



Dr. Dirk Vanderwall

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Location: Merrill-Cazier Library room 154
February 5, 2009 from 3:30 – 4:30 PM

“Equine Cloning: Applications and Outcomes”

Cloning is one of several new assisted reproductive techniques being developed for clinical use in the equine industry. Potential uses of equine cloning include: 1) preservation of genetics from individual animals that would otherwise not be able to reproduce such as geldings, 2) preservation of genetic material of endangered and/or exotic equine species such as the Mongolian Wild Horse (Przewalski's horse) and 3) because of the companion animal role that horses fill for some individuals, it is likely that some horse owners will have individual animals cloned for emotional fulfillment. Of these, cloning geldings has been the first direct application of cloning in the equine industry. Although equine cloning has been successful, like other species, it remains a very inefficient process ($\leq 4\%$ success). In most species, the inefficiency of cloning results from a high incidence of embryonic, fetal and/or placental developmental abnormalities that contribute to extremely high rates of embryonic loss, abortion and stillbirths throughout gestation; and compromised neonatal health after birth. This seminar will describe the ultrasonographic, endocrinologic and histopathologic characteristics of successful (produced viable offspring) and unsuccessful (resulted in pregnancy failure) cloned equine (mule and horse) pregnancies. This information adds to an accumulating body of knowledge about the outcome of cloned equine pregnancies that will help to establish when, and perhaps why, many cloned equine pregnancies fail. In addition, this information is relevant for the comparative study of similarities and/or differences observed in the outcome of cloned pregnancies in other species.

Refreshments will follow in the Biotechnology Building Lobby

Seminar