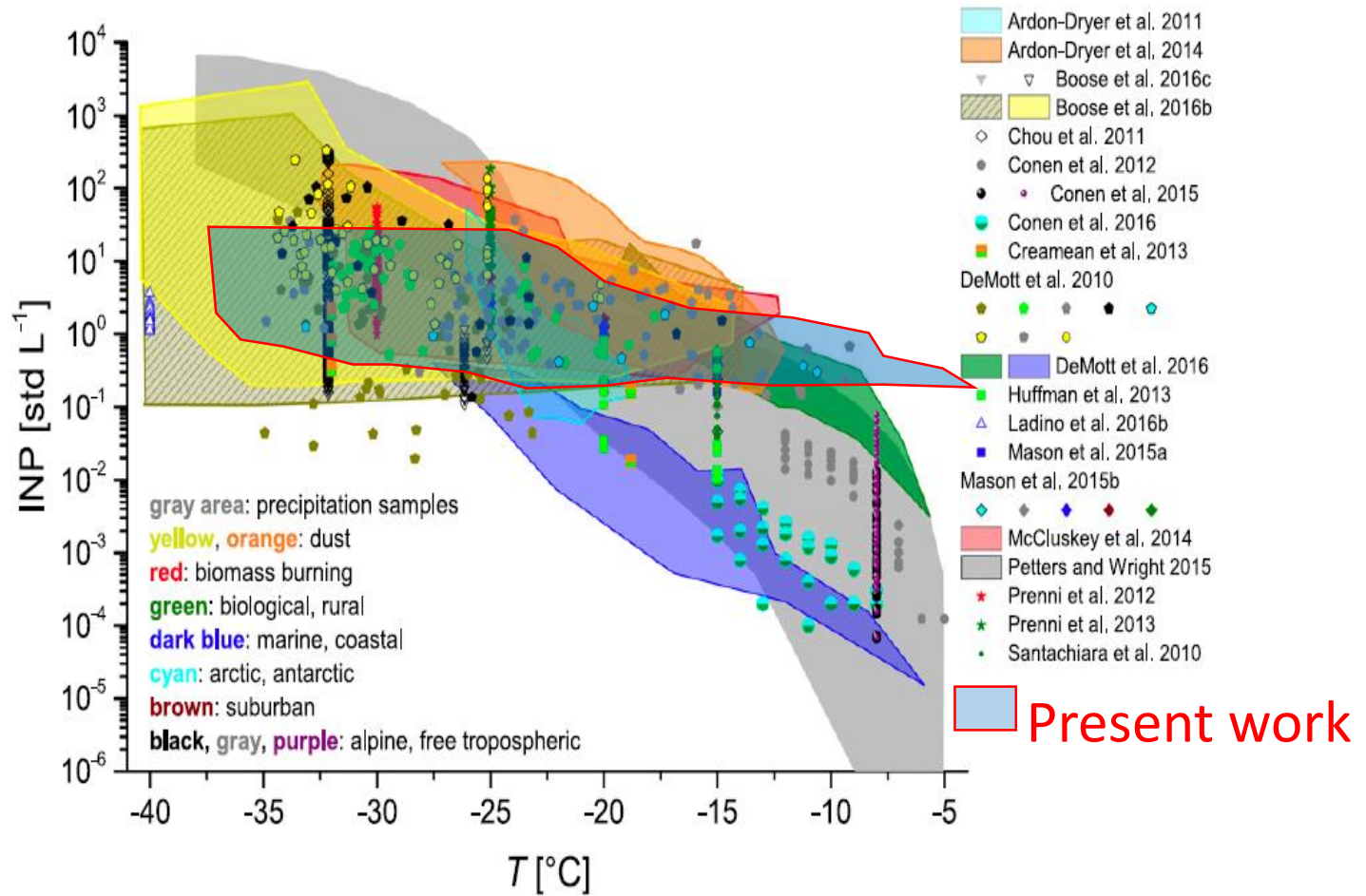


Figure 1. Summary of INP concentrations taken from studies of field measurements conducted globally (adapted from Kanji et al. 2017).



The preliminary analysis of the aerosol particles collected around Sisal (Yucatan) indicate that they are efficient INPs, with onset freezing temperatures of -3°C (in some cases), similar to the onsets of *Pseudomonas Syringae* (Haga et al. 2017) or Arctic sea surface microlayer waters (Ladino and Wilson et al. 2015).

Phylum	Genus/species	Habitat
Actinobacteria	<i>Micrococcus</i>	Water, soil, dust, and skin
Firmicutes	<i>Staphylococcus</i>	Animal and human skin mucous, soils
	<i>Bacillus</i> spp	Cosmopolitan
	<i>Bacillus aeris</i>	Soil
	<i>Bacillus oceanisediminis</i>	Marine sediments
Proteobacteria	<i>Pseudomonas reactants</i>	Soil
	<i>Pseudomonas stutzeri</i>	Soil
	<i>Vibrio alginolyticus</i>	Marine
	<i>Vibrio natriegens</i>	Marine
	<i>Vibrio neocaledonicus</i>	Marine
	<i>Vibrio parahaemolyticus</i>	Marine
	<i>Proteus mirabilis</i>	Water and soil
	<i>Sphingomonas mucosissima</i>	Water and soil

Given the large concentration of INPs at -15°C, it can be inferred that biological particles are very important in ice cloud formation in this tropical location. Some of the identified microorganisms are listed above