## **Public Comment to SACATM: Recognising Indigenous Knowledge in Alternative Toxicological Methods**

The move toward alternative toxicological methods is important for improving safety assessment while reducing reliance on animal models. I thank the committee and the agency for leading this important work.

In Australia, there is a growing commercial interest in native plant foods and medicines that have been used by the continents Indigenous population, the Aboriginal and Torres Strait Islander peoples. Similar examples exist globally. As these products enter larger markets, the need for robust safety evidence grows.

Regulators already make limited use of "history of safe use." Food regulators, such as EFSA and Food Standards Australia New Zealand (FSANZ) both allow historical consumption data to inform assessments of novel foods. In the US, many companies have used the GRAS pathway for botanicals, often citing long-standing use as part of their safety rationale. In some cases, this has been done without sufficient engagement with knowledge holders or detailed toxicological data. This can create variability in how safety is demonstrated and limits the recognition of traditional knowledge as structured evidence.

Indigenous knowledge of preparation, consumption and tolerance provides direct evidence of human exposure. This should form the first tier of risk assessment and be supported by alternative toxicological methods. Traditionally used foods and medicines are therefore an ideal context in which to apply these methods. They already come with a history of safe use, and modern *in vitro* and *in silico* approaches can be applied in a targeted way to novel preparations or concentrations that extend beyond traditional contexts. This does not reduce safety standards. It makes assessment more proportionate to actual risk while recognising existing evidence.

Incorporating Indigenous knowledge also strengthens the legitimacy of regulatory science. It respects cultural authority, improves efficiency and supports international commitments such as the UN Declaration on the Rights of Indigenous Peoples.

As alternative toxicological methods are advanced, I encourage SACATM to consider how traditional knowledge systems can be incorporated into risk assessment frameworks. Doing so would provide a more complete, globally relevant and culturally responsive foundation for safety evaluation.

I appreciate the opportunity to share this perspective and believe it can support more inclusive, evidence-based, and forward-looking approaches to toxicology. I would be pleased to engage further if helpful.

Warm regards,

