June 9, 2025

Dr. Martin Makary
Commissioner
Food and Drug Administration (FDA)
10903 New Hampshire Avenue
Silver Spring, MD 20993-0002

Re: Response to "FDA Expert Panel on Talc"

Dear Commissioner Makary:

We write as a wide group of scientists and medical doctors, representing various areas of knowledge, including mineralogy, geology, toxicology, pathology, epidemiology, risk assessment, molecular biology, oncology, and others. Many of us studied talc safety for years or have significant experience in evaluating mineral particles and assessing their health effects. Our group also includes medical professionals who have long treated patients in the field of gynecologic oncology and different types of malignancies, as well as have performed in-depth research on the etiology of gastrointestinal cancers.

We have followed with great interest the ongoing debate concerning the safety of talcum powder and were eager to hear from FDA and participate in a discussion regarding talc science and safety with the agency. Each of the below signatories either attended the roundtable regarding talc safety that FDA held on May 20, 2025 ("Roundtable") live, or watched the Roundtable online because we were unable to attend for a variety of reasons (including an inability to move patient appointments) given the short notice FDA provided.

Unfortunately, not only were we deprived of the opportunity to participate in the discussion held at the Roundtable, but the entire process that FDA employed for the Roundtable did not allow for an open, fair and balanced discussion regarding talc safety. Thus, we write to convey our serious concerns regarding various scientific deficiencies that were readily apparent within the panel's discussion, including most notably the panel's failure to address the Gold Standard scientific studies that refute the propositions and recommendations made by many of the panel members. These failures are particularly troubling in view of the broad stated mandate of the Roundtable, encompassing talc safety in food, drugs and cosmetics. The panel's misplaced and misleading contentions regarding talc safety and related use recommendations therefore have significant economic, regulatory, and legal implications across a wide spectrum of industries. More concerning to the undersigned, those conclusions and recommendations may create serious health concerns to the extent patients are dissuaded from taking life-saving medications due to the panel's unsubstantiated claims concerning the safety of talc.

As an initial matter, the process FDA employed to announce and hold the Roundtable foreclosed the sort of fair, balanced and transparent discussion that FDA itself has emphasized is necessary to ensure appropriate scientific decisions are made, and public confidence is maintained in the agency.[1] As we were informed, FDA first "announced" the meeting in your unscripted comments at a small conference on Thursday, May 15, 2025. Then, a day later, the agency officially announced the meeting on its website, to be held only *two business days later*: Tuesday, May 20, 2025. That short notice made it extremely difficult for interested parties to attend, including many signatories to this letter who had previously scheduled professional obligations. The lack of any meaningful notice is particularly troubling in light of the broad scope of the meeting that covered talc not just in cosmetics or consumer goods, but also in food and drugs. As FDA is no doubt aware, talc serves as an inactive ingredient *in over 14,000 medications*.

Even more troubling was the manner in which panel met, which had been billed as a "public" discussion. Instead, FDA prohibited members of the audience from any form of participation, stating that attendees must be in "listening mode" only. FDA even turned off comments on its YouTube feed of the event. All this combined to ensure that a robust, objective discussion of the scientific evidence could not occur.

Further, FDA billed the event as a "roundtable discussion of an independent panel of scientific experts" without explaining how the panel members were chosen, opening an application process for interested experts, or giving any advanced notice of who the panel members would be. Unfortunately, the participating panelists were largely anything but "independent." As we know, the panel included several paid plaintiff-side experts in talc-related litigation, none of whom disclosed their conflict of interest during the discussion. The panel did not include any defense-side experts with counterbalancing views.

The panel members correctly acknowledged that the best way to evaluate the issue of talc safety was through epidemiological studies. Yet the panel did not discuss, or even acknowledge, the highest quality epidemiological studies with prospective cohort designs described below, each of which concluded that talc does not cause ovarian cancer. Instead, the panel only discussed case-control studies that they conceded had many biases (such as recall bias) and that at best show a weak association, not causation, between talc and certain cancers. As Dr. Schildkraut aptly noted: "What I can caution about these studies is *we can't determine causality*." Certain panel members also mentioned *in vitro* studies that purportedly support talc as a carcinogen, yet serious methodological flaws of those studies were not acknowledged, nor was their relevance to humans discussed.

[1] The process, and the limited and one-sided science referenced and discussed during the meeting of the panel, also runs directly contrary to the goals and directives announced by President Trump in an Executive Order ("EO") issued May 23, 2025. That EO directs FDA and other federal agencies to Restor[e] Gold Standard Science, and in particular, ensure that agencies avoid the promotion of "scientific information in a highly misleading manner" and guarantee that decisions "are informed by the most credible, reliable, and impartial scientific evidence available."

In lieu of addressing the highest quality epidemiology studies, the panel instead relied heavily on a pending, re-designation of talc as "probably carcinogenic" from the International Agency for Research on Cancer ("IARC"). But that designation is not final, and the final evaluation is not expected to be published until later this year.[2] More importantly, as at least one panel member recognized, that designation was not based on any new evidence but rather "reassessment of things that we already had known, not major new studies that showed new things." Importantly, moreover, with respect to the best evidence of safety, the relevant IARC working group itself found that the epidemiological studies showed only "limited" evidence that talc causes ovarian cancer in humans. That is, the Working Group concluded that chance, bias, and confounding could not be ruled out in these studies.

The panel also did not discuss the weight of evidence for alleged expansion of the possible health effects of talc, to include gastrointestinal cancers in children and young adults. We do not have any evidence that IARC ever confirmed pure talc to be a probable gastrointestinal carcinogen or robust epidemiologic studies to support such an allegation. The panelists mentioned alleged inflammogenicity of pure talc as evidence for possible causation of cancer by ingestion pathway. However, there are numerous inflammogenic agents that are not carcinogenic by every specific route of exposure, if at all.

Also, epidemiological and toxicological studies distinguished between pure talc and talc containing various associated minerals (such as asbestiform particles). There is also a difference between various types of talc (industrial vs. cosmetic grade) that were demonstrated to have different characteristics and associated minerals, relevant for carcinogenic risk assessment. As numerous studies have shown, elongate mineral particles in cosmetic talc typically belong to non-asbestiform category that is not associated with carcinogenic effects. However, all the panel discussion was related to "talc" in general, independent of exposure pathways, mineralogical type, origin, and composition.

These shortcomings are significant, and they lead to an entirely biased and misleading understanding of the true state of Gold Standard Science as it relates to the safety of talc. Had we been able to participate in the meeting in any way beyond "listening mode," this is what we would have told the panel and the members of the public who listened to the event.

A robust body of scientific literature examining the safety of talc has been amassed over the past several decades. For example, the largest, highest quality epidemiological studies that certain of the below signatories have studied closely and rely upon in treating women ***do not establish that talc causes ovarian cancer***:

- The **Nurses' Health Study**—the largest women's health study ever conducted—followed nearly 80,000 women for 24 years, about 40% of whom reported using talcum powder on their genital area or on sanitary napkins. The study showed no increase in the overall rate of ovarian cancer among the talc users, regardless of how often they used talc.

[2] https://www.iarc.who.int/wp-content/uploads/2024/07/pr352_E.pdf

- The **Women's Health Initiative Study** included nearly 62,000 women, 53% of whom said they had used powder on their genitals, sanitary napkins, or diaphragms, some for over 20 years. The women were followed from 1993 to 2012, and the analysis showed no increased risk of ovarian cancer in women who used talcum powder. There was also no increase in risk among women who used powder for longer periods of time.

- The **Sister Study** was conducted from 2003-2009 with the support of the National Institutes of Health and the National Institute of Environmental Health Sciences. The study enrolled nearly 42,000 women in the United States and Puerto Rico ages 35-74 who had a full or half-sister who had been diagnosed with breast cancer and were asked about talc use over the prior 12 months. Over the course of the study, no association was found between perineal talc use and subsequent diagnosis of ovarian cancer. While douching was more common among talc users, it was found that douching, but not talc, was associated with the increased risk of ovarian cancer.

- The most recent cohort study, published in the Journal of the American Medical Association (**JAMA**), pooled a number of high-level epidemiological studies and found no statistically significant increased risk of ovarian cancer with talc use. The study reconfirms that a statistical association between ovarian cancer and powder users is not found in large, prospective cohort studies, although some, but not all, case-control studies do indicate a slight statistical association. One potential reason that some have found slight statistical associations is the potential for an overestimation of the true association due to "recall bias." Recall bias is when people with a disease are more likely to overestimate their prior exposures to these risk factors than people without that disease.

Consistent with these studies, the National Cancer Institute of the National Institutes of Health has confirmed in its Physician Data Query ("PDQ") that "the data are inadequate to support an association between perineal talc exposure and an increased risk of ovarian cancer."

In addition to these ovarian cancer focused studies, epidemiology studies also show no association between cosmetic talc exposure and the development of the rare cancer, ***mesothelioma***:

- Several cohort studies have measured the health of cosmetic talc miners and millers, who were exposed to large quantities of talc dust daily for their entire working careers. If talc were contaminated with asbestos and caused mesothelioma, one would expect these studies to show an increased risk of mesothelioma, but they uniformly report no such risk.

- Epidemiological studies of barbers, hairdressers, and cosmetologists who typically use talc powder in their occupations also have not shown any increased risk of mesothelioma.

- There also have been epidemiological studies of patients who have undergone a procedure called talc pleurodesis, which involves direct injection of talc into the lining of the lung, and these studies have reported zero cases of mesothelioma.

- Recent toxicological publications confirmed that elongate mineral particles reported in some samples of cosmetic talc were of "non-asbestiform" variety, or so-called cleavage fragments, that were not associated with elevated risk of cancers in any epidemiological studies, and

confirmed to be non-carcinogenic by *in vitro* testing and quantitative structure-activity relationship (QSAR) modeling.

Also, as we know, FDA has followed talc safety issues for decades. In the 1970s there were two scientists who reported finding trace amounts of asbestos in various cosmetic talcum powders. This led to collaboration between FDA and industry to widely test the talc on the market at the time and to develop an appropriate set of methods and techniques to test talc for the presence of asbestos. As a result of this work, extensive testing and investigation of the initial reported findings showed that many of the early results were unreliable due to methodological flaws. Thus, far from a new or novel issue, FDA and the numerous industries that utilize talc have been aware of the potential for contamination and, of equal importance, sensitive to and monitoring for any potential adverse health impacts for *decades*. This awareness in the scientific community has led to the above-described robust body of scientific literature that has thoroughly examined the safety of talc and continues to explore the issue of talc safety today.

As a direct result of the robust science, FDA has rejected citizen petitions in the 1980s, 1990s, and early 2000s, all of which sought warnings on cosmetic talcum powders either for the presence of asbestos or an association with certain cancers. In fact, to date, FDA has *not* concluded that there is a causal relationship between talc and cancer, nor has FDA required that a warning regarding the alleged risks of talc be placed on the packaging of talc products in the United States. Significantly, despite the focus on likely biased case control and similar studies, the panel did not reach such a conclusion either.

In short, the overwhelming weight of the very best science – which has been a focus of both FDA and the larger scientific, medical and academic communities for decades – does not support carcinogenicity of pure talc. Clearly, the general public and scientific community would have been better served by a more fulsome discussion of these important issues, and the full scope of literature illuminating them, rather than a process that precluded all questions and commentary.

We urge FDA to schedule a second meeting that promotes and allows for true discussion and public input on this important subject.

Respectfully submitted*,

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Signature

06/09/2025

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* Above signatories have consulted on behalf of defendants in asbestos and/or talc related litigation matters.