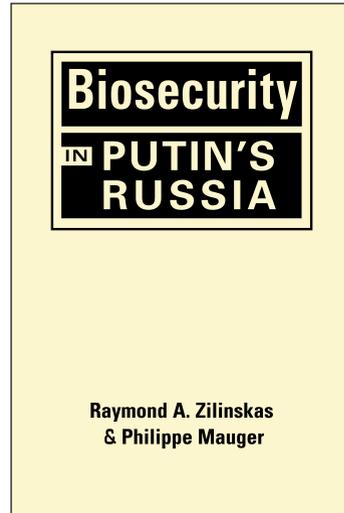


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Biosecurity in Putin's Russia

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and Philippe Mauger

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1

Putin's Direction in the Biosciences

Two events converged in 2012 that led us to conduct the project whose findings are reported here. The basis for the first event was laid on February 19, 2012, when the newspaper *Rossiiskaya Gazeta* published a long article authored by Prime Minister Vladimir Vladimirovich Putin titled “A Smart Defense Against New Threats.”¹ The article included the following passage:

What is the future preparing for us? . . . In the more distant future, weapons systems based on new physical principles (beam, geophysical, wave, genetic, psychophysical and other technology) will be developed. All this will, in addition to nuclear weapons, provide entirely new instruments for achieving political and strategic goals. Such hi-tech weapons systems will be comparable in effect to nuclear weapons but will be more “acceptable” in terms of political and military ideology.²

As expected by most Russians and external commentators, on March 4, 2012, Putin won the presidential election for the second time. On March 22, 2012, he convened a ministerial meeting “on the tasks he set in his articles as a presidential candidate.” Employing carefully vetted language, the future ministers took turns explaining what their ministries would do to operationalize Putin’s electoral platform. In particular, the minister of defense, Anatoly Serdyukov, explained to Putin how his Ministry of Defense (MOD) would match the contents of the aforementioned *Rossiiskaya Gazeta* article. He stated: “Mr. Putin, we have thoroughly studied your article and prepared a plan for implementing the tasks set there for the Defence Ministry.”³ Serdyukov promised to implement twenty-eight tasks. Of these, the fourth task was: “The development of weapons based on new physical principles: radiation, geophysical wave, genetic, psychophysical, etc.”⁴

Commentators in Russia and abroad immediately picked up on Serdyukov's statement, some of whom remarked that it was difficult to conceive of any "genetic" weapon that would not violate the Biological and Toxin Weapons Convention (BWC).⁵ These commentators were right to be alarmed, given that the MOD's encyclopedia defines "genetic weapons" as "a type of weapon able to damage the genetic (hereditary) apparatus of people. It is assumed/expected that some viruses can/may serve as the active principle," and lists no other examples.⁶ Rather than clarify what it had meant by this announcement, the Russian government simply edited out the disquieting paragraph from the public transcript of the meeting.⁷

The second event occurred just three months after Putin was inaugurated president on May 7, 2012. In August 2012, the US Department of State's yearly compliance report was issued and, like its predecessors, it expressed concerns about Russia's possible noncompliance with the BWC.⁸ As in the 2011 compliance report, the Department of State averred that: "Available information during the reporting period indicated Russian entities have remained engaged in dual-use, biological activities. It is unclear that these activities were conducted for purposes inconsistent with the BWC. It also remains unclear whether Russia has fulfilled its BWC obligations in regard to the items specified in Article I of the Convention that it inherited."⁹ And as in previous reports, the Department of State noted that: "Although Russia had inherited the past offensive program of biological research and development from the Soviet Union, Russia's annual BWC confidence-building measure declarations since 1992 have not satisfactorily documented whether this program was completely destroyed or diverted to peaceful purposes in accordance with Article II of the BWC."¹⁰ Where all prior compliance reports had stated that the US government had engaged Russia through bilateral and multilateral discussions over these BWC compliance issues, this one was different. The 2012 report's section on Russia's compliance with the BWC concluded with the observation: "during the reporting period, no discussions took place regarding Russia's compliance with the BWC."¹¹ To us this meant that the Putin and Obama administrations had stopped all bilateral diplomatic efforts to address BWC-related issues the very year that Putin and his minister of defense appeared to have promised to develop genetic weapons.

Our intent was to investigate as much as open sources and interviews would allow the Putin administration's views on biosciences and biotechnology for civilian and military purposes, as well as what activities it had launched in support of these fields. Given the extensive legacy of the Soviet offensive biological warfare (BW) program and the well-resourced nature of the Russian biodefense system of the Putin and Medvedev administrations, the reactivation of an illicit Russian BW program would mostly be a question of motivation. It would require the acquisition of little to no new

capabilities or facilities that might be detected through open-source research. We therefore had no illusion that our investigation would unearth a Russian BW program even if such a program had been launched.

Rather, our objective was to discover and document the dual-use activities alluded to in the Department of State report, and in doing so move the discussion over Russian compliance concerns to the public sphere, where issues could be at least partly evaluated on the basis of evidence rather than wholly on the basis of trust in either US or Russian official statements. We were concerned by our discovery of a buildup and modernization of the Russian biodefense establishment under the Putin administration that had gone publicly unreported in English-language sources, including in Department of State compliance reports. We sought to draw attention to this development and to highlight specific activities of concern.

Concerns left to fester with no diplomatic recourse can rapidly devolve into paranoia. Russia is home to some of the world's brightest civilian experts on dangerous infectious disease. It is in the world's interest that their already underused research be openly applied to benefit the public health sector. If US-Russian relations on BWC issues continue to deteriorate, their research instead risks languishing because of the twin effects of Russian publication controls and travel restrictions, and a US unwillingness to fund research and invest in joint ventures. For that reason, while we focus on Russian activities that we deem are of concern, we also propose certain steps that Russia could realistically take to improve transparency or decrease diplomatic brinksmanship without losing face. In addition, we devote a considerable number of pages to analyzing the state of Russia's civilian life sciences research and commercial biotechnology sectors, with an emphasis on specific programs that have in the past involved cooperation or co-publication with the West.

Our hope is that the findings reported here will help the US government to reengage with their Russian counterparts on BWC-related compliance issues without having to reveal US intelligence sources and methods. We also wish to foster greater interest on the part of BWC States Parties generally, as well as nongovernmental organizations (NGOs) and the public at large in BW involved in interdiction efforts, because their renewed engagement and pressure on this topic is a necessary precondition for diplomatic progress on the current issue and more generally for the BWC's effective functioning in the future.

At the same time, doctrinal pronouncements tend to be vague by design, and dual-use activities by definition lack a unique plausible explanation. We wanted our readers to be able to view the same evidence as we have discovered and derive value from our work regardless of whether they agreed with our interpretations. We therefore took a facts-heavy approach when reporting what we had found in the hopes that this work's

numerous lists, figures, charts, and translated quotes will at a minimum serve as a useful reference for anyone interested in BW-related security in general as well as those who follow Russian developments.

We took a dual approach to analyzing the Putin administration's plans for biotechnology, including the possible military application of genetics. First, we directly evaluated the MOD's designs for biology through a systematic assessment of Russian governmental doctrine and activities related to biodefense and high-technology weapons such as "weapons based on new physical principles." Chapters 2 through 4 contain the results of this direct approach.

In Chapter 2 we present a brief history of the Soviet BW program to provide context for the entire project, as well as to elaborate an initial list of active facilities of concern that will be prioritized when investigating for ongoing dual-use activity in Russia. In Chapter 3, we consider Russian government military planning and MOD doctrine regarding biodefense or high-technology weapons, with an emphasis on pronouncements made in the 2008–2016 period. We studied this set of changing official beliefs to better understand the strategic and bureaucratic drivers behind Russia's biodefense buildup and stated desire for "weapons based on new physical principles."

In Chapter 4 we analyze the Russian biodefense and high-technology weapons planning and acquisition institute networks that are meant to implement said doctrine. This chapter is the heart of our project, as it presents a long list of institutes conducting specific dual-use activities in biology, gauges the level of interest among various high-technology research and development (R&D) institutes possibly involved in weaponizing biotechnology, and assesses the level of institutional support for being involved in such biotechnological activity. The open-source information underpinning this assessment was acquired through a close reading of Russian state media articles and specialist publications, by tracking the research topics and the overall volume of scientific publications by researchers based at institutes of interest, and by conducting satellite imagery and financial network analysis. Most of these "off-site measures" had been considered by BWC States Parties experts participating in the 1992–1993 meetings of the Ad Hoc Group of Governmental Experts to Identify and Examine Potential Verification Measures from a Scientific and Technical Standpoint.¹² Since that time, the development of the Internet and of online services built upon its network has led to a massive increase in publicly available information and research tools, ranging from freely available satellite imagery to the ability to almost instantaneously retrieve and machine-translate foreign documents. In this regard our findings may prove useful in establishing what can and what probably cannot be determined today when conducting open-source monitoring of a foreign biodefense program. Based on our experience in putting together Chapter 4, the greatest value appears to be in determining discrepancies of facility operations,

either by finding disparate accounts of facility activity or by noting a marked absence of information on certain programs. We have found open sources to be sufficient to meet our stated goal of uncovering dual-use biological activities in Russia, and even to raise pointed questions about specific developments we uncovered that we found to be of concern, but certainly not to determine whether Russian activity had gone beyond what could be understood as permissible under the BWC.

Our second approach to analyzing the Putin administration's plans for biotechnology was indirect. We assessed the state of the current broader socioeconomic and international diplomatic environments that either enable or hamper the Putin administration or the MOD should either seek to weaponize the life sciences. The findings derived from this indirect approach are summarized in Chapters 5 and 6. We examine the health and governmental independence of Russia's civilian biotechnology sector since 2005 in Chapter 5. In Chapter 6 we describe Russia's activities in the international sphere, and compare Russian internal assessments of foreign BWC compliance against its official declarations and activities at the BWC meetings and with the content of relevant Russian disinformation campaigns.

Overall, we address the following eight overarching questions in the five substantive chapters that follow:

1. What do Russian government planning and military doctrine documents and statements reveal about the Putin administration's concept of biodefense?
2. What do these sources mean when they speak of "weapons based on new physical principles" and "genetic weapons"?
3. When and why did these concepts become "popular" with the military and civilian security people, and with what impact on Russia's commitment to the BWC?
4. How has the Russian biodefense program evolved and, further, who runs experimental weapons development programs, and what types of weapons are they aiming for?
5. Are Russian life sciences scientists sufficiently rewarded for conducting civilian R&D to remain in academy and university laboratories, or are they disgruntled and therefore considering emigration or work at military institutions?
6. Does the Russian government really believe that the United States is in noncompliance with the BWC, as claimed in Russian disinformation campaigns?
7. Who runs the Russian propaganda campaigns alleging US biological warfare activities, and to what end?
8. What are the Russian objectives in terms of affecting the BWC now and in the future?

We then return to these eight overarching questions in Chapter 7 as a means of summarizing the results of our research.

Notes

1. Putin's original article was reprinted in English by the following source: Vladimir Putin, "Being Strong: National Security Guarantees for Russia," *Russia Today*, February 20, 2012, <http://rt.com/politics/official-word/strong-putin-military-russia-711> (accessed March 20, 2017).

2. Vladimir Putin, "Being Strong: National Security Guarantees for Russia," (in Russian) February 20, 2012, <http://premier.gov.ru/eng/events/news/18185> (defunct), retrieved from <https://web.archive.org/web/20120504063733/http://premier.gov.ru/eng/events/news/18185> (accessed May 13, 2016).

3. Anatoly Serdyukov, "Statement at Prime Minister Vladimir Putin Holds a Meeting on the Tasks He Set in His Articles As a Presidential Candidate" (in Russian), March 22, 2012, <http://premier.gov.ru/eng/events/news/18490> (accessed May 13, 2016).

4. Putin fired Serdyukov on November 5, 2012, for alleged fraud, and appointed Moscow regional governor Sergei Shoigu to replace him. Unless information is received to the contrary, the twenty-eight tasks are assumed to still be in force and guiding the Ministry of Defense's future activities.

5. David Hoffman, "Genetic Weapons, You Say?" *Foreign Policy*, March 27, 2012, http://hoffman.foreignpolicy.com/posts/2012/03/27/genetic_weapons_you_say; Raymond A. Zilinskas, "Take Russia to 'Task' on Bioweapons Transparency," *Nature Medicine* 18, no. 6 (2012), p. 850; Alexander Khramchikhin, "Dreams of a New Weapon" (in Russian), *Independent Military Review* 11, no. 1 (April 6, 2012); Alessandro Bianchi, "Ultimate 'Zombie' Mind Control: Myths and Facts About Weapons of Future," *Russia Today*, April 8, 2012, <http://rt.com/news/weapons-future-zombie-media-486> (accessed May 13, 2016).

6. Ministry of Defense of the Russian Federation, *Encyclopedia: Weapons on New Physical Principles* (in Russian), n.d., <http://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=13770@morfDictionary> (accessed December 20, 2016).

7. The original transcript has been taken down and the website edited, as remarked in an unrelated publication: Julian Cooper, "Military Expenditure in the Russian Federation During the Years 2012 to 2015: A Research Note," p. 4 n. 14, http://www.sipri.org/research/armaments/milex/publications/unpubl_milex/military-expenditure-in-the-russian-federation-2012-2015 (accessed May 13, 2016).

8. US Department of State, *2012 Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, August 2012, <http://www.state.gov/documents/organization/197295.pdf>.

9. *Ibid.*, p. 12.

10. *Ibid.* We explain what is meant by "confidence-building measure declarations" in Chapter 2.

11. US Department of State, *2012 Adherence to and Compliance with Arms Control*, p. 13.

12. Ad Hoc Group of Governmental Experts to Identify and Examine Potential Verification Measures from a Scientific and Technical Standpoint, "Report," BWC/CONF.III/VEREX/9, 1993, pp. 11–20, http://www.unog.ch/bwcdocuments/1993-09-VEREX4/BWC_CONF.III_VEREX_09.pdf (accessed February 23, 2016).