



CORRESPONDENCE

The destructive role of Trofim Lysenko in Russian Science

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We are writing to express our deep concern about a letter by Drs. Zhengrong Wang and Yongsheng Liu, published in your journal [1]. This letter was a response to the article by Peter S. Harper, “Some Pioneers of European Human Genetics” [2]. The authors of the letter wanted to correct Harper’s “somewhat misleading statement” about Trofim Lysenko (1898–1976), who, according to Wang and Liu, was incorrectly characterized by Harper as “a fraudulent agronomist.”

If this letter expressed only a personal opinion of its authors, it might have been overlooked. However, it represents an alarming trend, especially noticeable today within Russia. In the recent years, a number of biologists with academic degrees, as well as historians and journalists, have authored articles and books on Lysenko’s “achievements”. In all these publications, Lysenko’s “mistakes” are minimized, while he is credited with important scientific discoveries [3]. In this context, we feel obliged to correct the correctors.

An ill-educated agronomist with huge ambitions, Lysenko failed to become a real scientist, but greatly succeeded in exposing of the “bourgeois enemies of the people.” From such a “scion” who was “grafted” to the Stalinist totalitarian regime “stock”, impressive results could have been expected—and were indeed achieved. Josef Stalin personally edited Lysenko’s keynote address to the 1948 Session of Lenin’s Agricultural Academy. The names of Gregor Mendel, August Weismann, Thomas Hunt Morgan became anathema to a generation of Soviet biologists. In the ensuing witch hunt, the entire science of genetics was denounced as a “reactionary bourgeois

enterprise” and a “whore of capitalism”. The Russian geneticists were labeled “fly lovers, human haters”; thousands of them lost their jobs; many were imprisoned and lost their lives.

Nikolai Vavilov (1887–1943), one of the greatest scientists of the 20th century, was the leading opponent of Lysenko. He was arrested and starved to death in prison, years before the infamous 1948 Session. One of the “reasons” for his arrest was that “VAVILOV was fighting, and instructed others to fight, against the theory and the [practical] works of LYSENKO and MICHURIN, which were of a decisive importance for the agriculture of the USSR” [4].

We must add, for the record, that, while Lysenko did play a decisive role in the destruction of Soviet agriculture, the famed plant breeder Ivan Michurin (1955–1935) had nothing to do with that. Lysenko proclaimed himself a Michurinist after Michurin’s death. The real Michurin worked with Vavilov and angrily dismissed Lysenko [5].

As Zhores Medvedev [6] and many other biologists and historians of Soviet biology established long ago, Trofim Lysenko’s scientific “discoveries” were fictitious, and part of them were intentionally falsified.

The authors of the 2017 letter claim, that in the light of the newest discoveries of molecular genetics and epigenetics, some of Lysenko’s ideas “turned out to be correct predictions”. This is the main, fallacious argument of the modern admirers of Lysenko in Russia. How far this argumentation is from the reality, has been brilliantly demonstrated by Loren Graham [7].

Lysenko’s “predictions” were akin to those of the Middle Age alchemists. Looking for a Philosopher’s Stone to turn the trivial metals into gold, they believed in transformation of chemical elements. They naturally failed, but today some might claim that the alchemists “predicted” the discoveries of modern nuclear physics. “The advanced teachings of Marxism-Leninism” was Lysenko’s Philosopher’s Stone. It was helpless in increasing agricultural crop yields—but very productive

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in crushing the heads of the “reactionary bourgeois” scientists.

The Lysenko’s dictatorship—one of the most shameful pages in the history of modern science—came to its end with the demise of Nikita Khrushchev in 1964. However, even today, over half a century later, the genetics in Russia has not fully recovered.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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Closing comment

One might think that the scientific field would be well-aware of the damage done by Lysenko and his followers. However, advances in epigenetics are increasingly being used in attempts to rehabilitate Lysenko and to promote his false work. In these days of ‘fake news’ and ‘alternative facts’, one does have to go out of one’s way to emphasize the truth, like these authors laudably do.

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