Vás pozývajú na 52. prednášku v rámci Kuželových seminárov:

Dr. Boris Bilčík
Ústav biochémie a genetiky SAV

Who is the father?
(Mating strategies and reproductive success in broiler breeders)

ktorá sa uskutoční 11. novembra 2005 (piatok) o 14:00
v knižnici Katedry genetiky Prírodovedeckej fakulty UK
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Modern broiler strains reach 1500g body weight in 33 days, compared to 120 days needed in 1925. Such intensive genetic selection, however, brought an unwanted byproduct in the form of decreased fertility. Whether behavior, morphometrical characteristics or sperm quality can be used to assess reproductive potential of broiler breeder males, and what strategy is used by males to promote their genes, was the aim of our studies. Reproductive success in domestic and red jungle fowl depends on different factors such as dominance status, mating behavior frequency, intensity of courtship behavior, time of mating or level of sperm competition. As the level of male–male competition increases, males can use different behavioral strategies to outperform other males. In addition, considering sperm competition and last male precedence theory, males in highly competitive environments are predicted to mate at higher frequencies to out-compete the sperm inseminated by the preceding male. Differential reproductive success due to sperm competition has already been reported in poultry, however, only under artificial insemination conditions. Paternity of offspring in multiple male groups or after artificial insemination with pooled sperm can be successfully determined by DNA fingerprinting. Based on individual differences in highly polymorphic microsatellite sequences, other authors found that disproportionately more progeny is sired by males with high sperm motility. Our results suggest, that under natural mating condition, reproductive success is affected by interaction of multiple factors and contrary to our prediction, mating behavior can not be used as a reliable selection marker.

List of selected publications: