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A. STENIN/RIA NOVOSTI

Olga Zelenina, seen in the dock at a hearing, is being held in prison in Moscow on a charge of abetting drug trafficking.

HUMAN RIGHTS

Researchers campaign to free jailed Russian chemist

Narcotics expert Olga Zelenina recognized as a political prisoner.

BY QUIRIN SCHIERMEIER

Russian scientists have reacted with alarm to the jailing of a colleague, narcotics expert Olga Nikolaevna Zelenina, on charges of aiding drug trafficking. Researchers believe that Zelenina has been falsely accused, and fear that the free pursuit of science in Russia is in jeopardy. "With state repression being a recurring issue in this country, the outcome of this case is very important for us all," says Mikhail Gelfand, a biologist at the Institute for Information Transmission Problems in Moscow.

As *Nature* reported last week (*Nature* <http://doi.org/jd5>; 2012), Zelenina, an analytical chemist at the Penza Agricultural Institute in Russia, was arrested at her home on 15 August by officials from the Russian Federal Drug Control Service (FDCS), who were accompanied by masked and armed members of a special police unit. Five days later, a judge at Moscow's Zyuzino District Court ruled that Zelenina would be detained until 15 October, pending a trial.

Zelenina seems to have been targeted because of a scientific report that she prepared in September 2011 for the defence attorneys of

Sergey Shilov, a Russian businessman under investigation by the FDCS. As an expert on narcotic compounds in hemp and poppy, Zelenina was asked to assess the concentration of opiates in a 42-tonne shipment of food poppy seeds that Shilov had imported from Spain in 2010. Russia banned cultivation of the opium poppy (*Papaver somniferum*) in 1987, but the seeds can still be imported for use in foods including bread or cake, as long as they are free of alkaloids such as morphine and codeine. The seeds themselves do not contain these compounds, but other parts of the plant do, and can contaminate shipments. ►

► In her analysis, Zelenina found that the concentration of opium alkaloids in Shilov's seed shipment was negligible, and that there was no scientific evidence that the seeds had been imported for the purpose of extracting illegal drugs. Her report also stated that it is technically impossible to completely eliminate these alkaloids from batches of poppy seeds.

Her findings apparently did not please the FDCS. Although a Moscow court ruling on 24 September raised hopes that Zelenina's case could be heard sooner than October, she remained in custody as *Nature* went to press. For now, Zelenina shares a cell with activist Nadezhda Tolokonnikova, one of three members of the Russian punk band Pussy Riot who were last month sentenced to two years in jail on charges of hooliganism. Their crime was singing a song critical of Russian president Vladimir Putin in Moscow's Cathedral of Christ the Saviour.

Zelenina's "is the most outrageous case I've heard of so far", says Ivan Gololobov, a

sociologist at the University of Warwick in Coventry, UK, who has read the Russian-language report that was used to make the case against the chemist. Gololobov notes that Russia often restricts speech and art that are critical of the government. "But the case of Zelenina, an expert who expressed independent opinions and arrived at scientific conclusions different from those of the prosecutors, is a step further," he says. "She stands accused not for oppositional activity or for her political opinions, but simply because of her independent professional expertise. If proven guilty, she is facing a severe sentence." A conviction could carry a sentence of several years in prison.

Natalia Andreeva, Zelenina's Moscow-based lawyer, says that the case is reminiscent of that of botanist and geneticist Nikolai Vavilov. He was jailed in 1940 and died in prison three years later, having challenged the non-Mendelian doctrines of heredity propagated at the time by Trofim Lysenko and backed by Joseph Stalin.

Last month, the Russian government's human-rights commissioner, Vladimir Lukin, appealed against Zelenina's detention without success. Zelenina is now recognized as a political prisoner by the Union of Solidarity, a Russian human-rights watchdog. And last week, Russian scientists launched an online petition campaigning for her immediate release (go.nature.com/ihxmxu).

The case reveals the inferior status of professional science in modern Russia, says Mikhail Feigel'man, a physicist at the Landau Institute for Theoretical Physics in Moscow. "There is a lot of talk going on here these days that the absence of a functioning system of technological innovation and professional scientific expertise is one of the big problems in this country," he says. "These qualities have indeed all but vanished — and Olga's case makes me fear that they will not come back any time soon. Scientists in Russia will understand that what they are doing is more likely to get them in trouble than do anything good for society." ■

INTELLECTUAL PROPERTY

Chemical society tried to block business competitor

Court ruling raises concerns among some American Chemical Society members.

BY EUGENIE SAMUEL REICH

The world's largest scientific society tried to unfairly obstruct a tiny entrepreneurial start-up from competing with its most lucrative scientific information product. That is the main conclusion of a ten-year legal battle that leaves the American Chemical Society (ACS) facing millions of dollars in penalties and sharp questions from some of its members about whether its business practices conflict with its mission to advance the chemical sciences.

The 18 September ruling by the Ohio Supreme Court focuses on the society's cash cow: the Chemical Abstracts Service (CAS), which offers access to a database of 68 million chemical compounds, indispensable to many chemists the world over. By typing in the name of a chemical or submitting a drawing of its structure, researchers can access reams of data about the molecule's properties, or a list of academic papers referring to it. According to court documents in the case, CAS makes up about 60% of the society's gross revenue, amounting to some US\$300 million a year. By contrast, membership payments raise only about \$12 million

SOURCE: ACS

(see 'Chemical cash'). The society, a non-profit organization based in Washington DC, ploughs the cash back into programmes for chemistry education, academic meetings and improvements in chemical-information resources.

In 2002, the ACS sued Leadscape, a chemical-informatics firm in Columbus, Ohio. The society alleged that the company had infringed ACS intellectual property when

the firm obtained a patent on software to display correlations between structural features of chemical compounds and their biological and physical properties.

The ACS argued that Leadscape's product was based on an aborted project called PathFinder, which two of three Leadscape co-founders had worked on in the 1990s when they were employed by CAS, also based