

Pharmacological approaches to aggression management:

Use of pharmaceuticals for behavior modification in primates

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Species

Old World monkeys

- Mandrill
- Gelada
- Wolf's guenon
- DeBrazza's monkey
- Silvered langur



New World monkeys

- White-throated capuchin
- Golden-headed lion tamarin



Prosimians

- Ring-tailed lemur
- Galago moholi



Common scenarios

- General conspecific aggression
 - Competition, proximity to other groups/species, bachelor groups
- Situational aggression
 - Introductions, breeding, births, male takeover
 - Tend to be temporary
- Abberant behavioral patterns
 - Stereotypies, self-directed behavior, inappropriate response to normal social cues → can trigger aggression
 - Longer-term



What we have learned...

- Most frequently needed in species that live in large and complex social groups, especially those with multilevel societies
 - Cercopithecines (baboons, mandrills, geladas, guenons, macaques, etc)
 - Typically, males emigrate from natal group so are competitive and aggressive with one another
 - Often see young, inexperienced males exhibiting inappropriate aggression toward conspecific males, females, and infants
 - Many species are matrilineal and female competition often provokes male aggression
 - Introductions can be particularly challenging
 - Effectiveness of drug varies by species and individual
 - Mandrills vs Geladas





Pharmaceutical experience

- Historically used haldol (anti-psychotic) for majority of behavioral disorders, particularly aggression or psychogenic issues
 - Side effects
 - Long-term use can cause health problems
- Antidepressants such as SSRIs (trazadone, fluoxetine, sertraline) favored now
 - Fewer side effects
 - Safer for long-term use
- Contraception
 - Oral bc
 - Deslorelin implants (chemical castration)





Important points

- Drugs work best in combination with behavioral management/interventions
- Can be used successfully for shorter periods to support inherently stressful events, such as a birth or introduction
- Very slow weaning can be important
- Conflict and aggression are a natural part of social behavior, particularly species with complex social organization
- Understand what is an allowable level of aggression and do not immediately resort to pharmaceutical interventions
- Consider the individual's role/rank in the group



