



## **Statement by the Cuban Academy of Sciences**

The Standing Committee created by the US National Academies of Sciences, Engineering, and Medicine (NASEM), has released in December 2020 the report “An Assessment of Illness in U.S. Government Employees and Their Families at Overseas Embassies”. The illness in the title refers primarily to health complaints reported by US personnel deployed in Cuba and to a lesser degree in China. The present document summarizes the Cuban Academy of Sciences’ initial assessment of the Standing Committee’ report, based on the work of a panel of Cuban experts that has spent more than two years investigating the complaints and informed by international experts including those who participated in the workshop *Is there a Havana Syndrome?* aptly held in Havana in March 2020.

The NASEM report attempts to define the nature of the health complaints, to identify their causes, and recommend measures to protect U.S. diplomats and their families when abroad. The Cuban Academy of Sciences disagrees with the final conclusion about the causes of the health complaints, although it recognizes that the report (prepared by an outstanding panel of scientists) made progress in the medical characterization of the complaints, and issued valid recommendations. Importantly, the NASEM committee made frequent reference to the difficulty of obtaining reliable data about either the patient symptoms, clinical information, or the reported exposures to possible causal agents. They note myriad inconsistencies in the data available to them and note repeatedly that many critical data points could not be accessed.

The NASEM committee report claims that exposure to radiofrequency waves was the most plausible candidate as the cause of the symptoms. However, this claim is not supported by direct evidence or by a critical appraisal of the available literature, nor by the bulk of the report itself, and exhibits intrinsic contradictions. Notably, although the report itself was mostly circumspect, the

publicity surrounding its release suggested that the NASEM report endorsed the idea that a radiofrequency source was likely involved in initiating patient symptoms. At best, radiofrequencies waves should be considered an unlikely hypothesis on the cause of the complaints, and it certainly is not an established fact.

Specifically, the NASEM report gives weight to radiofrequency waves as causing the constellation of reported symptoms, even as it acknowledges that the relevant data are problematic. The literature reviewed does not support this hypothesis. For example, no literature suggests that radiofrequency radiation can result in the experience of painfully loud sounds; none suggests that such exposure can result in specific neurological symptoms and, significantly, there is no evidence, circumstantial or otherwise, of any devices that might have created the large radiofrequency field exposure. We cite from the report: "... there are insufficient data in the open literature on potential RF exposure/dosage characteristics and biological effects possible for DOS scenarios". Furthermore, the report says: "Some animal studies have shown conflicting results, however, even when using the same exposure system..." The report provides no evidence that indeed radio waves were higher in the area where the diplomats were located (and in fact Cuban environmental research has falsified this hypothesis). The lack of sufficient evidence was considered in the report to strongly cast doubt on either a pesticide intoxication, an infectious cause, or a psychological trigger, as explanations for the symptoms, yet the same logic was not applied to the microwave hypothesis (for which there is even less evidence). The lack of so much as a suspected source of microwave energy was not enough to abandon the microwave hypothesis.

While unconvinced by the claim that RF waves caused the health incidents, Cuban Academy of Sciences agrees with the careful review of the limited clinical data available, reaching conclusions consistent with those of the international experts we consulted and those of the Cuban scientists. The report finds little evidence of widespread brain damage in the diplomats and their families. It states that neuroimaging with standard clinical procedures was normal in the cases studied, while indicating that reported findings with novel imaging techniques (which found inconsistent results across two studies) are not acceptable for single case studies, do not have validated normal ranges, and are

notoriously difficult to replicate. Agreeing with previously published criticisms, the report concludes that the results of neuropsychological tests in these cases could not establish a novel syndrome due to widespread brain damage. In addition, the committee casts doubts on the validity of many of the vestibular function tests used.

An important issue addressed by the report is the enormous heterogeneity of symptoms within and between cohorts assessed at different sites. This makes the proposal of a novel homogenous syndrome due to a common cause untenable and exceptionally unlikely. It is also relevant that the Standing Committee acknowledges that functional neurological disorders and psychogenic factors might have played a certain role in exacerbating, but more importantly in spreading over time, the symptoms experienced by the diplomats. Persistent postural-perceptual dizziness, a functional neurological disorder, was ascertained by the National Institutes of Health in about a fourth of the diplomats they examined. This is the first time that a U.S. scientific body considers this possibility, that has been convincingly posited in the scientific literature as contributing (and perhaps generating in some cases) to these health incidents.

The recommendations of the NAESM committee to the US government are reasonable: increase baseline and longitudinal collection of health-related data from diplomatic personnel overseas, effectively monitor new clusters of cases if they appear, and provide protocols for measuring possible exposure to radiofrequency sources and toxins. However, for the wellbeing of all involved, we would also recommend that both reporters and governments should heed the science and refrain from endorsing conspiracy theories. Over the last two years, wild speculations have been made, publicized, and even included in official sources, with unsubstantiated claims about “sonic or microwave attacks” on US diplomats, that generated brain-damage. These claims have not survived experimental or theoretical validation, but have generated much anxiety and unnecessary concern.

The Cuban Academy of Sciences shares the frustration expressed by the NASEM panel for not having access to the necessary clinical information needed to perform an adequate assessment, a factor which partially explains the limitations in the report. In addition to the information firewalls within the US that the Standing Committee laments, research into these health complaints has

suffered from a lack of fluid communication between US and Cuban scientists examining the issue, largely due to artificial and politically motivated barriers. Communication between U.S. scientists, and their counterparts in Cuba and worldwide, has been hampered. Such pre-emptive censorship can only be destructive to the legitimate desires to understand the source of this particular illness outbreak and to take whatever measures might be needed to protect citizens of any country from further disease.

The complaints made by the diplomats and families should be considered and treated as a health concern not as a political issue. Collaboration bears fruits, as demonstrated by the Cuban and Canadian scientists studying similar health incidents who have engaged in productive discussion, have organized joint workshops, and are currently conducting a collaborative research project assessing people exposed to pesticides in Havana. Individual U.S. scientists have engaged in email discussions with Cuban Academy of Sciences and some have participated in the workshop Cuban Academy of Sciences organized in March 2020. The workshop was unbiased and included a U.S. proponent of the radiofrequency hypothesis. Cuban Academy of Sciences reiterates its willingness (which has been repeatedly expressed over the years) to collaborate with NAESM and other U.S. counterparts, in order to better understand the health incidents involving US diplomats and their families in Havana (or in any other place), with the end goals of helping people and promoting closer ties between the two scientific communities and ultimately between the two countries.

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