

Animal Models and Human Aggression



There are two basic strategies for developing or using animal models in behavioral studies. A first strategy, when considering animals for models of aggression, is to develop a model with some similarities to humans. Another strategy is to use findings reported in animals to make predictions about humans and then return to animals to further develop the model. In the topic of aggression, both strategies have led to interesting findings in animals and humans. The talks presented in this session will represent examples of these two strategies.

As an example of the first approach, Kim Huhman will be talking about her model of social defeat in hamsters that has long lasting consequence on behavior. Similarly, Jozsef Haller will be talking about his model of exaggerated aggression in rats and its neurobiological variables. Rich Melloni will talk about an animal model of anabolic steroid administration. These models have great translational value as it is possible to manipulate effect of the experience of the animals through neurochemical manipulations. Another aspect of working with animals is testing existing hypotheses and assessing their significance to the study of aggression. For example, the "challenge hypothesis" predicts increased testosterone release after a fight in particular species based on their social structure. Such increased release of testosterone has been described for many years, but without a specific role in aggression. Cathy Marler's research shows a clear role for testosterone in further aggression. As example of the second approach, Matt Newman will present new insights to research on bullying based on predictions originating from animal studies on stress during puberty. Rich Thompson will proceed with this approach by explaining his studies on testing the effects of vasopressin in human subjects. Based from studies in animals, it was predicted that vasopressin would affect aspects of aggression behavior in humans. These two types of approaches will be discussed in this session.