

# The use of psychotropic drugs in the management of aggression in zoo animals

ASSOCIATION  
OF ZOOS &  
AQUARIUMS

AZA Reproductive  
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Center Workshop



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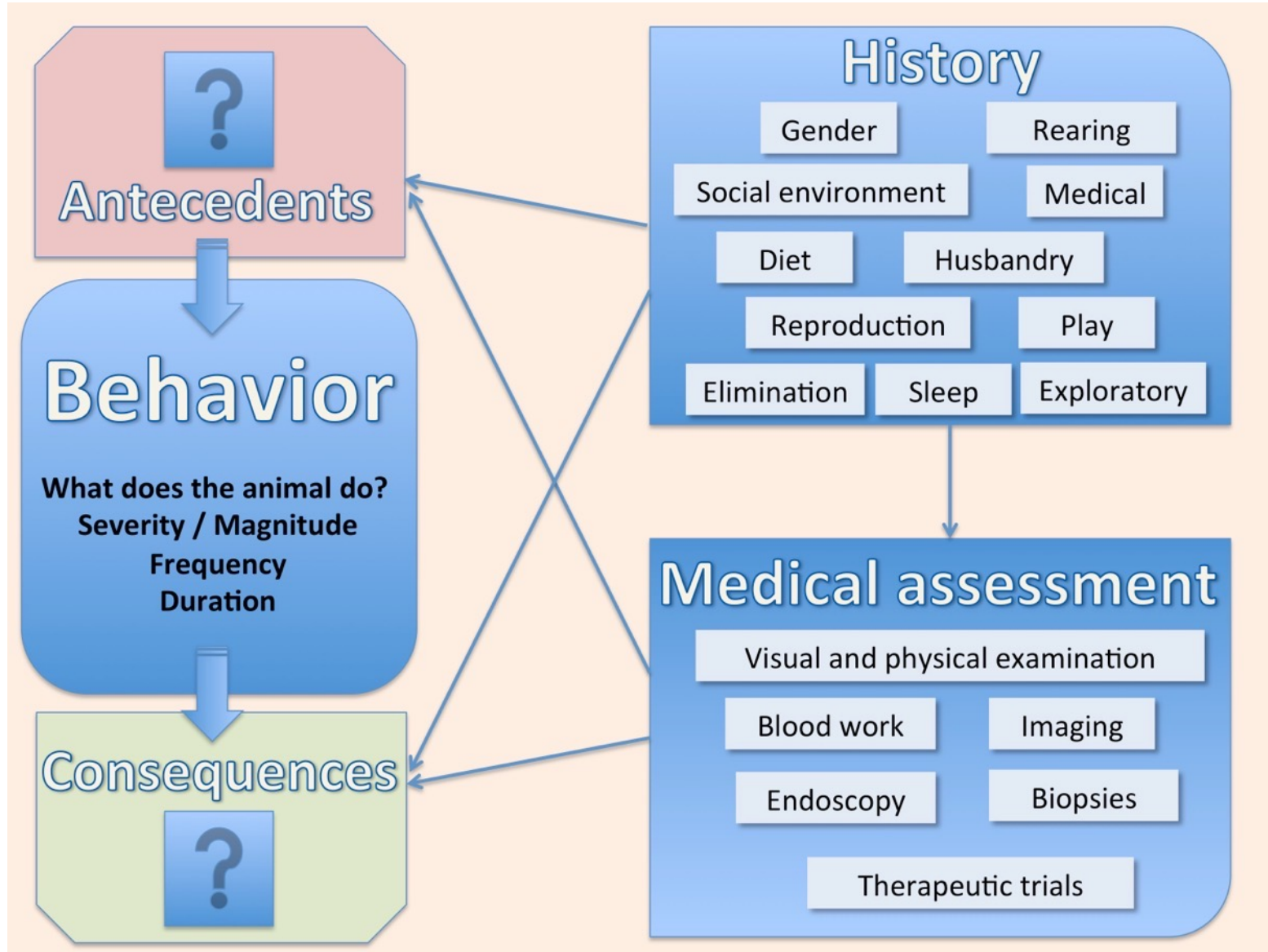


## Psychotropic drugs and aggression

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- Where do they fit in the management plan?
- When to consider using them?
- What to expect from them?
- What everyone should know about psychotropic drugs?
- A note on the ethical use of behaviour meds in zoo animals
- My experience with meds and aggression in zoo animals





# Management of behavioral issues

- Environment
- Behavior modifications
- +/- Drugs to allow the first two steps to be effective





# Which molecules am I talking about?

- Selective Serotonin reuptake Inhibitors (fluoxetine (Prozac), etc.)
- Serotonin Antagonist and Reuptake Inhibitors (trazodone)
- Tricyclic Agents (clomipramine)
- +/- Zylkene (alpha-casozepine)
- +/- Benzodiazepines







***When to consider using behavior meds?***



**NOT AS  
THE LAST  
RESORT!!!**





**What to expect from  
psychotropic drugs in  
aggression cases?**



# What to expect?

- An emotional state that favors learning
  - Better participation in training
  - More interest for enrichment
  - Decreased reactivity
  - Better intraspecific communication
  - Better welfare
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- Overall decreased aggression
  - Absence of sedation





**DRUGS DO NOT TELL  
THE ANIMALS  
WHAT TO DO!**



# Key points on psychotropic drugs

- They do not sedate the animals.
- They are not prescribed for life. Average 6-18 months.
- They allow for faster neurogenesis and synapsogenesis.
- = They help grow new neurons much faster!
- They help the animal take control over their emotions.
- Each individual react differently to different drugs and doses.
- Drug adjustment is an art that requires great team work.





# Ethical use of behaviour medications for aggression

A photograph of a mountain goat with large, curved, ridged horns standing in a grassy field. The goat is facing slightly to the left but looking towards the camera. The background is a hilly, grassy landscape with some rocks and sparse vegetation. Another goat is visible in the background, slightly out of focus.

- Sedation should never be a long-term objective.
- A note on the use of antipsychotic agents (ex. haloperidol, zuclopenthixol).
- They can never replace good management practices.





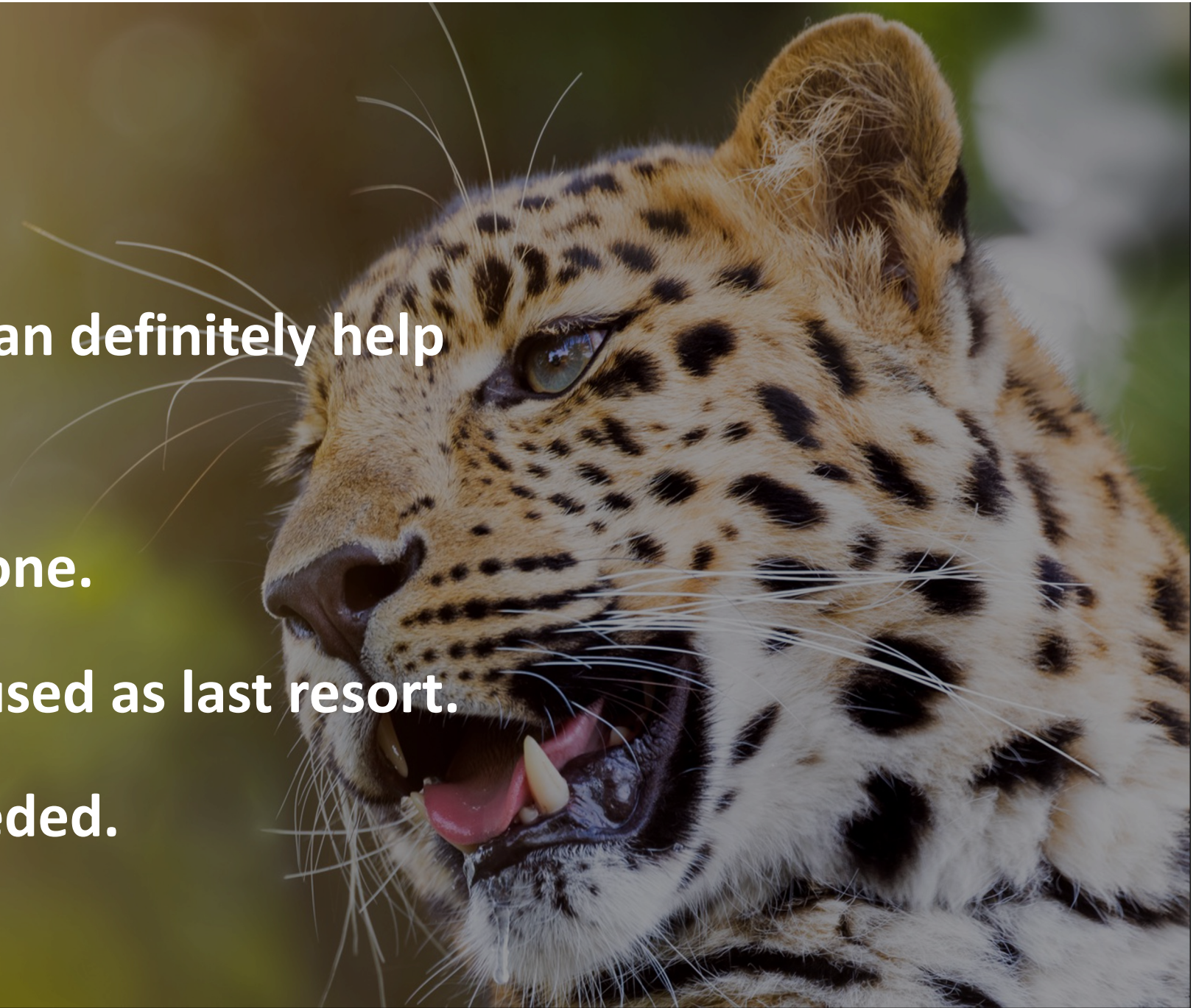
# Our experience – Aggression cases

- NHP intraspecific aggression
- Intra and interspecific aggression in parrots
- Great ape intraspecific aggression
- Lion prides, wolf packs, raccoons,
- Intra and interspecific aggression in tigers
- Intraspecific aggression in suids
- Intraspecific aggression in sirenians, otariids, phocids
- Intraspecific aggression in reptiles
- Maternal aggression – Infanticide in various species



# Conclusion

- Psychotropic drugs can definitely help if well prescribed.
- They do not work alone.
- They should not be used as last resort.
- More research is needed.





# Questions ?

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