**EMBARGOED FOR RELEASE UNTIL NOV. 1 AT 8:01 P.M. EST**

**Ancient DNA Analysis Sheds Light on the Early Peopling of South America**

1. ***Alcobaça* archaeological site:**

**Photo Caption:** The *Alcobaça* archaeological site, in which the skeletal remains of Brazil-12 (northeast Brazil) were unearthed.

**Photo Credit:** Henry Lavalle, Universidade Federal de Pernambuco and Ana Nascimento, Universidade Federal Rural de Pernambuco

1. **Ancient burial unearthed in Alcobaça:**

**Photo Caption:** Ancient human remains from the Alcobaça, one of the archeological sites in northeast Brazil.

**Photo Credit:** Henry Lavalle, Universidade Federal de Pernambuco and Ana Nascimento, Universidade Federal Rural de Pernambuco

1. **Map – Neanderthal and Denisovan Proportions:**

**Photo Caption:** The figure depicts the deep ancestries of the ancient individuals of the Americas and archaic ancestry in ancient South America and Panama. The pie chart radius reflects the proportion of shared archaic ancestry in the individual.

**Photo Credit:** Florida Atlantic University

1. **Map - Summary of Migrations:**

**Photo Caption:** The first southern North American groups entered South America and spread through the Pacific coast settling the Andes (yellow arrow). At least one population split occurred soon after, branching the first groups that settled the Atlantic coast (green arrow) from the groups that gave rise to the ancient populations of Southern Cone. New Migrations may have then emerged along the Atlantic Coast, with a possible origin around Lagoa Santa, heading north toward Northeast Brazil and Panama, and south to Uruguay. Eventually, Uruguay and Panama were linked by a south-to-north migration route closer to the Atlantic coast (purple double-headed arrow).

**Photo Credit:** Florida Atlantic University

1. **Teeth – Northeast Brazil Samples**

**Photo Caption:** Researchers used teeth from ancient samples collected in archeological sites in northeast Brazil. Teeth are especially important in ancient DNA analysis because of the excellent preservation of biomaterials within the tooth.

**Photo Credit:** Laboratório de Arqueologia Biológica e Forense, Universidade Federal de Pernambuco

1. ***Pedra do Tubarão* archaeological site:**

**Photo Caption:** The *Pedra do Tubarão* archaeological site, in which the skeletal remains of Brazil-2 (northeast Brazil) were unearthed.

**Photo Credit:** Courtesy of Henry Lavalle and Desiree Nascimento, Universidade Federal de Pernambuco