala University, Sweden
1988 – 1989 A course on the evolutionary comparative cytogenetics and molecular genetics of vertebrates, Moscow State University, Russia
1988 Lectures on comparative and molecular cytogenetics at the Universities of Pisa and Naples, Italy

ACTIVITIES

Science and Conservation

In January 1994, I was appointed Chairman of the Sturgeon Specialist Group, SSC, IUCN - The World Conservation Union (an organization under the United Nations). I chaired this group until April 1998. I edited, published and distributed a newsletter called *The Sturgeon Quarterly*, which was sent in 1993-97 to over 500 subscribers worldwide.

In 1994, I organized and co-chaired *The International Conference on Sturgeon Biodiversity and Conservation* which took place at the American Museum of Natural History (AMNH), New York, in July 28-30. I was the primary editor of the Conference Proceedings which were published by Kluwer Academic Publishers in 1997 under the title *Sturgeon Biodiversity and Conservation* (Birstein, V. J., J. R. Waldman, and W. E. Bemis, eds.).

Also, I wrote a draft proposal for inclusion of all sturgeon and paddlefish species in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This document was the basis of the proposal later submitted by the German and American governments to the Convention of CITES Parties at the 10th CITES Meeting in Harare (Zimbabwe), June 9-20, 1997.

In 1995, I organized and chaired the workshop Sturgeon Stocks and Caviar Trade (Bonn, October 9-10, 1995) funded by the German Federal Ministry of the Environment. I was the primary editor of the Proceedings of this workshop which were published by the IUCN. From 1995 till 1998, I worked closely with TRAFFIC Europe, the World Bank, the CITES Secretariat (Switzerland), and the Commission on Environmental Law, IUCN (Chairman: Professor Nicholas Robinson, Pace University, NY).

In 1999, I participated in the American-Turkmen expedition to the Amu Darya River (Turkmenistan) which I helped to organize for a study of sturgeons of the genus *Pseudoscaphirhynchus* endemic to this river. Also, I was an invited speaker at the *International Workshop on Behalf of the 20th Anniversary of the Bonn Convention* (Bonn, Germany, 23-26

June, 1999). As a member of the Scientific Committee of the international *Symposium on Conservation of the Atlantic Sturgeon Acipenser sturio in Europe* (Madrid and Seville, 6-11 September, 1999), I chaired the Genetic Section of this symposium and then I was a co-editor of the Symposium Proceedings.

At the Molecular Laboratory of American Museum of Natural History (New York) I have worked with Dr. Rob DeSalle and our students on sturgeon molecular (DNA) phylogeny; together we published 15 papers. Additionally, Dr. DeSalle and I have patented our molecular method of caviar species identification in the United States (through the AMNH) and in Europe (through a non-profit organization, *Karl-Schmitz-Scholl-Funds für Umweltrecht und Umweltpolitik e.V.*) We have assigned our legal rights for the method to these institutions.

I have reviewed manuscripts of scientific papers for a number of journals in various countries: *Aquatic Living Resources* (France), *Biologia* (Slovakia), *Environmental Biology of Fishes* (Canada), *Evolution* (USA), *Folia Biologica* (Czech Republic), *Journal of Fish Biology* (Britain), *Journal of Heredity* (USA), *Marine Biology* (International), *Molecular Phylogenetics and Evolution* (USA), *Transactions of the American Fisheries Society* (USA), and others.

Historical Research

In addition to my scientific activities, I am a historian and long-time human rights activist. In the 1970s-80s, I was an individual Amnesty International member in Moscow and since 1989, I have been a researcher for the Russian human rights group *Memorial* (Moscow) created by Academician Andrei Sakharov and well-known human rights activist, Sergei Kovalev. As a *Memorial* member, in 1990 I participated in the visit of Russian and Polish historians to the Katyn forest, where in 1940 the NKVD executed thousands of Polish officers.

I am an expert on the subject of foreign prisoners in the *Gulag*, the fate of the Swedish Diplomat Raoul Wallenberg, Soviet doctors' experimentation on humans and the Soviet secret services. In 1990-91, I was a member of the International Commission on Raoul Wallenberg and participated in the Commission's study of prisoner cards in Vladimir Prison and materials at then secret Special, now Military Archive in Moscow. I have published three articles about my research on Raoul Wallenberg in the Russian press.

In 1991, I was a Visiting Scholar at the W. Averell Harriman Institute for the Advanced Study of the Soviet Union at Columbia University, NY, NY. In 2001, I published my first history book, *The Perversion of Knowledge: The True Story of Soviet Science* (Westview Press). In December 2004, a paperback version of this book was published by Basic Books.

I gave seminars on this book at Princeton, Harvard, and Washington (St. Louis) Universities and appeared in the television documentary *Poisons-Discover Magazine* produced in 1997 by Powderhouse Productions, Inc. (Somerville, MA).

Currently, I am working on a series of books on the history of SMERSH (Soviet military counterintelligence during WWII, 1943-46), the Soviet State Security Ministry (MGB; 1946-53), Academician Vasilii Parin's story (the first victim of the Cold War in the Soviet Union), and the

story of Raoul Wallenberg in Moscow prisons in 1945-47. All these books are based on published and unpublished archival documents declassified during last 10 years and available only in Russian. The first book in this series is in the final editing stage.

SCIENTIFIC PUBLICATIONS

I am the author of over 150 scientific publications, including:

Papers on sturgeons and environmental issues (published since 1993):

- 1) Birstein, V. J. 1993. Sturgeons and paddlefishes: Threatened fishes in need of conservation. *Conservation Biology*, **7**:773-787.
- 2) Birstein, V. J. 1993. Is *Acipenser medirostris* one or two species? *Sturgeon Quarterly*, **1** (2) :8.
- 3) Birstein, V. J., A. I. Poletaev, and B. F. Goncharov. 1993. The DNA content in Eurasian sturgeon species determined by flow cytometry. *Cytometry*, **14** :377-383.
- 4) Birstein, V. J. 1995. Sturgeon specialist group. *Species*, No. 24 :63.
- 5) Birstein, V. J. 1995. Another fish story. *IUCN Bulletin*, No. 4 :27-28.
- 6) Mikhailova, N. A., I. B. Lobov, O. I. Podgornaya, and V. J. Birstein. 1995. Restriction analysis of the nuclear DNA of three species of *Acipenser*. *Sturgeon Quarterly*, **3** (3) :10-11.
- 7) Birstein, V. J. 1996. Sturgeons may disappear from the Caspian Sea. *Russian Conservation News*, No. 7: 15-16.
- 8) Birstein, V. J. 1996. Sturgeons in the lower Danube: A trip to Romania. *Sturgeon Quarterly*, **4** (1-2) :10-11.
- 9) Birstein, V. J. 1996. International sturgeon meetings. *Sturgeon Quarterly*, **4** (4) :15.
- 10) Birstein, V. J. 1996. Sturgeon Specialist Group. *Species*, No. 26-27 :92-93.
- 11) DeSalle, R., and V. J. Birstein. 1996. PCR identification of black caviar. *Nature*, **381** :197-198.
- 12) Salnikov, V. B., V. J. Birstein, and R. L. Mayden. 1996. The contemporary status of the two Amu Darya River shovelnose sturgeons, *Pseudoscaphirhynchus kaufmanni* and *P. hermanni*. *Sturgeon Quarterly*, **4** (3) :10-14.
- 13) Birstein, V. 1997. The problem of sub-species: Further comment. *CAT News*, No. 27 :24.
- 14) Birstein, V. J. 1997. *Pseudoscaphirhynchus* spp.: A bibliography. *Sturgeon Quarterly*, **5** (1/2) :6-11.
- 15) Birstein, V. J. 1997. Concluding remarks: The current status of sturgeons, threats to their survival, the caviar trade and international efforts needed to save them. *In*: Birstein, V. J., A.

- Bauer, and A. Kaiser-Pohlmann (eds.). *Sturgeon Stocks and Caviar Trade Workshop*. IUCN, Gland (Switzerland) & Cambridge (UK). Pp. 71-88.
- 16) Birstein, V. J. 1997. Threatened fishes of the world: *Pseudoscaphirhynchus* spp. (Acipenseridae). *In*: Birstein, V. J., J. R. Waldman, and W. E. Bemis (eds.) *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. Pp. 381-383.
 - 17) Birstein, V. J., and W. E. Bemis. 1997. Leo Semenovich Berg and the biology of Acipenseriformes: a dedication. *In*: Birstein, V. J., J. R. Waldman & W. E. Bemis (eds.) *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. Pp. 15-22.
 - 18) Birstein, V. J., and W. E. Bemis. 1997. How many species are there within the genus *Acipenser*? *In*: Birstein, V. J., J. R. Waldman, and W. E. Bemis (eds.) *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. Pp. 157-163.
 - 19) Birstein, V. J., W. E. Bemis, and J. R. Waldman. 1997. The threatened status of acipenseriform species: a summary. *In*: Birstein, V. J., J. R. Waldman & W. E. Bemis (eds.) *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. Pp. 427-444.
 - 20) Birstein, V. J., R. Hanner, and R. DeSalle. 1997. Phylogeny of the Acipenseriformes: cytogenetic and molecular approaches. *In*: Birstein, V. J., J. R. Waldman & W. E. Bemis (eds.) *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. Pp. 127-155.
 - 21) Bemis, W. E., V. J. Birstein, and J. R. Waldman. 1997. Sturgeon biodiversity and conservation: an introduction. *In*: Birstein, V. J., J. R. Waldman, and W. E. Bemis (eds.) *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. Pp. 13-14.
 - 22) Birstein, V. J., J. Betts, and R. DeSalle. 1998. Molecular identification of *Acipenser sturio* specimens: a warning note for recovery plans. *Biological Conservation*, **84** :97-101.
 - 23) Birstein, V. J., and R. DeSalle. 1998. Molecular phylogeny of Acipenserinae. *Molecular Phylogenetics and Evolution*, **9** :141-151.
 - 24) Birstein, V. J., P. Doukakis, B. Sorkin, and R. DeSalle. 1998. Population aggregation analysis of caviar producing species of sturgeons and implications for diagnosis of black caviar. *Conservation Biology*, **12** :766-775.

- 25) Birstein, V. J. 1999. Effects of ecosystem degradation on anadromous sturgeons. *In: Proceedings of the CMS Symposium on Animal Migration (Gland, Switzerland, 13 April 1997)*. CMS Technical Publications No. 2, Bonn/The Hague, pp. 19-37.
- 26) Birstein, V. 1999. New perspectives for monitoring migratory animals – improving knowledge for conservation. *Environmental Policy and Law*, **29** (5) : 235-238.
- 27) Birstein, V. J., P. Doukakis, and R. DeSalle. 1999. Molecular phylogeny of Acipenserinae and black caviar species identification. *Journal of Applied Ichthyology*, **15** :12-16.
- 28) Doukakis, P., V. J. Birstein, G. I. Ruban, and R. DeSalle. 1999. Molecular genetic analysis among subspecies of two Eurasian sturgeon species, *Acipenser baerii* and *A. stellatus*. *Molecular Ecology*, **8**, Issue S12 :S117-S128.
- 29) Birstein, V. J. 2000. Sturgeons and Paddlefishes (Acipenseriformes). *In: Reading, R. P., and B. Miller (eds.) Endangered Animals: A Reference Guide to Conflicting Issues*. Greenwood Press, Westport (CT). Pp. 269-278.
- 30) Birstein, V. J., P. Doukakis, and R. DeSalle. 2000. Polyphyly of mtDNA lineages in the Russian sturgeon, *Acipenser gueldenstaedtii*: Forensic and evolutionary implications. *Conservation Genetics*, **1**, No. 1 :81-88.
- 31) Doukakis, P., V. J. Birstein, R. DeSalle, A. Ludwig, A. Machordom, A. Almodovar, and B. Elvira. 2000. Failure to confirm previous identification of two putative museum specimens of the Atlantic sturgeon, *Acipenser sturio*, as the Adriatic sturgeon, *A. naccarii*. *Marine Biology*, **136**, No. 2 :373-377.
- 32) Kuhajda, B. R., R. L. Mayden, and V. J. Birstein. 2000. Examination of inter- and intraspecies variation within the Central Asian sturgeon genus *Pseudoscaphirhynchus* (Actinopterygii, Acipenseridae). *Abst. 2000 American Society of Ichthyologists and Herpetologists Meeting, La Paz, Mexico*.
- 33) Birstein, V. J., P. Doukakis, G. I. Ruban, and R. DeSalle. 2000. A new cryptic species within the Russian sturgeon in the Caspian Sea: The first molecular evidence. *In: Proceedings of the International Conference “Sturgeons on the Boundary of the 21st Century,” Astrakhan (Russia), September 11-15, 2000* :124 (in Russian).
- 34) Birstein, V. J., and P. Doukakis. 2000. Molecular analysis of *Acipenser sturio*, L., 1758 and *A. oxyrinchus* Mitchill, 1815: A review. *Boletín Instituto Español de Oceanografía*, **16** (1-4) :61-73.

- 35) Birstein, V. J., and P. Doukakis. 2001. Molecular identification of sturgeon species: science, bureaucracy, and the impact of environmental agreements. *In: New Perspectives for Monitoring for Migratory Animals – International Workshop on Behalf of the 20th Anniversary of the Bonn Convention* (Bonn, June 23-26, 1999) (Bonn: Federal Agency for Nature Conservation), pp. 47-63.
- 36) Birstein, V. J., P. Doukakis, and R. DeSalle. 2002. Molecular phylogeny of Acipenseridae: Nonmonophyly of Scaphirhynchinae. *Copeia*, **2002**, No. 2 :287-302.
- 37) Birstein, V. J. 2002. Sturgeon species and hybrids: Can hybrids produce caviar? *Environmental Policy and Law*, **32**, No. 5 :210-214.
- 38) Birstein, V. J., P. Doukakis, and R. DeSalle. 2002. Letter to the Editor. *Reviews in Fish Biology and Fisheries*, **12**, No. 1 :107-108.
- 39) Birstein, V. J., and G. Ruban. 2004. A comment on the Siberian, *Acipenser baerii*, and Russian, *Acipenser gueldenstaedtii*, sturgeons. *Environmental Biology of Fishes*, **70** :91-92.
- 40) Birstein, V. J., G. Ruban, A. Ludwig, P. Doukakis, and R. DeSalle. 2005. The enigmatic Caspian Sea Russian sturgeon: How many cryptic species does it contain? *Systematics and Biodiversity (in press)*.
- 41) Birstein, V. J. 2005. Phylogeny and evolution of Acipenseriformes: new molecular and genetic data create new puzzles (*in press*).
- 42) Krieger, J., A. K. Hett, P. A. Fuerst, V. J. Birstein, and A. Ludwig. 2005. Unusual intraindividual variation of the nuclear 18S rRNA gene is widespread within the Acipenseridae (submitted).
- 43) Birstein, V. J., P. Doukakis, and R. DeSalle. Siberian sturgeon (*Acipenser baerii*) in Lake Baikal: Caution for restocking (in preparation).

Some previous publications (published from 1971-95):

a) Genetics and Cytogenetics:

- 1) Gvozdev, V. A., V. J. Birstein, L. G. Polukarova, and V. T. Kakpakov. 1971. Expression of sex-linked genes of *Drosophila melanogaster*. *Drosophila Information Service*, **46** : 68.
- 2) V. A. Gvozdev, V. J. Birstein, and T. I. Gerasimova. 1972. Position-effect variegation of *Pgd* locus determining 6-phosphogluconate dehydrogenase in *Drosophila melanogaster*. *Drosophila Information Service*, **48** : 60.

- 3) V. A. Gvozdev, V. J. Birstein, and T. I. Gerasimova. 1974. Inactivation of 6-phosphogluconate dehydrogenase structural gene. *Molecular and General Genetics*, **130** :251-160.
- 4) Birstein, V. J. 1976. Heterochromatin, position effect in *Drosophila melanogaster*, and the problem of chromosome heterochromatinization. *Uspekhi sovremennoi biologii [Achievements in Modern Biology]*, **81**, No. 2 :225-243 (in Russian).
- 5) Mazin, A. L., V. J. Birstein, and T. O. Alexandrovskaya. 1980. Karyotype and genome size of *Pelodytes caucasicus*. *Genetica*, **54**, No. 1 :75-77.
- 6) Birstein, V. J. 1981. Silver staining of *Drosophila melanogaster* polytene chromosomes and the effect of hyaluronidase and lysozyme pretreatment. *Genetica*, **56**, No. 2 :167-173.
- 7) Birstein, V. J. 1981. On the mechanism of ammoniacal silver staining: Effect of lysozyme and hyaluronidase pretreatments of chromosomes. *Tsitologia [Cytology]*, 23, No. 4 :397-403 (in Russian).
- 8) Birstein, V. J. 1982. Structural characteristics of genome organization in Amphibians: Differential staining of chromosomes and DNA structure. *Journal of Molecular Evolution*, **18** :73-91.
- 9) Birstein, V. J., and A. L. Mazin. 1982. Chromosomal polymorphism of *Bufo bufo*: Karyotype and C-banding pattern of *B. b. verrucosissima*. *Genetica*, **59** :93-98.
- 10) Birstein, V. J. 1984. Localization of NORs in karyotypes of four *Rana* species. *Genetica*, **64** :149-154.
- 11) Birstein, V. J., and V. P. Vasiliev. 1987a. Tetraploid-octoploid relationships and karyological evolution in the order Acipenseriformes (Pisces). Karyotypes, nucleoli, and nucleus-organizer regions in four acipenserid species. *Genetica*, **72** :3-12.
- 12) Birstein, V. J., and V. P. Vasiliev. 1987b. Nucleolar organizer regions, their function and polyploidy in fishes. *Zhurnal obshchei biologii [Journal of General Biology]*, 48, No. 6 :729-747 (in Russian).
- 13) Birstein, V. J. 1988. Karyological and genetic characters of the genus *Laminaria* and other representatives of the *Laminariales*. *Botanicheskii zhurnal [Botanical Journal]*, **73**, No 10 :1369-1379 (in Russian).
- 14) Birstein, V. J. 1989. On the karyotype of *Trichoplax* sp. (Placozoa). *Biologisches Zentralblatt*, 108 :63-67.

- 15) Birstein, V. J. 1990. First contribution to karyology of two acoels (Turbellaria) and a dinophilid (Annelidae). *Biologisches Zentralblatt*, **109** :169-174.
- 16) Birstein, V. J., and N. A. Mikhailova. 1990. On the karyology of trematodes of the genus *Microphallus* and their intermediate gastropod host, *Littorina saxatilis*. I. Chromosome analysis of three *Microphallus* species. *Genetica*, **80** :159-165.
- 17) Birstein, V. J., and N. A. Mikhailova. 1990. On the karyology of trematodes of the genus *Microphallus* and their intermediate gastropod host, *Littorina saxatilis*. II. Karyological study of *Littorina saxatilis* (Gastropoda: Prosobranchia). *Genetica*, **80** :167-170.
- 18) Birstein, V. J. 1991. On the karyotypes of the Neorhabdozoa species and karyological evolution of Turbellaria. *Genetica*, **83** :107-120.
- 19) Joffe, B. I., K. M. Valiejo Roman, V. Ya. Birstein, and A. V. Troitsky. 1995. 5S rRNA sequences of 12 species of flatworms: Implications for the phylogeny of the Platyhelminthes. *Hydrobiologia*, **305** :37-43.

b) Identification of Bioorganic Components in Works of Art:

- 20) Birstein, V. J. 1974. *Methods of Analysis and the Problem of Identification of Binding Media*. Moscow: Informatsionnyi tsentr po problemam kul'tury i iskusstva, 29 pp. (in Russian).
- 21) Birstein, V. J. 1975. On the structure and chemical composition of bones and elephant and walrus tusks. *Art Heritage*, **1(35)** :63-73 (in Russian).
- 22) Birstein, V. J. 1975. On the technology of Central Asian wall paintings: Problems of binding media. *Studies in Conservation*, **20**, No. 1 :8-19.
- 23) Birstein, V. J. 1975. A study of organic components of paints and grounds in Central Asian and Crimean wall paintings. *ICOM Committee for Conservation, 4th Triennial Meeting, Venice 1975*, No. 75/1/10, pp. 1-9.
- 24) Birstein, V. J. V. M. Tulchinsky, and A. V. Troitsky. 1976. A study of organic components of ancient Middle Asian and Crimean wall-paintings. *Vestnik Moskovskogo Universiteta, Biologiya i pochvedenie [Bulletin of Moscow University, Biology and Soil Sciences]*, No. 3 :33-38 (in Russian).

- 25) Birstein, V. J., and V. M. Tulchinsky. 1977. Identification of bees wax and some admixtures by IR-spectroscopy. *Khimiya prirodnikh soedinenii [Chemistry of Natural Compounds]*, No. 2 :271-275 (in Russian).
- 26) Birstein, V. J. 1978. Comparison of gelatins isolated from grounds of polychrome paintings of wood sculptures and easel tempera paintings. *ICOM Committee for Conservation, 5th Triennial Meeting, Zagreb 1978*, No. 78/5/1, pp. 1-7.
- 27) Birstein, V. J., and V. M. Tulchinsky. 1981. IR-spectroscopic analysis of aged gelatins. *ICOM Committee for Conservation, 6th Triennial Meeting, Ottawa 1978*, No. 81/1/9, pp. 1-8.
- 28) Birstein, V. J., and V. M. Tulchinsky. 1982. A study of gelatins by IR-spectroscopy. *Khimiya prirodnikh soedinenii [Chemistry of Natural Compounds]*, No. 6 :735-738 (in Russian).

Books:

- 1) Birstein, V. J. 1985. *Evolutionary Karyology of Amphibians*. Moscow, Moscow University. (in Russian).
- 2) Birstein, V. J. 1987. *Molecular and Cytogenetic Characteristics of Early Anamniote Development (Amphibians and Teleosts)*. Apatity, Nauka Publ. 51 pp. (in Russian)
- 3) Birstein, V. J. 1987. *Cytogenetic and Molecular Aspects of Vertebrate Evolution*. Moscow, Nauka Publ. 284 pp. (in Russian).
- 4) Birstein, V. J., V. P. Golikov, I. P. Gorin et al. 1987. *The Technology, Studies and Storage of Oil Paintings and Murals* (Moscow: Izobrazitel'noe iskusstvo). 400 pp. (in Russian).
- 5) Birstein, V. J., J. R. Waldman, and W. E. Bemis (eds.) 1997. *Sturgeon Biodiversity and Conservation*. Kluwer Academic Publishers, Dordrecht. 444 pp.
- 6) Birstein, V. J., A. Bauer, and A. Kaiser-Pohlmann (eds.). 1997. *Sturgeon Stocks and Caviar Trade Workshop*. IUCN, Gland (Switzerland) and Cambridge (UK). 88 pp.
- 7) *Symposium on Conservation of the Atlantic Sturgeon Acipenser sturio in Europe* (Madrid and Sevilla, 6-11 September, 1999). *Boletín Instituto Español de Oceanografía*, **16** (one of the editors).

PATENTS

- 1) DeSalle, Rob, and Vadim J. Birstein. Method and compositions for identification of species origin of caviar. US Patent No. 5,766,144. July 28, 1998.
- 2) DeSalle, Rob, and Vadim J. Birstein. Method and compositions for identification of species origin of caviar. European Patent No. 087690. August 28, 2002.

HISTORICAL PUBLICATIONS

Papers:

- 1) Birstein, V. B. 1990. A witness of the Katyn tragedy [on the fate of Boris Menshagin]. *Kotlovan*, 3/10/90, pp. 1 & 6 (in Russian).
- 2) Birstein, V. J. 1991. The secret of cell number seven. Did an “extremely important prisoner,” Raoul Wallenberg, die from a natural cause? *Nezavisimaya Gazeta [Independent Newspaper]*, 25/04/91 (in Russian; translated into Polish: Birsztein, W. Kiedy zginął Wallenberg? *Gazeta Wyborsza*, No. 165 (634), 17/08/91, s. 9).
- 3) Birstein, V. J. 1991. Where did 20,000 Americans disappear to? *Nezavisimaya Gazeta [Independent Newspaper]*, 8/08/91 (in Russian).
- 4) Birstein, V. J. 1991. *Around Raoul Wallenberg: His Connections, Relatives, Cell Mates*. A report to the New York Wallenberg Committee. 99 pp. (unpublished manuscript).
- 5) Birstein, V. 1993. Interrogations in Lubyanka. *Novoe Vremya [New Times]*, No. 1 :40-44 (in Russian).
- 6) Birstein, V. J. 1997. Experiments on humans in the NKVD. *Chelovek [The Human Being]*, No. 5 :113-131 (in Russian).
- 7) Birstein, V. J. 1998. Experiments on humans – not only in Nazi Germany. *In: Yudin, B. G. (ed.) Bioethics: Principles, Rules, Problems* (Moscow: Editorial URSS) (in Russian), available at <http://bookssite.ru/localtxt/bio/etika/bioetika/15.html>.
- 8) Birstein, Vadim J. 2002. Mordet på rysk biology. *Res Publica*, No. 56 :99-113 (in Swedish).
- 9) Birstein, V. 2002. Raoul Wallenberg. The history of death. *Evreiskie novosti [The Jewish News]*, No. 2 (July 2002), p. 6 (in Russian).

Book:

Birstein, Vadim J. *The Perversion of Knowledge: The True Story of Soviet Science* (Boulder (CO): Westview Press, 2001), 492 pp. In 2004 a paperback version was published by Basic Books.

Main reviews of this book:

- a) Anonymous. 2001. The Perversion of Knowledge: The True Story of Soviet Science. *Kirkus Reviews. Nonfiction*, October 15, p. 1463.
- b) Wagner, Anne. 2001. Cruel Science. *National Journal*, November 8 (available at http://nationaljournal.com/members/reviews2001/1108birstein_knowledge.htm).
- c) Appelbaum, Anne. 2002. A sinister sort of science. *Daily Telegraph*, April 28 (available at <http://www.telegraph.co.uk/arts/main.jhtml?xml=/arts/2002/04/28/bobir28.xml>).
- d) Müller-Hill, Benno. 2002. Science, a social product? *Trends in Genetics*, **18**, No. 9 :487-488.
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