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**Re: EASA/EC FACTS (FRESH AIRCRAFT) aircraft cabin air study.**

Dear Commissioner Bulc and Director-General Hololei,

You will recall the Global Cabin Air Quality Executive (GCAQE) has written to both of you on several occasions late last year and earlier this year regarding the now underway EC funded FACTS aircraft cabin air study and other concerns.<sup>1,2</sup>

Our concerns remain unaddressed, yet the project is well underway. I will highlight our key four concerns below:

**1) Primary health concern**

Neither the European Commission nor EASA have taken any steps to ensure that pregnant airline crews and passengers are not exposed to chemicals known to be a risk to the foetus and development.<sup>3,4</sup> We find this is grossly negligent that the precautionary principle is not being followed for the most sensitive endpoints of exposure.

**2) Flight safety concern**

Despite numerous recommendations by air accident investigators<sup>5</sup>, subject matter experts and countless others, aircraft flying in EU airspace continue to do so with no form of contaminated air detection system fitted to warn crew when the air is contaminated. Only by having sensors fitted can you know if the aircraft is air worthy and enhance flight safety.

**3) Key EU/ EASA cabin air quality (CAQ) research concerns:**

The EC/EASA FACTS CAQ project continues to have the wrong scope. In summary it is looking at high dose exposures and relying on interpreting findings in light of levels of individual substances in relation to occupational exposure limits and other indoor air guidelines and limits. As advised recently by EASA and the scientific committee (SC) oversight panel, they will firstly release the entire contents of the oil and secondly, oil at the engine permissible consumption level in a simulator. From this they assume they will be addressing the worst-case scenario and will determine the toxic mechanism. In vitro and in vivo studies will then be undertaken, however again on acute exposure basis only,

without suitable chronic pre-exposures. We were advised by EASA and the SC at the recent CEN TC 436 meeting in Bordeaux that there was not the money or time to do anything other than the acute high dose exposures and indeed they stated this was the correct approach.<sup>6</sup>

This is not what the published literature is showing in the scenario for aircrew and passenger exposure to bleed air contaminants and we believe it is unlikely to yield relevant results. Aircrew and those frequently exposed to aircraft breathing air are showing an acute on chronic pattern of exposure and a difference to the general population. This can be seen in various recent publications and reports.<sup>7-12</sup> There is substantial other science supporting our concerns. EASA, the EC and the scientific committee have been advised of our concerns, but we are most concerned<sup>13</sup> this information is not being acted upon.

#### **4) Lack of independence of scientific committee member – Sven Schuchardt**

The EC tender document stated that: *"In order to guarantee that the work performed adheres to the highest scientific standards, a committee of **reputed independent scientific experts** will be set-up and funded by the Contracting Authority for purposes of providing assistance with the steering of the contract. This group of experts will be notably assigned to perform the signing-off of specific scientific or technical approaches that are to underpin the work as well as to peer-review the technical deliverables of the contract."*

Dr. Sven Schuchardt working for Fraunhofer ITEM was the lead author on the recently completed EASA sponsored cabin air quality study.<sup>14</sup> We were particularly concerned with the findings of this study and specifically the hardly unbiased wording used in the final conclusions and way forward as shown below:

*"Taking into account the current data situation [7, 41, 42], which indicates a very low OPC incidence in aircraft, the still ongoing discussion about the so-called "aerotoxic syndrome" remains completely incomprehensible."* p109

*"A human exposure study is the long-needed tool to provide an unequivocal and sound data set to end the misguided discussion on cabin air quality once and for all. The idea of "neuro toxic TCAC-events" can create fear which occasionally can lead to people feeling or developing respective corresponding symptoms at the occurrence of smell-events. This, misdiagnosis as well as data misinterpretation fuel the on-going debate for which no agreement between the participating parties (pro and contra) is anticipated in the foreseeable future...Human exposure can be seen as an important contribution to the objectification of the currently misguided discussion on cabin air quality."* p111

We are also aware that Fraunhofer IBP is part of the Consortium. While Dr. Schuchardt works for a different sector of Fraunhofer, it is still part of the same group of companies. We have been advised by the SC spokesperson that: *"Every member of the Scientific Committee has been checked against conflict of interest."*

We simply cannot accept that there is not a gross conflict of interest here. The GCAQE members are very well aware of the clear views of Dr. Schuchardt that the cabin air issue is all nonsense. Indeed our members heard him say at recent German cabin air meetings, that while there was no indication of poisoning, there was just impairment. On behalf of all of our GCAQE members, aircrew working on aircraft, we find this completely unacceptable in such a safety critical area. Impairment related to oil fumes and other fluid exposures

have been clearly documented in flight. All passengers are therefore having their safety degraded and jeopardized and this is completely intolerable. To have this person on the independent scientific oversight committee must simply be a gross error.

We thank you for your time and we trust now our concerns will be addressed with the serious attention they deserve.

Sincerely,

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