risk factor in the development of various health problems such as hypertension, diabetes, and cardiovascular disease. Urban populations and particular ethnic groups (Amerindians, East Indians, etc.) have been shown to have higher rates of obesity compared to rural populations and other ethnic groups (Chadha, 1998). The purpose of this study was to examine the rate of obesity in an East Indian community from Limon, a rural area not yet affected by rapid tourism growth. The sample consisted of 39 adults (20 males, 19 females), with a mean age of 41 years old. The rate of obesity was investigated by analyzing body mass index (BMI), subscapular and triceps skinfold thickness. Thirty percent of the pooled sample was obese and 32.5% considered overweight by World Health Organization BMI standards. Mean BMI was 27.2. Forty four percent of the pooled sample had triceps skinfold thickness greater than 85 percentile (excessive fat), with 26% having subscapular skinfold thickness greater than 85 percentile. These results demonstrate a high prevalence rate of obesity in a rural setting, where some families are still practicing subsistence fishing and farming. We compare our population with others from the Indian diaspora and from India, matching the subsistence pattern. At this point, our results indicate that obesity might precede full immersion into the globalized world economy. Funded by a USF Globalization Research Center grant.

Cutmarks and breakage of human bones in the Upper Paleolithic, La Salpétrière cave, Department of Gard, France

B. Mafart[1], G. Onoratini[1], P. Valensi[2,1]
Antenne de l'institut de Paléontologie humaine, Dpt Préhistoire, Muséum national d'histoire naturelle, UMR 5198, Technopole de l'Arbois, Aix-en-Provence, France, [2] Laboratoire Départemental du Lazaret, Nice, France

Cannibalism was shown to have existed in Europe during the Lower Paleolithic at Gran Dolina cave in Spain, in the Middle Paleolithic Moula-Guercy cave and the Neolithic Fontbrégoua cave in France. One of the characteristics of Upper Paleolithic populations is to have buried their deads. However, fragmented human bones with cutmarks were observed within several Upper Paleolithic French caves. We present a new case study, that of La Salpétrière (Gard) in Southeastern France.
Two human remains were found, mixed with numerous fragmented reindeer bones, in an Early Solutrean deposit (radiocarbon date : 20200 +/-660 BP, Ly-940). The human remains are a right ascending ramus of a juvenile and a mental protuberance of an adult. The post-mortem lost of teeth does not make it possible to estimate more precisely the age at death. The external surface of the ramus displays numerous cutmarks, which were examined by means of optical and electronic microscopes. They are typical traces made by lithic tools. No cutmarks are observed on the other fragment. The fracture patterns of the two remains are consistant with the breakage of fresh bone.
The presence of cutmarks and breakage on human bones in the Salpetrière cave raises the question of alternative mortuary practices to burial and also of cannibalism in the Upper Paleolithic populations in France.

Using the Calcaneus as an indicator of stature in Chinese populations.

S.M. Magaha. Department of Sociology and Anthropology, New Mexico State University.

Determining stature is one of the primary techniques used for identification in a forensic case, as well as gain demographic information of a population in an archaeological context. However, stature is not always easy to determine due to population variation. Additionally, the scarcity of complete elements due to skeletal deposition makes it difficult to determine stature with confidence. Recently, studies have shown that in the absence of complete long bones, the calcaneus may be used to estimate stature (Holland 1995; Bidmos and Asala 2005). These studies are limited, however, because they have only been conducted on American white, black and South African black populations. In order to determine if the calcaneus is an accurate indicator of stature among Chinese populations, I examined the relationship between calcaneus length and stature in 15 skeletons of Chinese ancestry from the collections of New Mexico State University. I measured the calcaneus following the Holland method (1995) and compared those measurements to stature estimates of the sample following the Fully method (1956). I found a strong positive correlation between stature and calcaneus length of 80% (r=.80). Additionally, linear regression analysis of the two variables calculated an intercept (91.18cm) slope (.92cm) and standard error (3.65cm) which allowed me to develop a formula to predict stature using calcaneus length (y=.92(x)+ 91.18 □3.65cm). These results demonstrate that the calcaneus can be applied individually or in conjunction with other elements to estimate stature with confidence among Chinese populations and is recommended for obtaining stature estimates in other populations.

Genetic contributions to normal variation in gene expression for a biomarker of cellular aging (*CDKN2A*) in baboons and humans.

Michael C. Mahaney[1,2], Lorena M. Havill[1], Harald H.H. Göring[1], Thomas D. Dyer[1], Deborah E. Newman[1], Matthew P. Johnson[1], Catherine M. Jett[1], Joanne E. Curran[1], Eric K. Moses[1], John Blangero[1], Laura A. Cox[1], Jeffrey Rogers[1,2], Shelley A. Cole[1], Carlo Brugnara[3], Orah S. Platt[3]. [1]Department of Genetics, [2]Southwest National Primate Research Center, San Antonio, Texas; [3]Department of Laboratory Medicine, Harvard University Medical School, Cambridge, Massachusetts.

The genetic contributions to human variation in aging are poorly understood. In mammals, aging is associated with reduced regenerative capacity in tissues containing stem cells. One contributor to senescence in stem cell progenitors and, by extension, to aging is *CDKN2A*. Coding for cyclin-dependent kinase inhibitor 2A, *CDKN2A* is a tumor suppressor and a robust *in vivo* biomarker of cellular aging in several classes of stem cells. We conducted a study to detect and quantify the effects of genes on normal variation in *CDKN2A* expression in two primate species. We obtained expression data in two, large-scale, transcriptional profile studies using the Illumina Human Sentrix-6 BeadChip micro-array to interrogate RNA from stored lymphocytes of 500 pedigreed baboons (*Papio hamadryas ssp.*) and 1240 humans from extended families in San Antonio. We used variance decomposition methods to estimate the proportion of the variance in age- and sex-adjusted *CDKN2A* expression due to the additive effects of genes (i.e., heritability or h^2). In both species, genes account for a modest but significant ($P<0.001$), proportion of normal variation in CDKN2A expression in lymphocytes: $h^2=0.21$ in baboons and $h^2=0.31$ in humans. Further, linkage analyses in both species provide suggestive evidence for *CDKN2A* expression QTL in locations orthologous to human chromosome 9, the location of the *CDKN2A* locus in humans. These preliminary results point to potential genetic similarities underlying cellular aging in two primate species and may implicate baboons as a non-human primate model for studies of the genetics of normal variation in human aging.

Human molar crown formation in Bronze Age Britain.

P. Mahoney[1], C.A. Deter[2]. [1]Department of Archaeology, University of Sheffield, [2]Institute of Archaeology, University College London.

A growing body of comparative dental developmental data is becoming available for extant hominoids. Here we add to this dataset by presenting new data for the ontogeny of M_1 crown formation in an archaeological sample of modern humans (n=15), dating to the British Early Bronze Age (4300-3200 bp). We examined the cuspal (protoconid, hypoconid, metaconid, entoconid) enamel secretion rates, formation times, extension rates, and sequence of calcification. Molars were embedded in a polyester resin, histological thin sections prepared, then short and long period lines were analyzed under polarized microscopy.
Cuspal secretion rates (mean = 3.94μm) together with long period lines yielded average formation times of 1062 days (2.91 yrs) for the protoconid, 1080 days (2.96 yrs) for the hypoconid, 916 days for the metaconid