March 9, 2026

The Honorable Michele Carringer, Chair
Population Health Subcommittee
Committee on Health
Tennessee House of Representatives
Nashville, TN
Rep.Michele.Carringer@capitol.tn.gov

Subject: Vote 'No' on House Bill 1852

Dear Chair Carringer and Members of the Population Health Subcommittee:

The Alliance for mRNA Medicines (AMM)[1] writes in strong opposition to HB 1852 and respectfully urges a "No" vote when the Subcommittee considers this legislation on March 10.

HB 1852 would ban individuals—including licensed healthcare providers and veterinarians—from administering any vaccine or injectable solution containing mRNA to humans or animals. Enactment of this legislation would deprive Tennessee patients, families, farmers, ranchers, pet owners, and others of safe and effective medicines—while undermining the state's scientific, economic, and agricultural standing.

The Alliance for mRNA Medicines (AMM) opposes HB 1852 because the legislation would:

1. **Eliminate Tennesseans' freedom to choose mRNA-based medicines and override the doctor-patient relationship**
2. **Block access to innovative treatments for Tennesseans**
3. **Inflict lasting damage on Tennessee's life sciences economy**
4. **Undermine Tennessee's agricultural sector**
5. **Enact scientifically false premises into state law**
6. **Weaken national security by restricting access to mRNA-based medical countermeasures**
7. **Undermine the legacy of President Trump's Operation Warp Speed**

[1] ***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, scientists, and other key stakeholders. AMM's membership, which is composed of over 90 organizations, consists of biotechnology companies, biopharmaceutical companies, contract development and manufacturing organizations (CDMOs), suppliers, raw material providers, and academic researchers.

1. HB 1852 Would Eliminate Tennesseans' Freedom to Choose mRNA-Based Medicines and Override the Doctor-Patient Relationship

The bill's stated purpose is to protect "sovereignty." The effect is the opposite. Real sovereignty is the freedom of patients and their physicians to make evidence-based decisions. HB 1852 eliminates that freedom for every Tennessean.

Messenger RNA (mRNA) is a naturally occurring molecule present in every human cell. It carries instructions that enable cells to produce specific proteins—including proteins that generate an immune response to fight or prevent disease. After delivering its instructions, mRNA breaks down and leaves the body within hours to days; the therapeutic benefit remains. Researchers have developed and refined this platform over more than 60 years, and it is now producing breakthrough treatments across oncology, infectious disease, rare genetic diseases, and veterinary medicine.

What mRNA medicines mean for Tennessee patients

- **Targeted, lower-toxicity therapies.** Because mRNA medicines leverage the body's own cellular machinery, they often produce fewer side effects than conventional treatments such as chemotherapy. For some patients, an mRNA therapy may be the only viable option.
- **Platform versatility with shared stakes.** The same mRNA technology used in cancer vaccines also underpins infectious disease vaccines and rare disease treatments. Disrupting the mRNA pipeline in Tennessee does not affect only vaccines—it damages the shared scientific and manufacturing infrastructure for every application of the platform.
- **Patient and physician autonomy.** Tennesseans should be free, in consultation with their doctors and veterinarians, to access the best available treatments for themselves, their children, and their animals. The government has no legitimate interest in foreclosing an entire therapeutic technology.

Consider what HB 1852 would prohibit in practice: a Tennessee oncologist could not administer an mRNA cancer vaccine to a patient with terminal melanoma; a physician could not prescribe an FDA-approved mRNA RSV vaccine to a high-risk elderly patient; a pediatric geneticist could not enroll a child in an mRNA rare-disease trial at a Tennessee medical center. In every case, the judgment of the General Assembly replaces the judgment of the treating physician and the patient.

True sovereignty protects patients' right to access FDA-approved therapies and make informed decisions with their doctors. HB 1852 does the reverse.

2. HB 1852 Would Block Access to Innovative Treatments for Tennesseans

HB 1852 would permanently exclude Tennessee patients from a broad and rapidly expanding class of mRNA medicines to treat serious and unmet medical needs. These include:

Cancer vaccines in clinical trials

- **mRNA-4157/V940 (Moderna/Merck):** A personalized mRNA cancer vaccine showing a 44% reduction in melanoma recurrence in Phase 2/3 trials, currently under accelerated FDA review and being administered at leading cancer centers.
- **BNT113 (BioNTech):** An mRNA vaccine targeting HPV-positive head and neck cancer with FDA Fast Track designation. Tennessee has above-average rates of oropharyngeal cancer. This is a cancer treatment, not a COVID product.
- **Pipeline oncology vaccines:** Dozens of mRNA candidates for lung, colorectal, and breast cancers are in clinical trials. All would be banned from Tennessee trial sites and clinical use.

Approved vaccines for serious non-COVID infections

- **mRESVIA (Moderna):** FDA-approved in 2024 for RSV prevention in adults 60 and older—a disease that hospitalizes tens of thousands of elderly Americans each year. This vaccine has no connection to COVID-19.
- **Influenza mRNA vaccines:** Multiple late-stage candidates designed to provide broader protection than existing egg-based flu vaccines. Tennessee would be excluded from access and trials.

Rare disease therapeutics for children

This is the most consequential and least visible impact of HB 1852. mRNA therapies represent the most promising—and in some cases the only—emerging treatment option for children with devastating rare genetic diseases:

- **SYNGAP1 deficiency:** A severe neurodevelopmental disorder causing intellectual disability and refractory epilepsy, for which mRNA replacement therapy is in active development.
- **CTNNB1 syndrome:** Causes profound intellectual disability and motor impairment; mRNA replacement is a lead therapeutic strategy.
- **Inborn errors of metabolism (OTC deficiency, propionic acidemia, methylmalonic acidemia):** mRNA-based enzyme replacement therapies in clinical trials offer potential cures for conditions that currently require lifelong dietary restriction and carry risk of life-threatening metabolic crises.
- **Phenylketonuria (PKU):** mRNA liver-directed therapy in clinical trials offers the prospect of metabolic normalization for affected children.

There are Tennessee families living with these diagnoses today. HB 1852 would permanently close the door on these therapies for every one of them.

3. HB 1852 Would Cause Devastating Economic Harm to Tennessee's Life Sciences Sector

Tennessee has built a significant life sciences infrastructure anchored by Vanderbilt University Medical Center, the University of Tennessee Health Science Center, and St. Jude Children's Research Hospital, among other world-class institutions. In addition, it is home to companies, like Helix Biotech in Knoxville, which helps bring cutting-edge medicines, including mRNA medicines, to the world through innovation and manufacturing excellence in pharmaceutical nanobiotechnology. HB 1852 would harm this vibrant economic sector:

- Tennessee institutions would become ineligible for NIH, BARDA, and Department of Defense grants involving mRNA research—potentially forfeiting tens to hundreds of millions of dollars in annual federal research funding.
- mRNA research programs at Tennessee academic medical centers would face strong pressure to relocate to states without prohibitions, taking faculty, trainees, jobs, and indirect research revenue with them.
- Pharmaceutical and biotechnology companies evaluating clinical trial sites and manufacturing investment would exclude Tennessee from consideration, ceding a fast-growing life sciences sector to competing states.
- Tennessee patients would be unable to participate in mRNA clinical trials, denying them access to potentially life-saving investigational therapies available in neighboring states.

A comprehensive market analysis conducted by AMM found that companies working in mRNA currently employ an average of 328 employees (ranging from 2 to 6,000), with budgets spanning from under a million to over $250 million. Roughly two-thirds (66%) of mRNA jobs are based in the United States. The report concluded that "mRNA technology is at an important developmental stage" and that without strategic policy support, "innovation activities will likely migrate internationally, potentially redefining the United States' position from innovation leader to technology recipient."[2]

The national competition for life sciences investment is intense. States that enact technology-specific prohibitions unsupported by evidence will lose that competition—permanently.

4. HB 1852 Would Harm Tennessee Agriculture

HB 1852's extension to veterinary medicine is a self-defeating provision for a state with a significant agricultural sector. mRNA vaccine platforms enable faster response to emerging

[2] The mRNA Innovation Ecosystem. Alliance for mRNA Medicines. May 2025. Accessed at: https://assets.mrnamedicines.org/uploads/2025/05/AMM-National-Assessment-of-the-mRNA-Industry.pdf

animal health threats—including avian influenza, African swine fever, and foot-and-mouth disease.

mRNA animal health products undergo rigorous regulatory review before use in animals. Like all veterinary medicines, they must demonstrate safety, quality, and effectiveness through science-based evaluation processes and ongoing monitoring. These standards exist to protect animal health, food safety, and the integrity of the food supply. All animal vaccines — including mRNA-based products — are approved and regulated by the U.S. Department of Agriculture's Center for Veterinary Biologics (CVB), which rigorously assesses each product's safety, efficacy, and quality prior to use.

5. HB 1852 Is Built on Scientifically False Premises

HB 1852 is framed as a "Sovereignty and Safety" measure, but its foundational premise—that mRNA technology poses a categorical safety threat requiring a permanent legislative ban—has no support in the scientific record. The bill encodes into Tennessee law several misconceptions that the global scientific community has conclusively addressed:

mRNA does not and cannot alter DNA

The central claim driving anti-mRNA legislation is that mRNA vaccines can modify a recipient's DNA. This is biologically impossible. mRNA cannot enter the cell nucleus where DNA resides. It does not carry or interact with reverse transcriptase, the enzyme that would be required to convert RNA into DNA. No known biological mechanism exists by which administered mRNA could integrate into the human genome. Every major scientific body that has examined this question has confirmed it. Enacting a permanent prohibition based on this claim writes a biological falsehood into Tennessee law.

mRNA is inherently transient

Messenger RNA is one of the most fundamental and short-lived molecules in biology. Every cell in the human body continuously produces and degrades mRNA as part of normal function. Administered mRNA degrades within hours to days. It does not persist or accumulate in the body. The premise that mRNA products represent a novel, permanent biological hazard is flatly inconsistent with the basic science of the molecule.

The safety record is extensive and well-documented

More than 700 million doses of mRNA COVID vaccines have been administered in the United States, monitored through the most comprehensive post-market safety surveillance program in vaccine history—including the CDC's V-safe program, the Vaccine Safety Datalink, and the FDA's PRISM system. The one genuine safety signal identified—rare, typically mild, self-resolving myocarditis predominantly in young males after a second dose—occurs less frequently than myocarditis caused by COVID-19 infection itself and is manageable within standard clinical

care. No credible safety evidence supports a categorical ban on the entire mRNA platform across all products, all indications, and all patients.

The 2023 Nobel Prize in Physiology or Medicine was awarded for the foundational science underlying mRNA vaccine technology—work that included rigorous safety characterization. The international scientific consensus on this technology is not ambiguous.

6. HB 1852 Would Weaken National Security

Restricting mRNA medicines in Tennessee is not only a public health concern—it is a national security concern. The same mRNA platform that produced COVID-19 vaccines is America's most powerful defense against biological threats, including engineered pathogens. Advances in synthetic biology and artificial intelligence have dramatically lowered the barrier to designing dangerous agents. Adversaries can now develop and deploy engineered biological threats in weeks, while traditional countermeasures take years. mRNA technology is the only medical platform capable of matching that pace: once a pathogen's genetic sequence is identified, an mRNA countermeasure can be designed in hours.

American leadership in mRNA research is therefore not merely an economic asset—it is a strategic one. State-level restrictions on mRNA medicines directly undermine this national security posture by discouraging the private-sector investment and clinical research that sustain America's mRNA innovation base.

Senior officials from President Trump's own first administration have been unequivocal on this point. Dr. Brett Giroir, who served as Assistant Secretary for Health, explained "mRNA platforms enable medical researchers to design targeted interventions in days and manufacture them within weeks. This speed and precision in delivering instructions that train immune systems to recognize and eliminate threats − from COVID to cancer − provides America a critical weapon against pandemics, bioweapons and other deadly diseases that could affect American families."[3] Dr. Jerome Adams, Trump's Surgeon General and a key participant in Operation Warp Speed, was equally direct, writing in a Washington Post op-ed that "abandoning mRNA for antiquated technology is a national security disaster". [4] HB 1852 would compound that damage within Tennessee's borders.

7. HB 1852 Would Undermine President Trump's Operation Warp Speed Legacy

Operation Warp Speed stands as one of President Trump's defining achievements—a public-private partnership that saved hundreds of thousands of American lives and established U.S. leadership in mRNA research and manufacturing. The research and industrial capacity built

[3]Giroir, B. "America needs warp speed on vaccines, not RFK Jr's warped decision making" USA Today. September 1, 2025. Accessed at: https://www.usatoday.com/story/opinion/2025/09/01/trump-kennedy-hhs-mrna-vaccine-covid/85833361007/

[4]Adams, J., "mRNA vaccines, Operation Warp Speed were historic feats," Washington Post, August 15, 2025. Accessed at: https://www.washingtonpost.com/opinions/2025/08/15/covid-bhattacharya-mrna-vaccines-nih/.

through Operation Warp Speed is now fueling the next generation of cancer vaccines, rare disease treatments, and pandemic preparedness tools. Enacting a ban on the very technology that Operation Warp Speed accelerated would undermine that legacy and squander the investment the American people made in it.

Conclusion

AMM thanks the members of the Committee for considering our comments on this legislation. We recognize that this hearing is part of a broader national conversation about vaccine policy and the government's pandemic response. There is no question that mistakes were made—including overpromising the benefits of vaccination, downplaying risks, and imposing coercive mandates. We share those concerns and believe they must inform future policy.

At the same time, the answer to past policy failures is not to prohibit a proven and transformative medical technology. Continued support for mRNA research will help more Tennessee patients fight serious diseases, attract high-quality jobs and federal investment to the state, and preserve America's global leadership in medical innovation. The harms of HB 1852—to patients, researchers, farmers, and the state's economy—are concrete, immediate, and irreversible. The bill's purported benefits are unsupported by science.

For all the reasons set forth above, AMM urges the Committee to oppose House Bill 1852. We appreciate your consideration and welcome any questions. Please contact us at Clay.Alspach@mrnamedicines.org.

Sincerely,

Clay Alspach
Executive Director
Alliance for mRNA Medicines