

ABSTRACT # 98**THE SCIENTIFIC LEGACY AND IMPACT OF STEPHEN J. SUOMI: INDIVIDUALS ARE DIFFERENT!**

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Historically, behavioral science focused on group differences, with individual variability considered a nuisance variable. Steve Suomi's pioneering work, however, saw individual differences as primary, focusing on the role of early experiences as they contribute to developmental vulnerability and resilience. This symposium honors the work of Steve Suomi, highlighting many of his important findings. He is perhaps best known for his study of temperamental reactivity, showing that temperament is a product of gene-by-environment (GxE) interactions. Students have extended this approach to chimpanzee research, using neuroimaging to study the effect of GxE interactions on the brain and cognition. Highlighting his way of thinking, is his ability to transform simple observations, such as neonatal imitation, into transformative discoveries, such as mirror neurons. Initially focusing on rehabilitating monkeys reared in impoverished environments, later he concentrated on promoting psychological well-being in captive primates, providing outdoor habitats for his monkeys. His students have extended those discoveries, focusing on enrichment and the importance of socialization for young primates. His influence and support have led his students to use GxE interactions to study impulsivity, addiction, mother-infant attachment, and to develop a widely-used test of neonatal temperament and biobehavioral functioning, and prenatal effects on the brain. Perhaps his greatest legacy is his influence on the science and thinking of people at all levels—his staff, undergraduate and graduate students, postdocs, and faculty collaborators.

ABSTRACT # 99**WHY DO SQUIRREL MONKEYS URINE WASH? A FIELD STUDY OF SAIMIRI COLLINSI IN EASTERN AMAZONIA, BRAZIL**

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Many primates perform a behavior called urine washing (hereby UW) in which an individual urinates into its palms and wipes the liquid on its soles. We tested four hypotheses on the function of UW (sexual signaling, social signaling, thermoregulation and anxiety displacement) by examining social and environmental factors that contribute to its frequency in a wild population of squirrel monkeys (*Saimiri collinsi*) in Brazil. We collected data over four months (mating seasons of 2017 and 2018) on three social groups ($N = 185.5$ contact hours). Behavioral data were collected using all-occurrence observations. Ambient temperature and humidity were recorded every 30 minutes while in contact with the groups. UW occurred in a social context in only 3.8% of cases ($N = 310$ UW occurrences), providing no support for the sexual and social signaling hypotheses. Furthermore, the mean juvenile UW rate (1.16 events/hr) was higher than that of adults (0.63 events/hr; $t_{77} = -3.31$, $p = .001$). Neither age nor sex affected the occurrence of juvenile UW ($X^2(2, N = 106) = 0.33$, $p = .56$). No relationship was found between temperature or humidity and UW rates ($p > .05$). Both juveniles and adults urine washed at a higher rate when in stressful situations ($t_{46} = 6.89$; $p = .000001$), lending support to the anxiety displacement.

ABSTRACT # 100**EFFECT OF PREGNANCY ON ALOPECIA IN ADULT FEMALE BABOONS (PAPIO HAMADRYAS SPP.)**

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Alopecia, or hair loss, occurs in both human and nonhuman primates. Although often considered a welfare issue in nonhuman primates, alopecia is a complex condition that can also be affected by variables that are not directly associated with welfare. The purpose of this study was to assess the impact of pregnancy on alopecia in female baboons housed in breeding groups. The subjects were 238 socially-housed adult female baboons of which 70 were pregnant, 58 were nursing infants, and 110 were controls. Alopecia was assessed on a 0-5 scale when the animals were sedated during routine physicals. Alopecia scores ranged from 0-3 (median = 1). Additional variables assessed included weight, age, season, age and sex of infant (nursing females), and sex of fetus and days prior to birth (pregnant females). There was a significant effect of pregnancy on alopecia. Alopecia was more prevalent in pregnant than in control females ($b = -0.852$, $P < .05$), but there was no difference between nursing and control females. Nursing females with female infants also had more alopecia than those with male infants ($b = -2.159$, $P < .01$). No other variables were significant. These results suggest that in captive female baboons, alopecia may be more greatly affected by pregnancy and nursing than other intrinsic or extrinsic variables. Supported by P51OD011133.