Genetic Diversity of the Pangolin Founder Population

**Abstract**

Pangolins are an endangered species considered to be the most widely trafficked mammal in the world. They are widely traded in the bushmeat industry and are desired for the medicinal use of these scales in traditional medicine. Native to Africa and Asia, these animals are threatened with high rates of poaching, leading to the nickname “scaly anteaters.” Their existence in captivity offers a unique opportunity to study genetic diversity.

**Hypotheses**

Individual pangolins with the most diversity will be better proof for breeding programs in captivity. The microsatellite markers will be a good representation of the overall variations that individual and the diversity of that pangolin. High levels of diversity are expected at such microsatellite markers to verify diversity levels accurately.

**Methods**

- Blood samples were collected on Whatman K+ lep. cards at three sites in the Pangolin Consortium (Atlanta Zoo and PPG Aquatics, Gladys Porter Zoo, Memphis Zoo, Brookfield Zoo, Turtle Back Zoo). A total of 53 individuals were assessed for DNA, and PCR amplification was performed, followed by visualization on agarose gel.
- Amplification was carried out using Applied Biosystems 3730XL Genetic Analyzer. Applied Biosystems Primer Core (CA, USA) fragment analysis program.
- The data were analyzed in GeneMapper, and electropherograms were created with different dye channels.

**Results**

46 of the tested markers were highly variable and could be used in diversity determination.

**References**