Conversely, in Symbiodiniaceae, the genes driving the separation of the samples from 2016 and 2017 had higher levels of expression in 2017, with the majority of these genes being involved in ion transmembrane transporter activity (Fig 3B). We hypothesize that this inverse pattern of expression to the *A. palmata* expression could indicate that in 2016 the symbiotic relationship was in equilibrium between the host and Symbiodiniaceae but in 2017, a dysbiosis between host and Symbiodiniaceae was present. This may be due to two potential mechanisms. In 2017, Symbiodiniaceae health may have been limited by certain ions due to a more virulent disease, or an external abiotic factor causing negative impacts. As such, increased expression of genes regulating ion exchange to different molecular compartments was increased to maintain ion balance needed for cellular functions. In Symbiodiniaceae we identified genes encoding for plasma membrane iron permease, voltage-gated sodium channels for sodium transport, ammonium, and nitrate transporters ions. All of these transporters facilitate the movement of iron, ammonium, and nitrate, which are all important for photosynthesis [50-53]. Being limited by these ions causes a lower rate in photosynthetic efficiency and therefore decreases the energy supply provided to the coral host [54,55]. This may indicate that corals in 2017 had less energy being supplied to the coral host by the Symbiodiniaceae. Alternatively, it has also been shown that in high nutrient environments Symbiodiniaceae within the coral host can become parasitic and can then decrease the translocation of energy to the coral [56]. The Florida Keys have seen increased nutrient loading from anthropogenic sources [57,58], which has been linked to increases in bleaching and disease susceptibility [59]. This should be tested in the future to fully understand the impacts of higher nutrients on disease susceptibility in *A. palmata* and how it impacts the relationship with the Symbiodiniaceae.