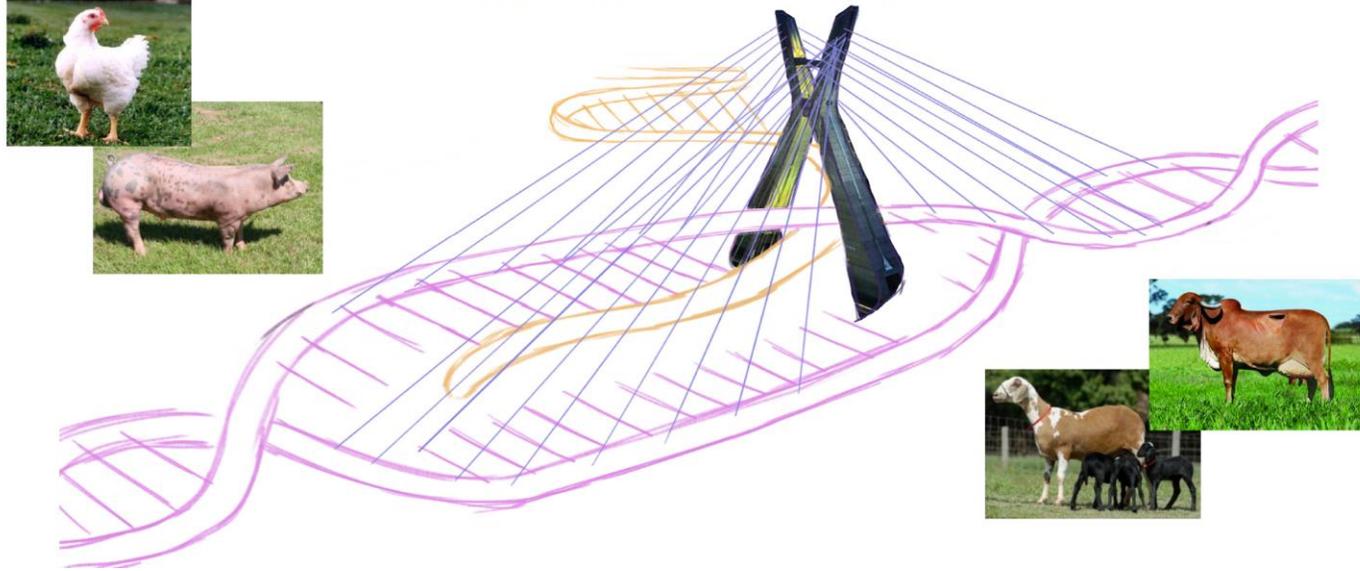


# 4th International Workshop on Regulatory Approaches for Agricultural Applications of Animal Biotechnologies

*12-16 September, 2022 – São Paulo, Brazil*

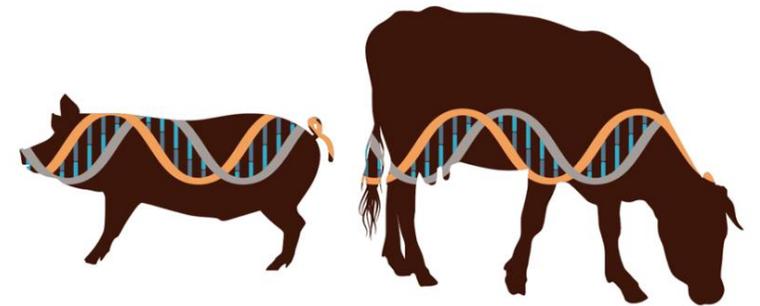


# Looking to the future

Eric Hallerman

# Fourth International Workshop on Regulatory Approaches for Agricultural Applications of Animal Biotechnologies

- To find full practical application, animal biotechnology will have to be *integrated* into classical selective breeding programs
- Animal biotechnology can make contributions to:
  - Animal health
  - Nutritional enhancement
  - Animal welfare
  - Adaptation to a changing climate
  - Reproductive confinement
  - Agricultural production in the developing-world context
  - Sustainable agricultural production



# Fourth International Workshop on Regulatory Approaches for Agricultural Applications of Animal Biotechnologies

- Regulation affects what genes and animals to edit, what traits to pursue
- The basis for regulation (Codex Alimentarius, Cartagena Protocol, national gene technology act, extended scope of existing regulation, ...) affects the philosophy and development of regulatory regimes, especially regarding regulatory triggers
- Regulation should be *risk-scaled*
- Regulation ideally should be *coordinated* among trading partners
- As regulatory systems develop, we have *much* to learn from one another...

# Fourth International Workshop on Regulatory Approaches for Agricultural Applications of Animal Biotechnologies

- Some countries are well along in developing their regulatory systems, ...
- The first genome-edited products are reaching practical utilization.



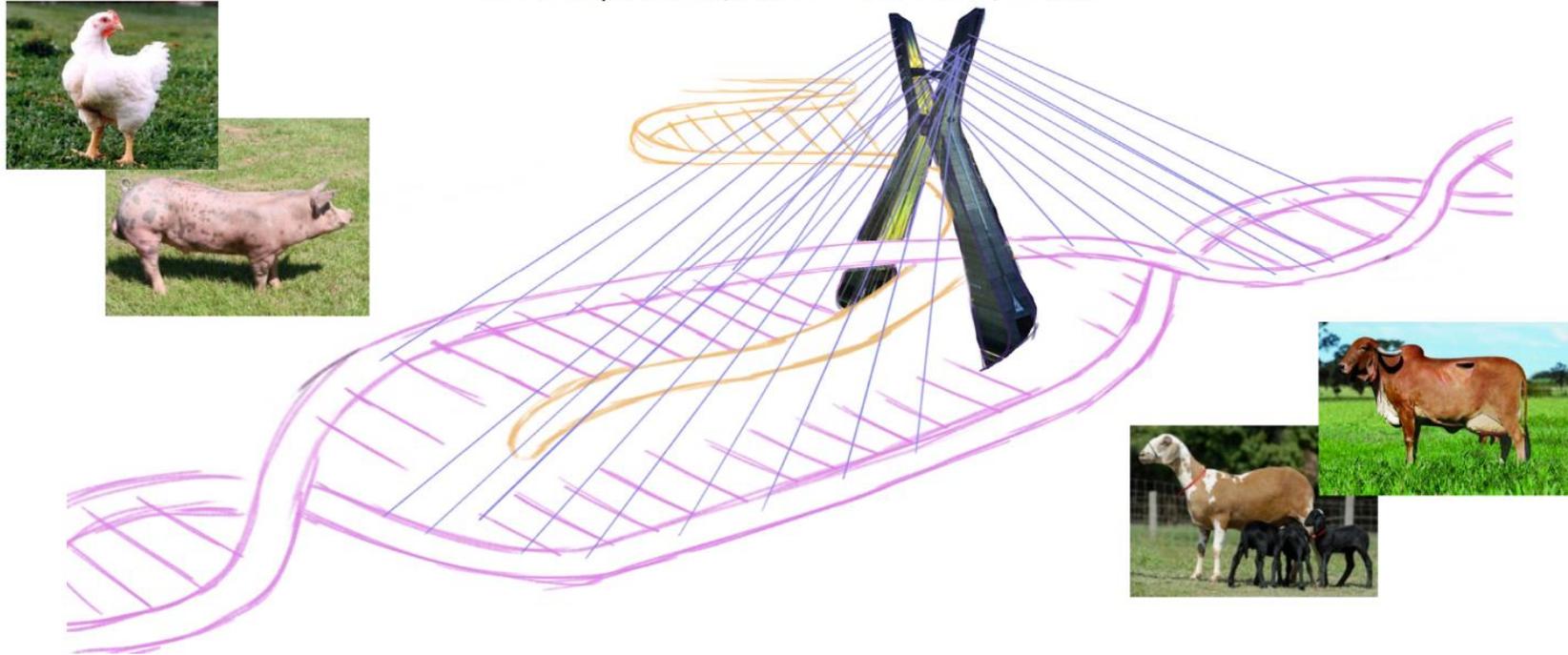
# Fourth International Workshop on Regulatory Approaches for Agricultural Applications of Animal Biotechnologies

- Issues remain:
  - Development of national policy in many countries
  - Building trust in animal biotechnology
  - Regulatory coordination among trade partners
  - Access and benefits sharing



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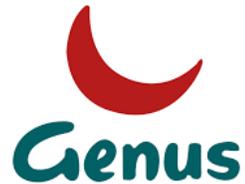
An international workshop doesn't just *happen*...

# Organizing Committee

- Diane Wray-Cahen (U.S. Department of Agriculture)
- Eric Hallerman (Virginia Tech, USA)
- Maria Lucia Zaidan Dagli (University of Sao Paulo, and CTNBio, Brazil)
- Bruce Whitelaw (Roslin Institute, UK)
- Anne Ndanu Muia (Kenyatta University and Biosafety Kenya, Kenya)
- Margaret Karembu (ISAAA AfriCenter, Kenya)
- Pedro Rocha (Inter-American Institute for Cooperation on Agriculture, Costa Rica)
- Olah Aldemita (ISAAA SEAsiaCenter, Philippines)
- Dan Kovich (U.S. Department of Agriculture – Foreign Agriculture Service)
- Mark Tizard (CSIRO, Australia)
- Heather Lombardi (HHS – U.S. Food and Drug Administration)
- Kayla Knilans (U.S. Department of Agriculture – Foreign Agriculture Service)
- Mark Walton (AquaBounty, USA)
- Luis Sergio Camargo (EMBRAPA, Brazil)
- Mariana Murrone (Ministry of Agriculture, Argentina)
- Justin Bredlau (U.S. Department of Agriculture)



# Sponsors



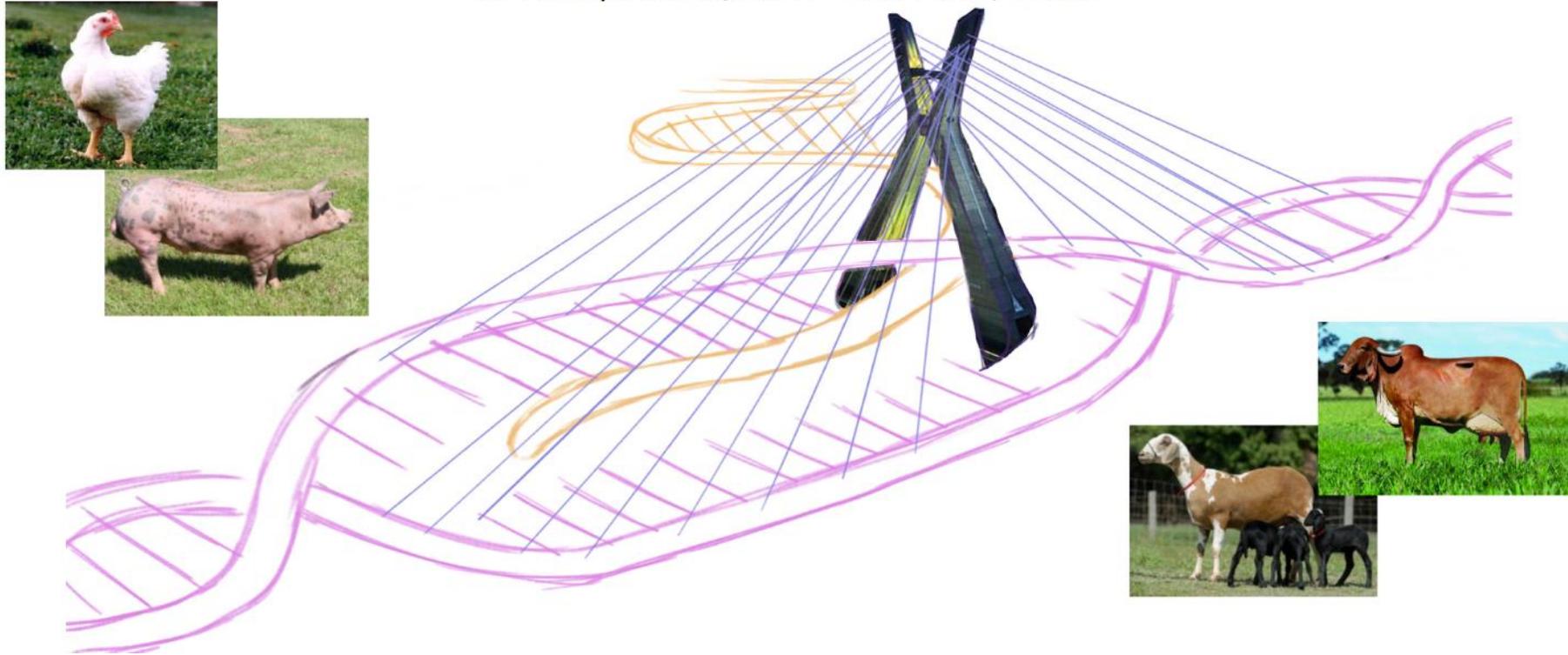
# Participants

- In person:
  - ~75 people
  - ~25 countries
- Virtual:
  - ~50 people
  - ~20 countries



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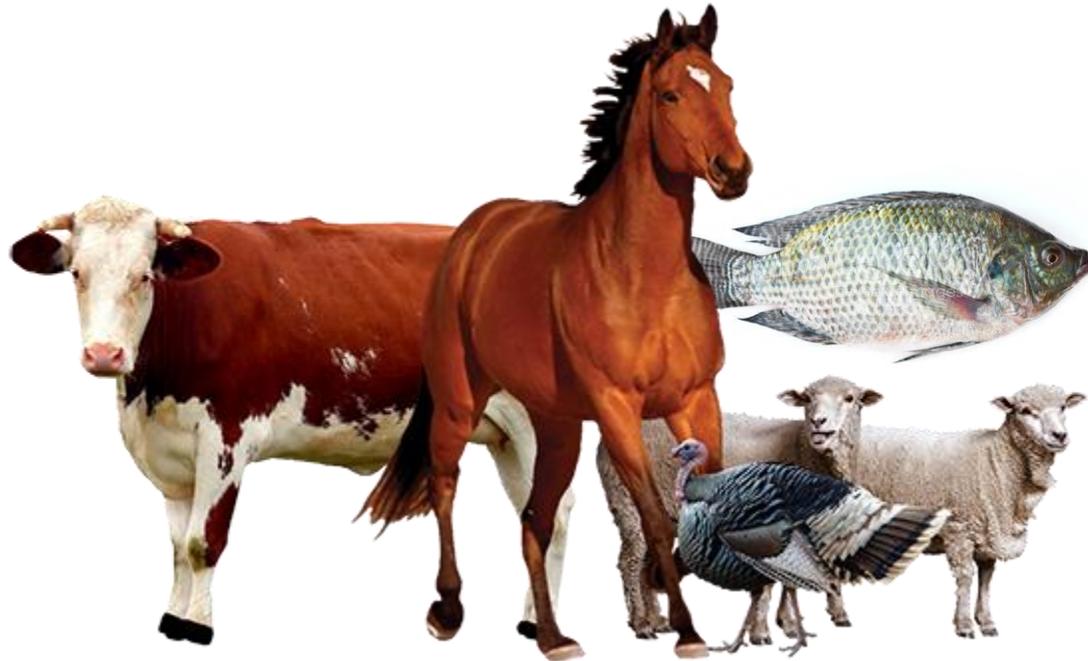
What are the anticipated *impacts* of this workshop?

## *Short-term outcomes of this workshop*

- Country-by-country database on development of regulatory policy
- Presentations and podcasts posted on Animal Biotechnology Resources website:  
<https://sites.google.com/a/vt.edu/animalbiotechresources/third-annual-2017>
- Manuscript of key findings of workshop for publication in an appropriate journal
- *Interpersonal network among and between researchers, developers, and regulators*

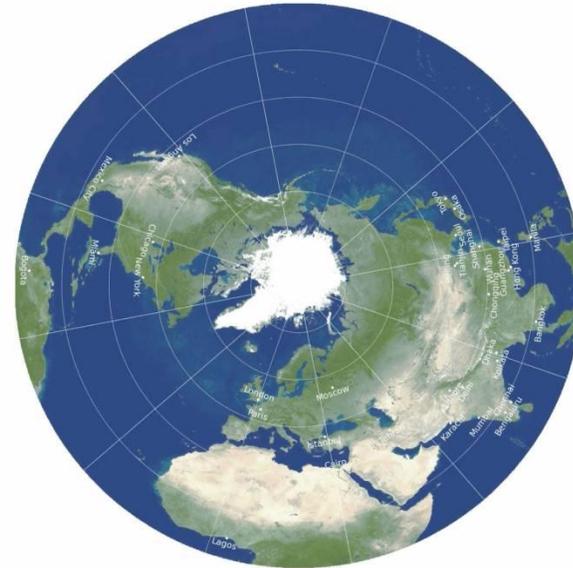
## *Longer-term* outcomes of this workshop

- Promotion of risk-scaled, *enabling* regulatory policy
- Regulatory approval, production, and trade of products of animal biotechnology



# What of this series of workshops?

- 2011 – Buenos Aires
- 2014 – Brasilia
- 2017 – Charlottesville
- 2020 – Virtual
- 2022 – Sao Paulo
- 2025? – where?



# What do we need to keep this series going?

- Renewal of sponsorship:

- Government agencies:



- Companies:



- NGOs:

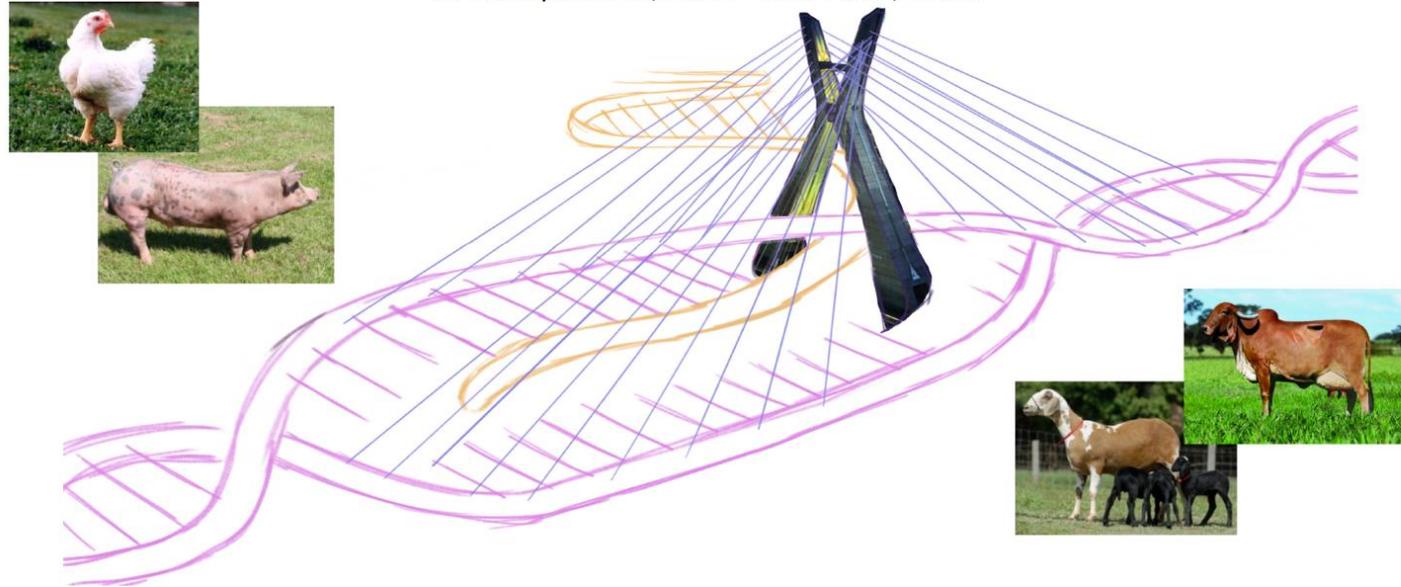


# What do we need to keep this series going?

- Renewal of the Organizing Committee
  - Representation from research, developer, and regulatory communities
- *Consider stepping forward to join...*

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*... How do we keep the conversation going?*

## Open discussion

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