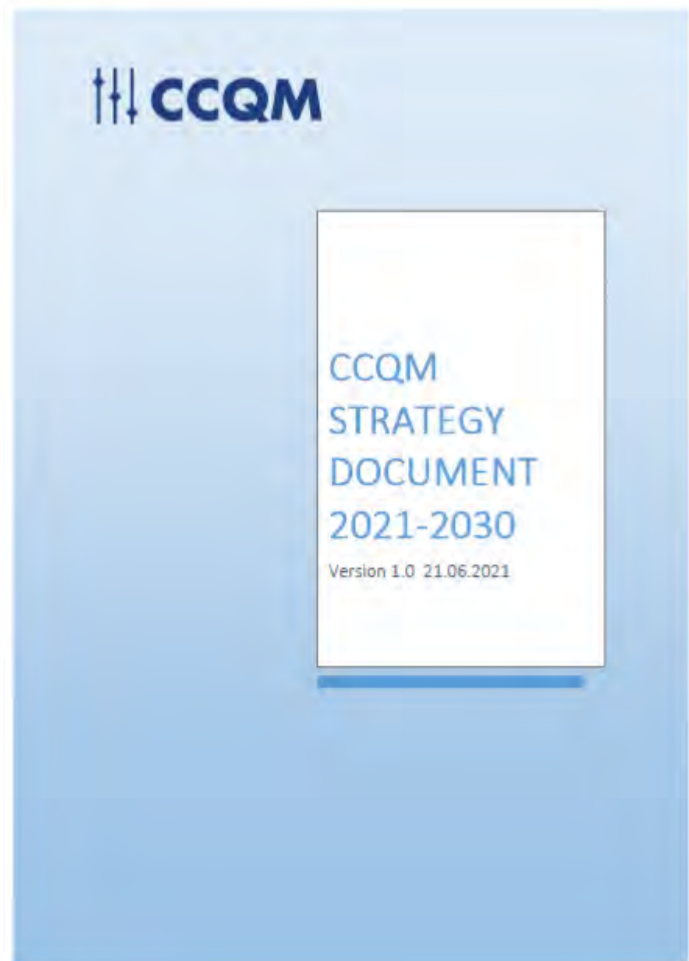


### CCQM Strategy (2021-2030)



**The CCQM's vision:** A world in which all chemical and biological measurements are made at the required level of accuracy to meet the needs of society.

**The mission of the CCQM is:** To advance global comparability of chemical and biological measurement standards and capabilities, enabling Member states and Associates to make measurements with confidence.

Sector	CCQM OAWG	CCQM PAWG	CCQM NAWG	CCQM CAWG	CCQM SAWG	CCQM EAWG	CCQM IAWG	CCQM IRWG	CCQM GAWG
Climate & Environment	POPs, Contaminants, Microplastics, Water/Soil		Species/microbial surveillance			Seawater pH and salinity	Heavy Metal Contaminants Speciation	GHGs	GHGs, Air Quality, Particles, Breath diagnostics
Health & Life Sciences	Diagnostic Biomarkers, Forensics, Anti-doping	Diagnostic Biomarkers, Therapeutics	Gene Therapy	Diagnostic biomarkers	Imaging diagnostics, Biocompatibility, In-vitro diagnostic devices	Diagnostic Biomarkers	Diagnostic Biomarkers, Forensics, Anti-doping		
Food Safety	Toxins, Contaminants, Residues, Authentication	Allergens, Authentication	GMO-Foods, Pathogens	Pathogens	Packaging materials		Heavy metal Contaminants Speciation	Food authentication	
Energy					Batteries, Fuel/Solar cells, Catalysts	Batteries, Fuel Cells	Fuel Contaminants		Natural Gas, LPG/LNG, Hydrogen, Bioblasts
Advanced Manufacturing		Advanced Therapy Development	Biotechnology	Advanced Therapy Development	Nanotechnology, Semiconductors, Quantum devices	Nanotechnology	Nanotechnology		Trace Gases
Digitalization			Digital Pathology					Isotope Ratio Scale defining, RMs Database	GHG Scales Database, Management

### Global forum for progressing the state of the art

Examples of progressing the state of the art through Working Groups, Task Groups, and Workshops

#### Standards for Infectious Disease Diagnostics



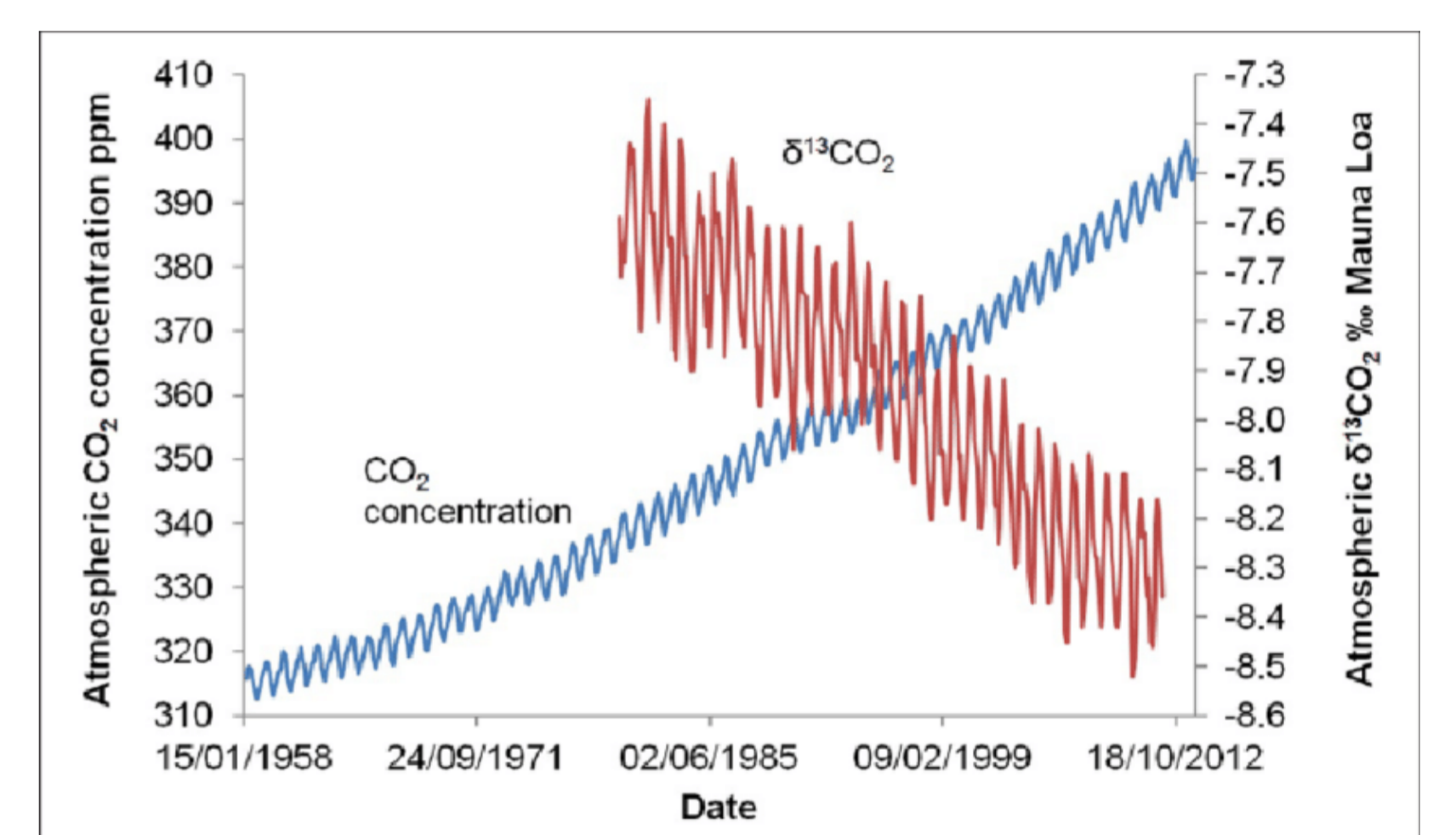
#### Standards for Persistent Organic Pollutants

- **Growing importance as a sector** with increasing regulation and growing public concern and demand on monitoring data
- **Widening portfolio of substances of concern** from the oldest POPs (dioxins) to new high concern substances (e.g. perfluorinated substances (PFAS), new flame retardants, endocrine disruptor compounds, antibiotics)
- **PFAS as a major environmental concern:** CCQM-K156 published in Sep 2022 demonstrating capabilities. Limited number of institutes working in these new and highly challenging areas



#### Standards for Greenhouse Gas Emissions Mitigation

CCQM-GAWG Task Group on GHG Scale Comparisons (CCQM-GAWG-TG-GHG)



### Facilitating dialogue between NMIs and stakeholders

Examples of working with stakeholders to identify and deliver standards needs through Workshops and Task Groups

#### CCQM Workshop on Microplastics measurements and standards

5 to 6 April 2022

Aims:

- To understand measurement and standards needs for microplastic contamination characterization and quantification
- To recommend specific metrology interventions to establish robust metrology system for microplastic measurement



#### CCQM Workshop on Particle Metrology

25 to 27 October 2022

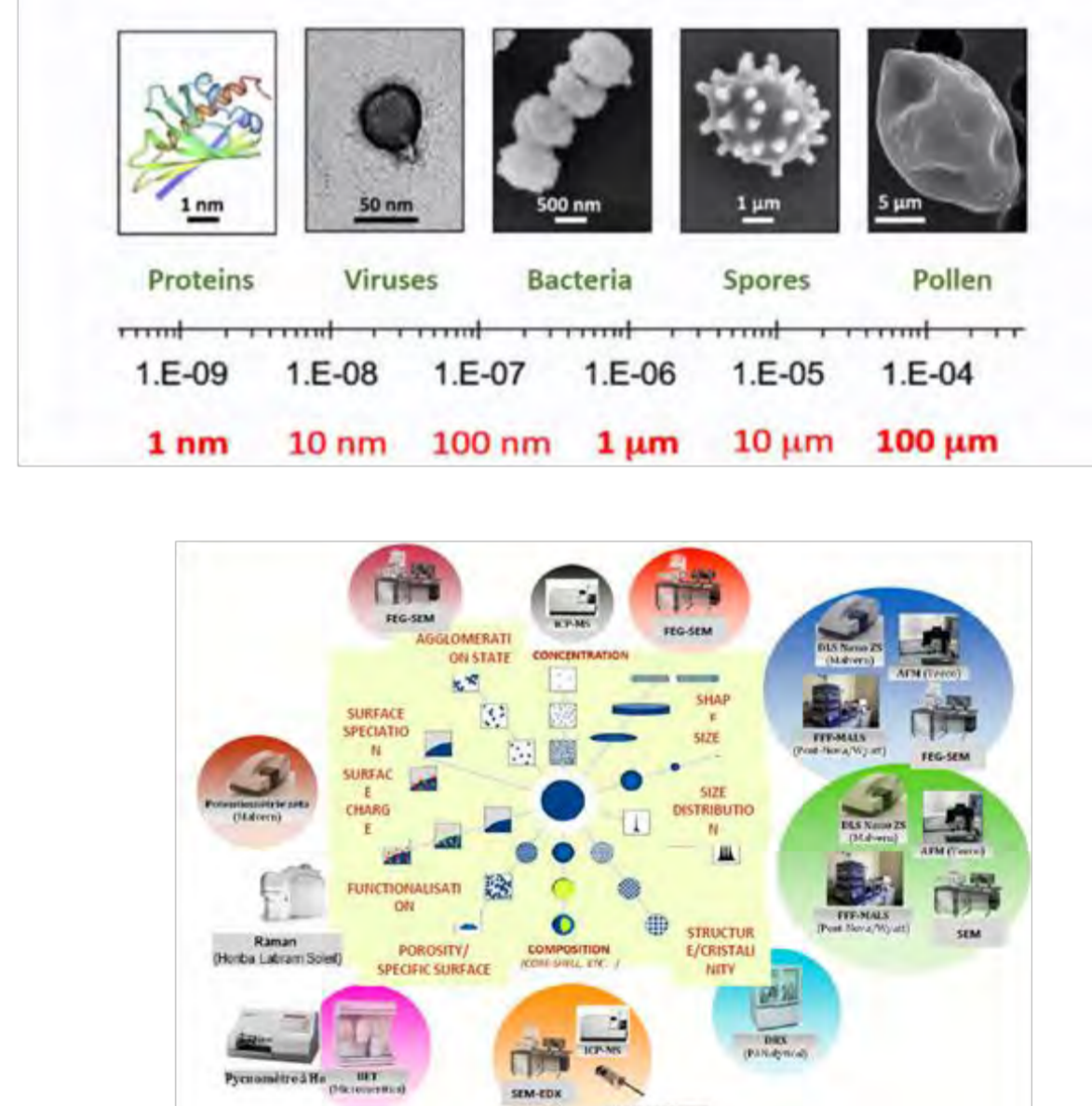


Information exchange with stakeholders on the current state of particle metrology



To identify activities that can be undertaken within CCQM, and to develop a CCQM action plan

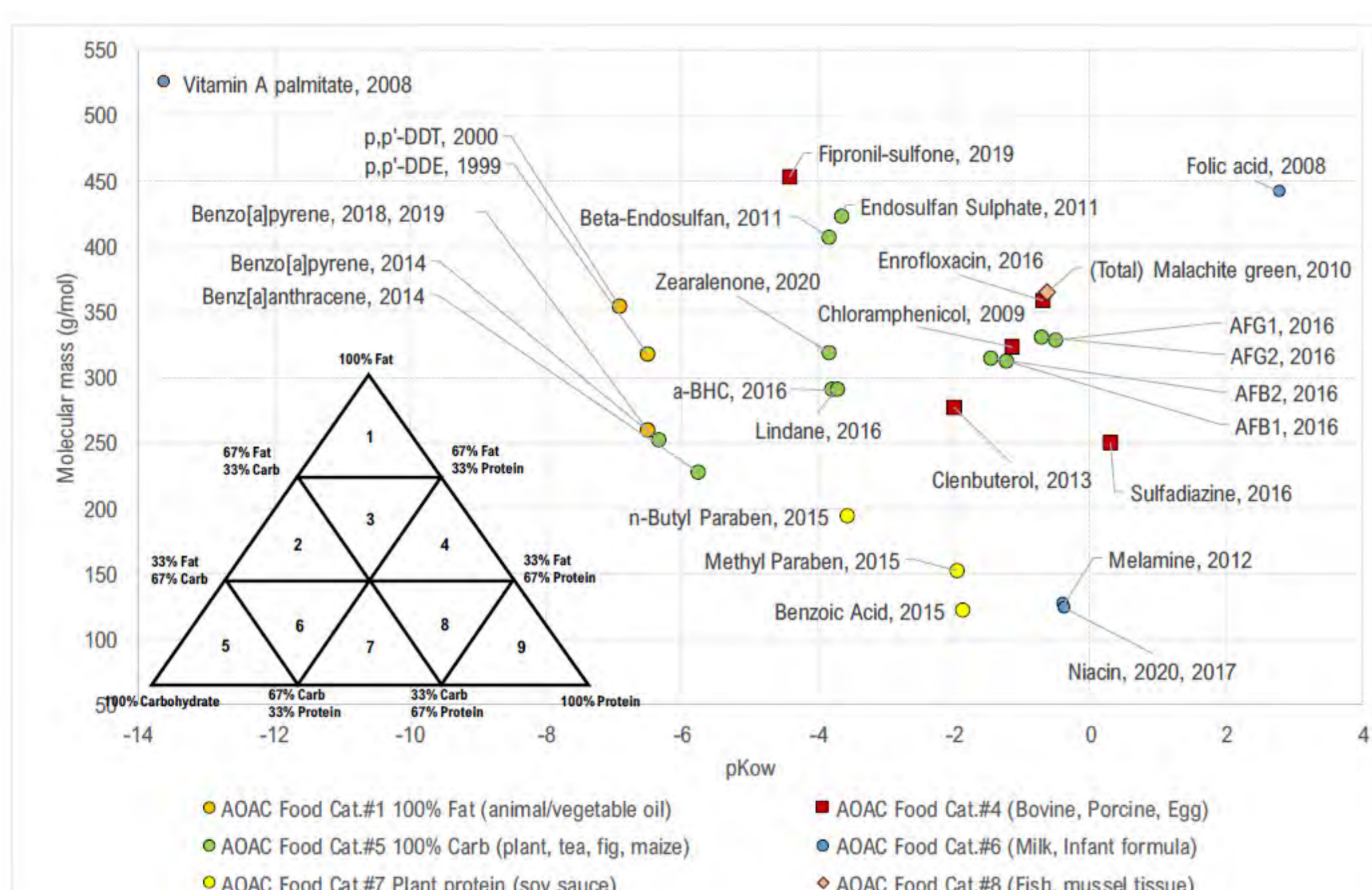
Bioaerosol cover a huge size spectrum



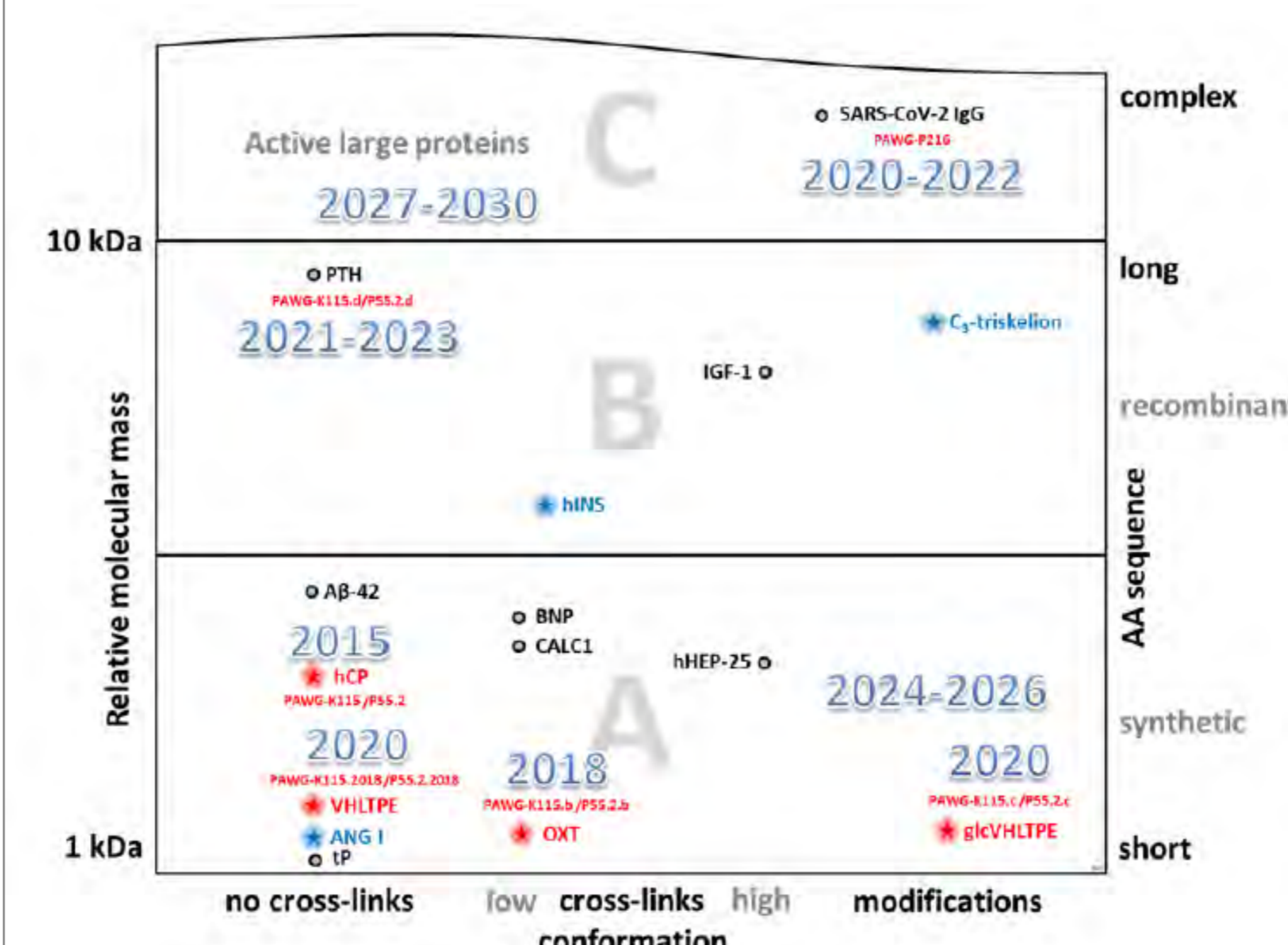
### Global comparability of measurements

Nine Technical Working Groups with strategically planned comparisons underpinning 6 300 Chem-Bio CMCs, examples:

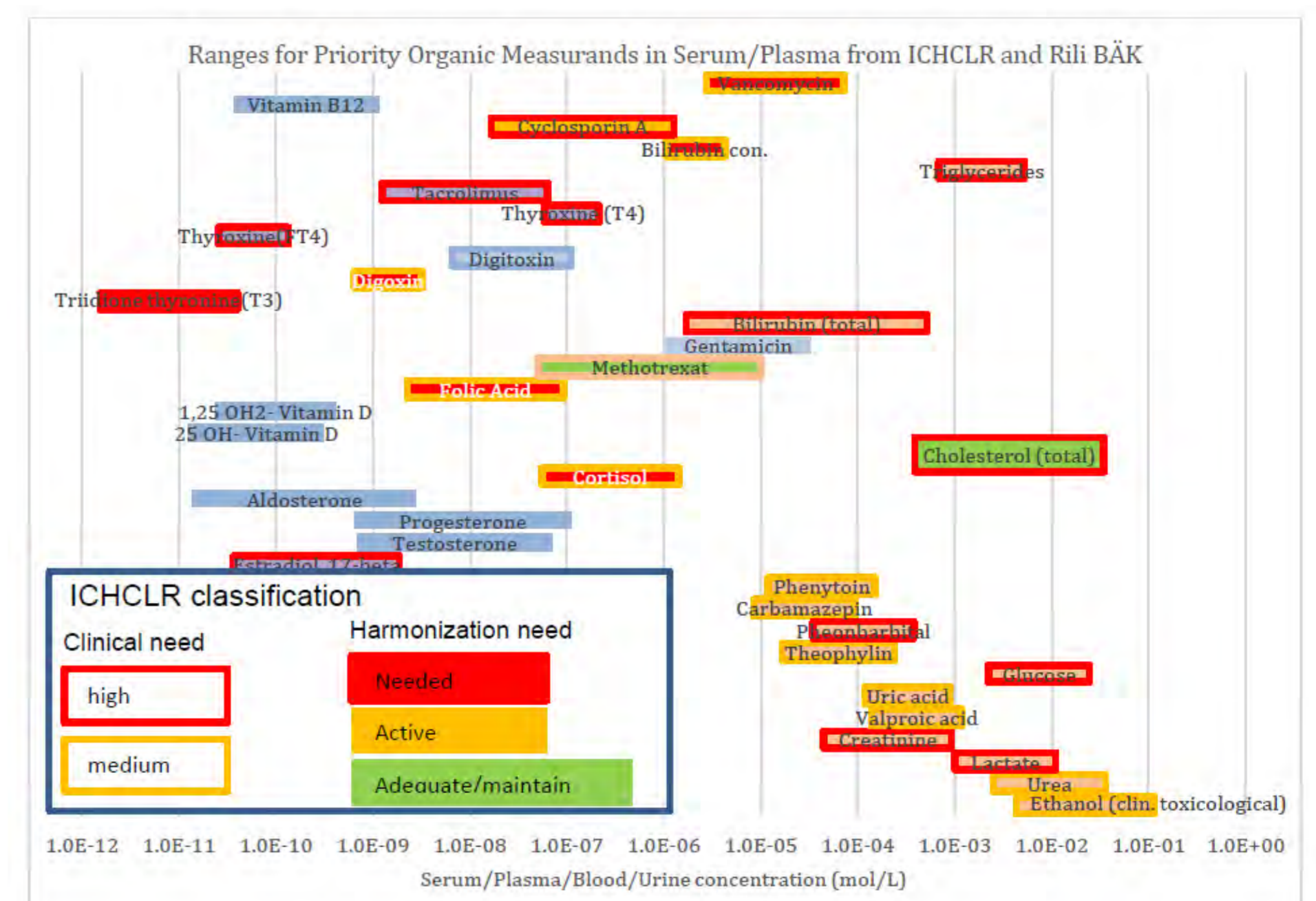
#### Planning of Comparisons to cover the 'Food Matrix' space



#### Planning of Comparisons to cover Protein Standards



#### Planning of Comparisons to cover priority analytes in Clinical Chemistry



During the period 2019-2022: 50 New CCQM Comparisons have been initiated and 47 CCQM Comparison reports published in the BIPM KCDB