Immun contraception
Where we started and where we are headed...

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History

  - Dog GnRH vaccine approved by USDA for treatment of BPH
  - Deer, wild horse vaccine approved by EPA (GonaCon)
  - No dog or cat vaccine approved
  - Horse PZP vaccine approved by the EPA

Barriers

- Duration of immunity-boosters required
- Never 100% effective
- Safety (injection site)
- Regulatory hurdles
- Technical difficulties
- Product development costs

Thanks
GnRH Vaccine

**Pfizer Animal Health (Zoetis)**

- "Canine GnRH immunotherapeutic for treatment of benign prostatic hypertrophy in male dogs"
- Two doses 4-6 wks apart; repeat every 6 months
- No longer on the market

- **Improvac®**
  - Approved for cattle (behavior) and pigs (boar taint)
  - Effective for male elephants to suppress musht

Current Immunocontraceptives

- **GnRH vaccines**
  - Effective in males, females (deer, wild horses, cattle, pigs)
  - Zona pellucida vaccine
  - Effective in females (horses)
  - Species differences (porcine doesn’t work in cats)

Where are we now?

- Exploring a GnRH vaccine based on GonaCon (different formulation) for applications in dogs (Dr. Lecuona)
- “Bleeding edge” research on methods to achieve single treatment very long term immunity (Drs. Munk and Samoylova)

The future for immunocontraception for dogs and cats?

- Single injection very long term (>5 years to permanent) suppression of fertility for males and females

- When and at what cost?
  - (The LR estimate*)
    - Five years of research - $10M
    - Five years of development - $15M

*optimistic