Statement of the Alliance for mRNA Medicines

In Opposition to South Dakota House Bill 1171

February 12, 2026

The Alliance for mRNA Medicines (AMM) opposes South Dakota House Bill 1171 and encourages legislators in South Dalota and around the country to oppose it and similar legislation. AMM is the leading global voice for mRNA research, bringing together researchers and industry leaders to advance new medicines for patients with serious diseases and unmet medical needs.

HB 1171 would require blood donation centers to collect and disclose blood donors' COVID-19 or mRNA vaccination history, label blood products accordingly, and permit patients to request to receive blood from a donor who has or has not received a COVID-19 or mRNA vaccine.

Although intended to protect patients, bills like South Dakota House Bill 1171 would put them at risk by jeopardizing the safety and reliability of South Dakota's blood supply and undermining the research and development of life-saving mRNA-based treatments.

About the Alliance for mRNA Medicines

The Alliance for mRNA Medicines (AMM)[1] is the leading global organization dedicated to advancing and advocating for mRNA and next-generation encoding RNA therapeutics and vaccines for the benefit of patients, public health, and society. Our mission is to propel the future of mRNA medicine, improve patients' lives, and advance scientific knowledge by convening and empowering mRNA industry leaders, innovators, researchers, and other key stakeholders.

AMM's membership, which is composed of over 90 organizations, includes biotechnology companies, biopharmaceutical companies, contract development and manufacturing organizations (CDMOs), suppliers, raw material providers, and academic researchers.

What are mRNA medicines?

Messenger RNA, or mRNA, is a natural molecule found in every cell in the human body that carries instructions for making proteins essential to health and disease prevention. mRNA medicines work by delivering instructions that prompt cells to produce specific proteins that create an immune response to fight or prevent illness. After a protein is made, the mRNA naturally breaks down and leaves the body, while the therapeutic effect remains. Researchers have spent more than 60 years preparing the science and infrastructure for mRNA technology which is unlocking new treatment options across a wide range of life-threatening illnesses, including cancer, infectious diseases, rare diseases, and genetic conditions.

[1] https://mrnamedicines.org/

Why mRNA medicines matter to patients

mRNA therapies help keep Americans healthier and living longer. Many mRNA therapies offer a highly targeted approach to treatment. Because they are based on natural processes in the body, these treatments may cause fewer side effects than other treatments like chemotherapy. For some patients, an mRNA medicine could be the only treatment option.

mRNA is highly versatile. The same mRNA platform used to develop cancer treatments is utilized for vaccines and rare disease therapies. Limiting access to mRNA therapies will not only leave people exposed to infectious diseases, it also will harm the pipeline and manufacturing capacity for future mRNA therapies targeting other diseases.

People should be free to choose the best available treatments for themselves and their families. By encouraging further mRNA research, we provide Americans more options to stay healthy and live longer, more productive lives. The government should not be in the business of picking winners and losers, deciding which patients can receive a potentially life-saving treatment and which patients cannot. Everyone deserves the freedom to consult with their doctor and make the best health decision possible.

Decades of research have shown that mRNA therapies are safe and effective. In 1960, an American scientist discovered that the body naturally produces billions of mRNAs. mRNA medicines use our bodies' natural ability to make proteins to fight disease. For decades, America's researchers have tested mRNA-based therapies in placebo-controlled, double-blind studies to prove they are safe and effective—the same gold standard used for all new medicines.

mRNA medicines undergo robust and comprehensive clinical testing, rigorous independent and FDA review processes, and ongoing safety monitoring. Like any treatment or developed drug, health authorities closely monitor mRNA medicines to ensure continued safety and efficacy.

mRNA medicines do not change or interact with your DNA. In fact, mRNA medicines utilize your body's natural ability to produce proteins to combat disease. The mRNA stays on the outer part of your cells and never enters the nucleus, where your DNA lives. Once the mRNA has delivered its message and your body creates the corresponding protein, the mRNA breaks down and naturally exits the body.

Investing in mRNA medicine maintains America's global leadership in medical innovation. The U.S. is the world leader in drug development, and we should not cede our competitive advantage to other nations. Investing in mRNA research protects our economic and national security interests and the ability to provide breakthrough care for patients, so Americans are not overly dependent on medicine from other countries.

Concerns about the legislation

1. The Bill Is Based on a Fundamental Misunderstanding of mRNA Biology

Messenger RNA is not a novel or foreign substance. It is an **essential molecule present in every human cell**, responsible for carrying genetic instructions from DNA to the cellular machinery that produces proteins. Human cells contain tens of thousands of mRNA molecules at any moment, continuously produced and rapidly degraded as part of normal biology. Without mRNA, life is not possible.

A defining characteristic of mRNA is that it is inherently temporary. Cells are equipped with sophisticated and well-studied enzymatic systems that actively degrade mRNA within hours

after it has been used. This process is among the most fundamental and tightly regulated mechanisms in molecular biology and has been documented across decades of research.

mRNA medicines follow this exact same degradation processes. After vaccination, the mRNA remains localized near the injection site, is briefly translated, and is then broken down. Studies in humans demonstrate that only trace amounts of vaccine mRNA ever reach the bloodstream, peaking briefly at extremely low levels and becoming undetectable within days.[1] By the time individuals are eligible to donate blood, vaccine mRNA is no longer present.

There is no plausible biological mechanism by which mRNA from a prior vaccination could persist in donated blood or cause harm to a transfusion recipient. mRNA cannot alter DNA, cannot copy itself, and is broken down by enzymes present in every cell of the human body.

2. There Is No Evidence of Harm from Blood Donated by Vaccinated Individuals

The premise of this bill implies some potential harm to patients who receive blood donated by an individual who has received an mRNA vaccine, however, no such evidence exists. The most comprehensive data on this question comes from the NHLBI Recipient Epidemiology and Donor Evaluation Study (REDS-IV), which examined outcomes among transfusion recipients across 21 hospitals. This large study found no increase in adverse outcomes, including thrombosis, respiratory complications, ICU admission, or death, among patients who received plasma or platelets from vaccinated donors compared with unvaccinated donors [2]. In addition, a 2025 review in *Annals of Internal Medicine* concluded that there is “no evidence that blood from vaccinated donors poses risk” and that requests for blood based on vaccination status “are not grounded in medical necessity” [3].

4. Segregating Blood by Vaccination Status Creates Safety and Ethical Risks

The U.S. Food and Drug Administration (FDA), American Red Cross, AABB (formerly American Association of Blood Banks), and America’s Blood Centers all oppose distinguishing blood products based on donor vaccination status [A, B]. They and other leaders in transfusion medicine have warned that directed blood donations for non-medical reasons can increase risks to patients, including higher rates of infectious disease transmission, immunologic complications, and logistical challenges and potential for errors [C].

5. HB 1171 Would Worsen Blood Shortages and Endanger Patients

The U.S. blood supply already faces chronic shortages. Policies that discourage donation, complicate inventory management, or undermine public confidence will have real and immediate consequences for trauma victims, surgical patients, cancer patients, and individuals with chronic blood disorders. Leading blood organizations have warned that legislation like HB 1171 could result in delays in care and preventable harm.

Creating a discriminatory, two-tiered blood system based on unfounded medical distinctions diverts resources from genuine safety measures and risks discouraging more Americans from donating blood that can save lives.

6. Stigmatizing mRNA Technology Undermines Medical Progress

mRNA technology is not limited to vaccines. It is a transformative platform advancing treatments for cancer, rare genetic diseases, and emerging infectious threats. Landmark clinical trials have demonstrated substantial benefits for patients with high-risk melanoma [4] and pancreatic cancer [5], while mRNA-based therapies are providing hope for children with previously fatal metabolic disorders [6].

In 2025, researchers at the Children's Hospital of Philadelphia and the University of Pennsylvania used an mRNA-encoded base editor to treat an infant with a rare and often fatal metabolic disorder. The personalized therapy was designed, tested, and delivered within six months of diagnosis, and the child responded positively, tolerating increased dietary protein and requiring reduced medication [7]. In other words, this young child is alive and with his family today thanks in part to research and development in mRNA medicines.

mRNA innovation is also advancing important solutions in agriculture, particularly for states like South Dakota with strong livestock industries. Researchers are using mRNA-based technologies that have the potential to protect livestock from infectious diseases, strengthen herd health, and reduce reliance on antibiotics. Because these tools can be developed and adapted quickly in response to emerging threats, they enhance biosecurity and help safeguard farmers' livelihoods and rural communities. Policies that hinder mRNA research risk slowing progress in both human and animal health.

Policies that single out and stigmatize mRNA technology based on misinformation risk chilling research, and undermining access to life-saving treatments already in development today.

Conclusion

Today, multiple mRNA vaccines are approved for use by the FDA. These mRNA vaccines are saving lives, and they are available due in large part to President Trump's successful leadership through Operation Warp Speed. There is no evidence that blood from vaccinated donors poses a risk to patients, and no validated way to identify such blood, yet there are broad and strong concerns from trusted leaders in transfusion medicine that these measures are unnecessary and harmful. Enacting this bill would fracture the South Dakota's blood supply, endanger its patients, and undermine confidence in one of the most important medical technologies of our time.

For these reasons, the **Alliance for mRNA Medicines respectfully urges states to reject legislation like HB 1171**.

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