

Scientists Target a Peer With Good Ties

By Alexander Bratersky

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Petrik, right, meeting with Gryzlov, center, and Chubais in an undated photo.

Leading Russian chemist Vladimir Novotortsev calls him a modern Thomas Edison. The nowdefunct Nuclear Power Ministry nominated him for a Nobel Prize. And former U.S. President George W. Bush sought his advice on purifying water.

Furthermore, he and State Duma Speaker Boris Gryzlov co-own a patent for a filter to clean radioactive water, and he holds a separate patent for a water filter that could reap millions of dollars in sales next year after winning a United Russia contest.

The little-known scientist, Viktor Petrik, touts these achievements on his web site, together with a resume that says he holds a doctorate in applied sciences, works as a professor, and belongs to three scientific academies.

Yet you will be hard-pressed to find a single scientific paper authored by Petrik — or any scientific paper that cites his work. A search on the Scientific Citation Index, an online tool that tracks scientific publications worldwide, comes up with zero results.

The lack of a scientific paper trail — as well as a series of patents for things like the secret behind Stradivarius violins and instructions on how to construct an Egyptian pyramid — has prompted a group of scientists and journalists to denounce the wispy white-haired Petrik, 63, as a "charlatan" and demand a thorough investigation of his work by the scientific community.

"When scientists publicly endorse a charlatan, they are not only becoming a part of his coterie but are also destroying the last weak trust in science itself," the scientists and journalists said in a Dec. 14 letter addressed to members of the Russian Academy of Sciences.

But Petrik, who served a prison term for fraud and extortion in the 1980s, is unfazed by the outcry and said he would welcome a peer review of his work.

"I'm not really worried because I am an inventor, not a theorist," he told The Moscow Times in a telephone interview from his home outside St. Petersburg.

Petrik might have good reason to be unconcerned. What sets him apart from self-styled scientists accused of quackery is the fact that he has friends in high places, including Gryzlov and Rosatom chief Sergei Kiriyenko, and his companies are involved in high-tech government projects worth hundreds of millions of dollars.

Petrik's inventions, some of which are listed on his web site <u>Goldformula.ru</u>, look ripe for scrutiny. In addition to the Stradivarius violins and pyramids, the list includes a murky technology developed by Petrik to obtain extra-pure samples of the osmium-187 isotope used to build lasers and the well-timed patent for a technology to create nanotubes for the superfast computers of the future.

"There is a need to stop Russian science from falling into disgrace," said Alexander Kostinsky, a science journalist and one of the authors of the Dec. 14 letter. "There are always a lot of charlatans, but not many of them are supported by serious academicians and the ruling authorities."

Vladimir Zakharov, head of the department of mathematical physics at the Academy of Sciences' Lebedev Institute of Physics and a math professor at the University of Arizona, said no serious scientist would endorse the claims on Petrik's web site.

"If you visit his site, you will understand that you are facing a fake scientist who is publishing complete rubbish," said Zakharov, who also signed the letter.

Zakharov told a meeting of the Academy of Sciences last week that a proposal by Petrik to harness electricity from atmospheric heat was nonsense.

Eduard Kruglyakov, who chairs the academy's commission against bogus science, said that while some of Petrik's achievements might have value, they were first invented by other scientists. As an example, he mentioned a graphite absorbent used to clean up oil spills that Petrik patented in 2002. A nearly identical absorbent was patented by a group of scientists in 1995, he said.

Petrik called Kruglyakov's accusations a "lie" and said nobody had challenged his patents. "If someone believes that I am copying other people's inventions, he should write a letter to

patent officials. But nobody has done anything of the sort," he said.

Petrik has found support among some respected scientists. "He is a man from all walks of life who can concentrate on various fields," Aziz Muzafarov, a chemist and a member of the Academy of Sciences, said in a video praising Petrik's achievements that was posted on Petrik's web site. "Viktor Ivanovich [Petrik] is like a special forces officer."

Fame in Smuggling Case

A psychologist by training, Petrik first gained widespread attention in 1993 when the authorities detained a man for trying to smuggle several grams of osmium, an expensive metal of the platinum family, across the Russian-Finnish border. The osmium was subsequently traced to Lev Savenkov, a deputy to then-St. Petersburg Mayor Anatoly Sobchak. Savenkov said he had gotten the precious metal from Petrik.

Savenkov was sentenced to five years in prison for smuggling in 1997, while Petrik walked free. News reports at the time said Petrik had been sentenced to 11 years in prison in 1984 for several crimes, including fraud, extortion and attempted robbery.

Petrik mentions his imprisonment briefly on his web site, without going into details. A statement on the web site says Petrik used his time behind bars to construct a robot "able to replace 20 workers."

After the trial, Petrik kept a low profile until 2007, when his company Golden Formula won a competition arranged by United Russia for a water filter system.

"We have the world's best technologies, and we are hiding them underground," Gryzlov, a United Russia leader, said at the time. He said he was ready to make a wager with anybody that Petrik's filters "might win any competition."

Curiously, another Petrik company, Zashitniye Technologies, won second place in the United Russia contest.

Petrik offered a vague explanation for why he had entered two of his companies in the contest, saying, "I only used it [the second company] to avoid paperwork and because this company controls the necessary equipment."

Perhaps Petrik's biggest claim to fame is a second water filter, which he and Gryzlov, an engineer by training, filed a patent for in 2007 and say turns radioactive water into pure drinking water.

In November 2007, Petrik demonstrated the filter to Kiriyenko and Gryzlov at the St. Petersburg-based Khlopin Radium Institute in a presentation shown on NTV television.

"A technology like this uses nanomaterials that do not exist in the world. This is an original technology," the institute's director, Valery Romanovsky, told NTV during the demonstration.

Igor Maslennikov, who has since replaced Romanovsky at the institute in an appointment overseen by Kiriyenko, declined a request by The Moscow Times to provide information about

Petrik's research and his involvement with the institute.

Another senior scientist with the institute, however, expressed discomfort with Petrik's work. "I don't want this name associated with our institute," he said, asking not be identified because he was not authorized to speak with the media.

Several scientists conceded that the filter removes radiation from water, but they said it does not work as well as Petrik claims.

Petrik's Bush Link

Petrik said the filter caught George W. Bush's attention in 2005, and the U.S. president asked him for help purifying water containing the chemical MTBE, which has been added to gasoline since the late 1970s and has contaminated drinking water in many U.S. states.

He said on his web site that he patented a water filter to remove MTBE in the United States in 2006.

Jennifer Rankin Byrne, public affairs officer at the U.S. Patent and Trademark Office, confirmed that Petrik's patent was registered Oct. 31, 2006.

Bush officials were not immediately available for comment for this article Tuesday.

Petrik said in the interview that he enjoys "a friendly relationship with all of the Bush family" and pointed to a photograph on his web site of him posing with former President George H.W. Bush in 2006. The circumstances of their meeting were not immediately clear.

Petrik's web site also features photos of him with Defense Minister Anatoly Serdyukov, Health Minister Tatyana Golikova and Rusnano chief Anatoly Chubais.

Petrik sells his other filter — the one that won the United Russia contest — in the United States through a Florida-based company called BDnP Technologies LLC. Petrik's son Timofei Petrik is a vice president of BDnP.

Cleaning Russia's Water

Back at home, the filter has become part of a United Russia program to clean water around the country. Filters produced by Golden Formula have been installed in most public schools in the city of Novgorod under the supervision of Federation Council Deputy Speaker Svetlana Orlova, who is also a senior United Russia official. According to the regional government, about 3 million rubles (\$100,000) was spent to install the filters in schools around the city this year.

Golden Formula saw a turnover of \$1 million in 2008, according to Interfax's Spark database on Russian businesses.

A school official said the filters were installed in her school less than a year ago and seemed to be working well. "They were installed in both the nurse's office and in the school canteen. There have been no complaints, and everyone is drinking it," said Lyudmila Stepanova, an educator at a Novgorod school. A more lucrative contract may be in the pipeline for Petrik as United Russia's clean water project expands into a federal program with a budget of up to 10 billion rubles (\$330 million) a year, Orlova's aide Alexander Katkov told The Moscow Times.

Katkov said the program is currently being examined by the Economic Development Ministry and might win the Duma's approval in early 2010.

He said a decision on whether to include Petrik's companies into the federal program might depend on a review of his other inventions by the scientific community.

Petrik said he was ready to bid for government contacts if tenders were announced for water filters.

He added that he was already busy with another project that has received the blessing of Rusnano, the state technology corporation headed by Anatoly Chubais. He plans to build a plant in St. Petersburg to separate rhenium, one of the rarest elements in the Earth's crust, from scrap metal. Petrik said he had an investor lined up to finance it.

"This will be the first plant like it in the world," Petrik said.

Rusnano has approved a \$6 million rhenium project, but company spokesman Mikhail Popov said Petrik was not involved in it. "Viktor Petrik is not listed as a co-investor or the head of any companies involved in the project, nor is he among the intellectual property holders or involved in any other capacity," he said in e-mailed comments.

But according to the Spark database, Petrik's Zashitniye Technologies owns the Adron company, which controls 85 percent of the project with an obscure company called the Center of Nuclear Therapy, which has the same mailing address as Adron. The other 15 percent belongs to the Khlopin Radium Institute, where Petrik showed off his water filter in 2007.

Correction: An earlier version of this article incorrectly put the value of the rhenium project at \$60 million. The project is worth \$6 million.

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