

Not So Dystopian

Zoonotic disease and human-animal interactions bring us closer to a feared narrative

Mikalah Singer, JD, LLM
Public Policy Manager, Center for Contemporary
Sciences
Executive Director, Fox Protection International



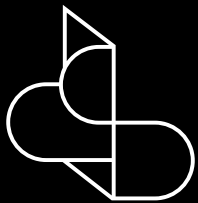
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MARION COTILLARD MATT DAMON LAURENCE FISHBURNE JUDE LAW GWYNETH PALTROW KATE WINSLET
NOTHING SPREADS LIKE FEAR
CONTAGION



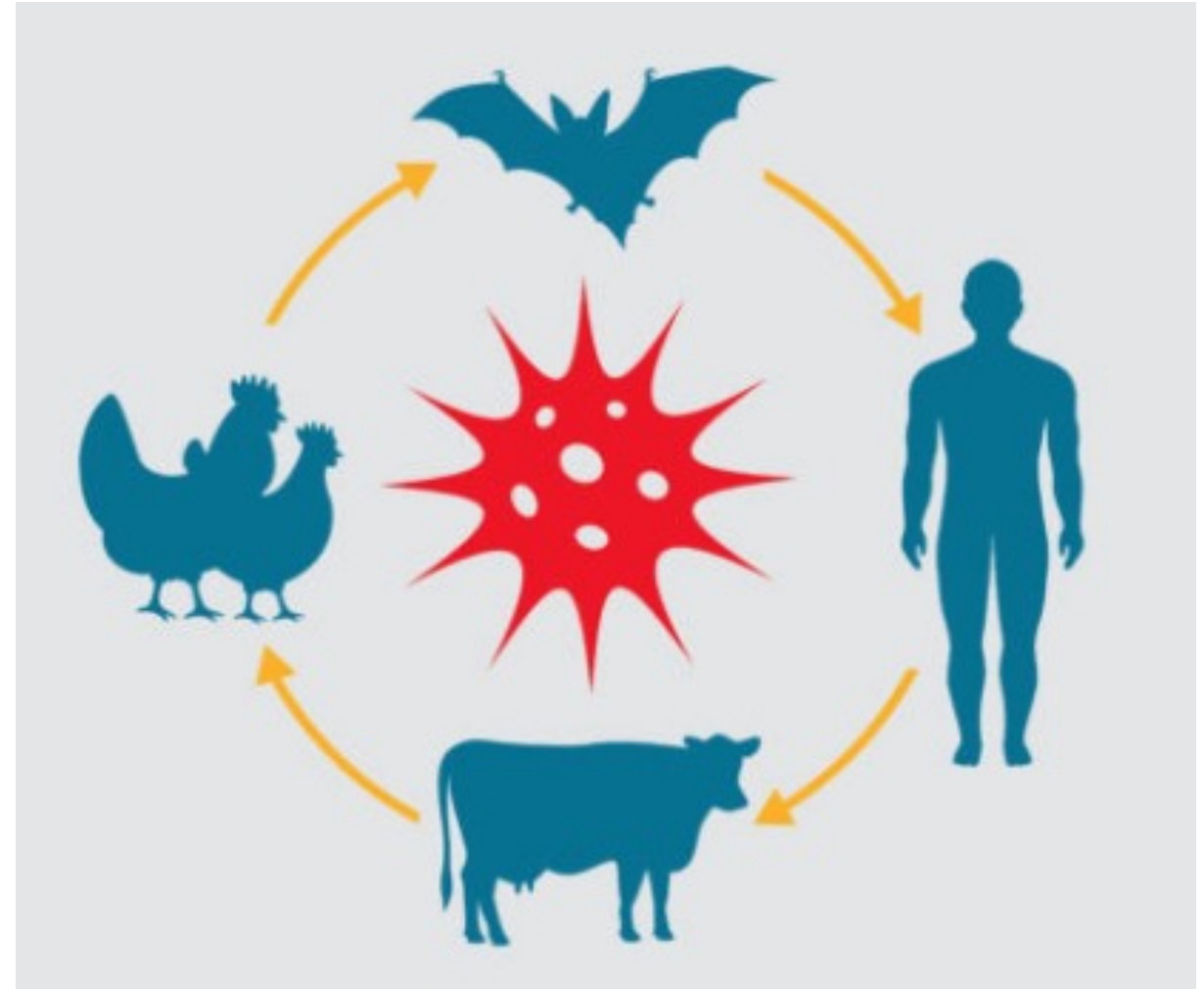
Three-fourths of emerging infectious diseases originate in animals and spread to humans.¹



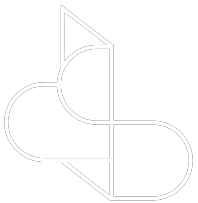
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What are Zoonotic Diseases (or Zoonoses)?

- Diseases that have originated in animals and spread to humans as a result of human-animal interactions.
- Can be viral, parasitic, or bacterial.
- Zoonotic diseases are very common – more than 6 of 10 known infectious diseases in people are spread between people and animals.



The World Health Organization (WHO) recognizes zoonotic diseases as a “major public health problem around the world due to our close relationship with animals in agriculture, as companions, and in the natural environment.”²

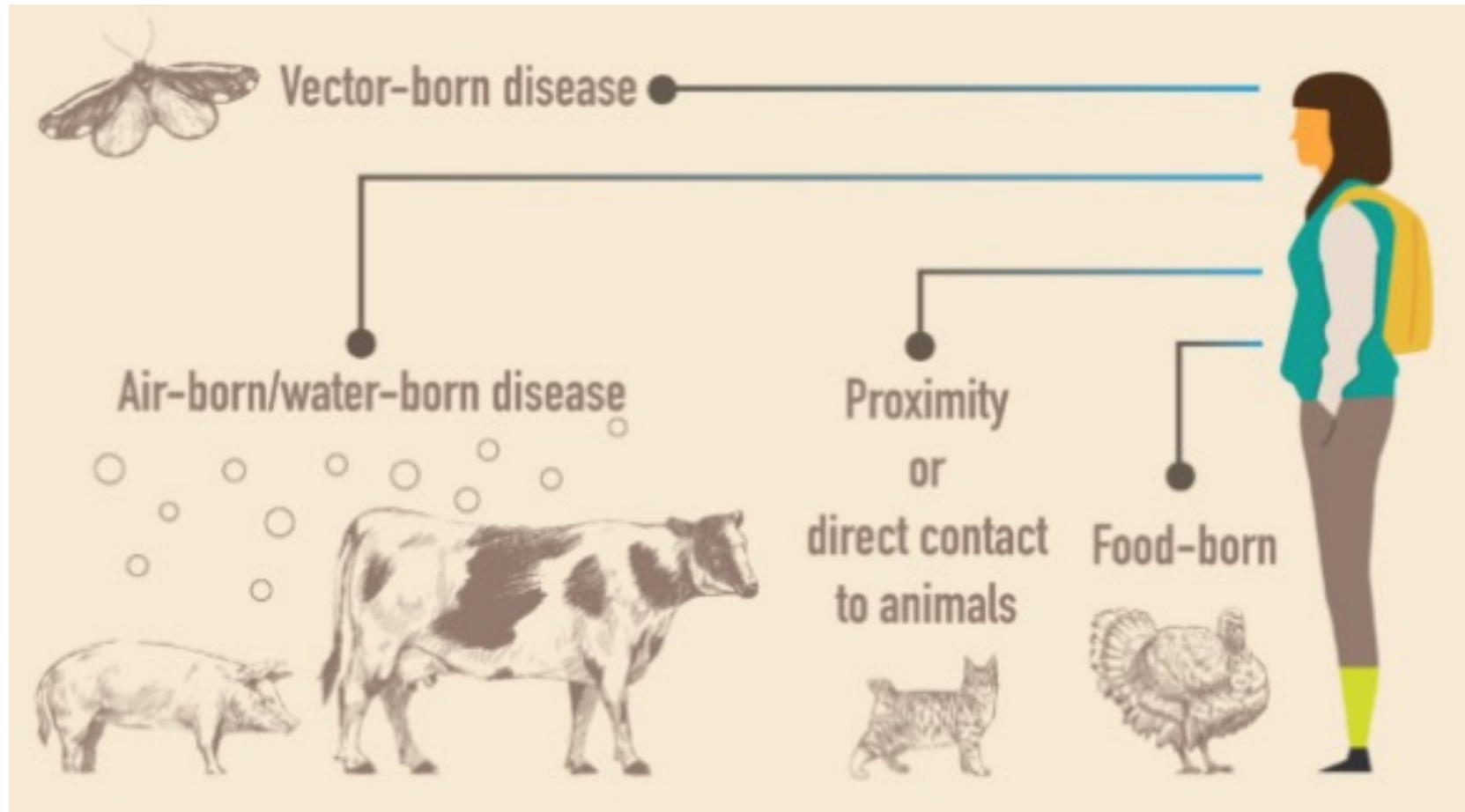


Human Exploitation of Animals

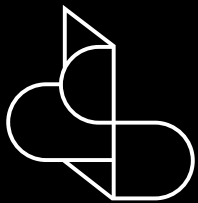
- **Factory Farming**
- **Wet Markets**
- **Canned Hunting**
- **Wildlife Trade**



How Do Germs Spread Between Animals & Humans?³⁴



“Spillover” – An infection that has moved from an animal source to cause an outbreak in humans, which may then lead to an epidemic.⁵

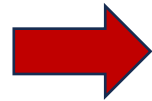


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The Process and Chances of a Spillover Event

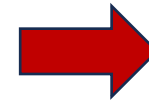
Pathogen Pressure

The amount of pathogen that is exposed to the new host at any given point in time and space.



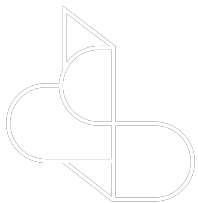
Human & Vector Behavior

Behavior that could lead to exposure including time spent near the host species.

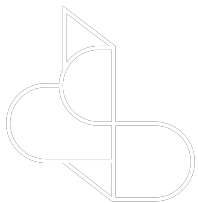


Attributes of the Host

The probability of spread within the new species and the severity of the infection. This is determined by genetic, physiological, and immunological attributes of host.



Transmission requires close contact between the primary host species and the secondary host species.



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Some Recognized Zoonotic Diseases

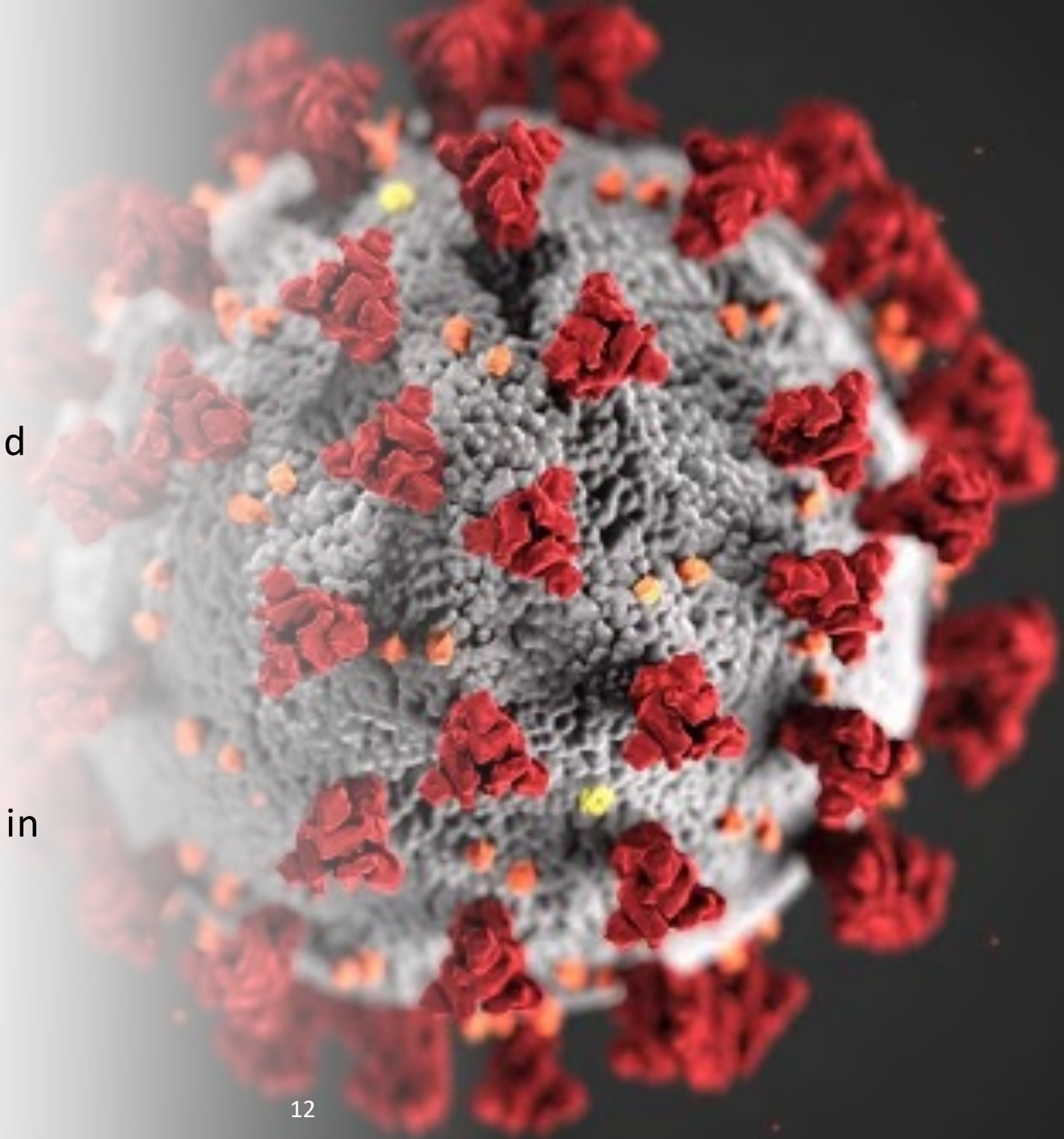
Excluding Common Foodborne Infections

- Zika Virus⁶
- Ebola Virus⁷
- Influenza Type A Viruses⁸
- Coronaviruses⁹
 - Severe Acute Respiratory Syndrome (SARS)
 - Middle Eastern Respiratory Syndrome (MERS)
 - COVID-19
- West Nile Virus¹⁰
- Lyme Disease¹¹
- Yellow Fever¹²
- Rabies¹³
- Brucellosis¹⁴
- Hepatitis E¹⁵



Coronaviruses and SARS-CoV- 19

- Coronaviruses are often found in mammals that exist in high population densities or that have strong connections with humans – bats, rodents, pigs, and dogs.⁹
- COVID-19 has been reported in a wide variety of mammals including canine and feline species, mink and deer.¹⁶



Influenza Viruses⁸

- Avian Flu (H5N1, H9N2)
- Swine Flu (H1N1, H3N2)
- Other species including horses and dogs have their own varieties of influenza.

- Influenza strains transmitted from animals to humans are usually acquired through **direct contact** with *infected animals* or *contaminated environments*.

“If [an influenza virus of animal origin has] the capacity to spread sustainability from one person to another, it could start a pandemic because it would be so new that humans would have very little immunity to it.”¹⁷

-World Health Organization



Rabies

- Rabies is found on all continents except Antarctica.
- Once symptoms appear, the disease is almost always fatal.
- Rabies virus can infect all animals considered livestock.



Fox, dog, Skunk and Raccon are the main vectors of rabies into livestock in the north America and Europe.



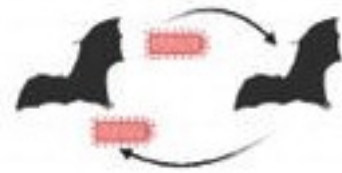
Dog and Jackal are the main vectors of rabies into livestock in Africa and middle east



Bats, fox and, Dog are the main vectors of rabies into livestock in Latin America and Caribbean

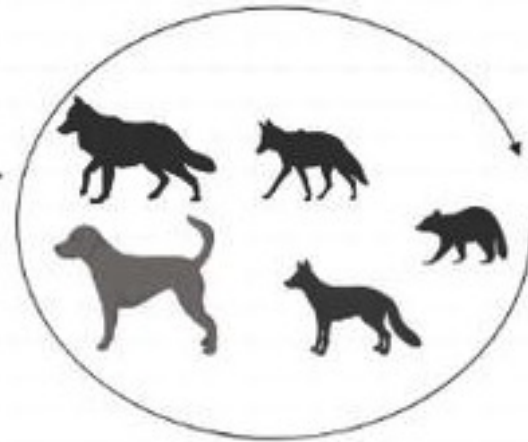


Dog, Jackal and Raccon are the main vectors of rabies into livestock in Asia



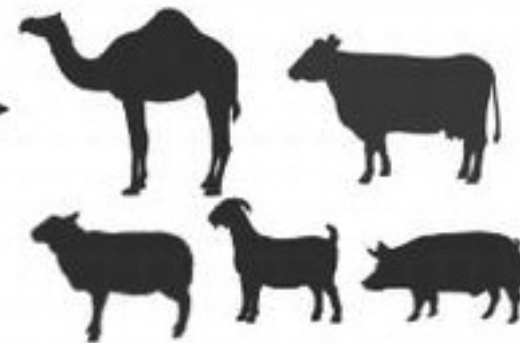
1

Rabies virus circulating within bats communities



2

Rabies virus maintenance within terrestrial communities



3

Rabies virus can infect all livestock including camels

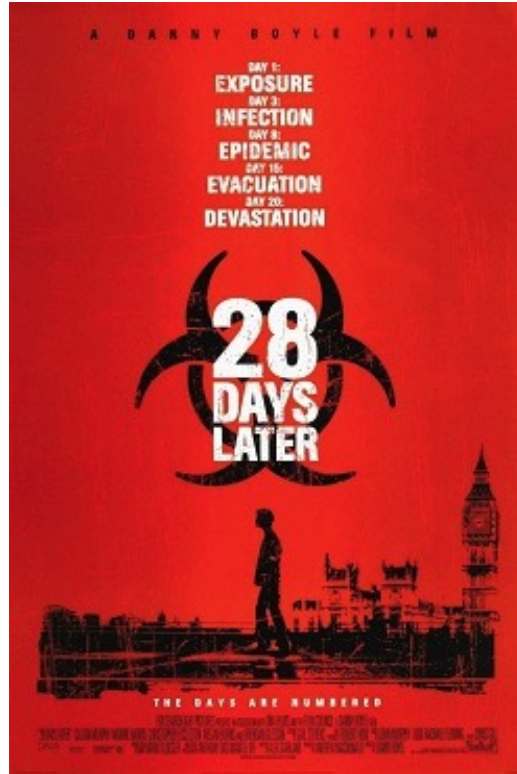
Time to talk zombies, some
vampires, and the apocalypse...

During the first few months of the COVID-19 Pandemic Contagion (2011) jumped from the 270th most watched Warner Bros Film to the 2nd and was in the top 10 of iTunes rentals for weeks.¹⁸



28 days later (2002)

Animal Testing -> Zoonotic Disease Outbreak



”Post-apocalyptic horror film” where main character wakes up from a coma to find that a highly-contagious virus has caused a breakdown in society after an infected chimpanzee is released from a laboratory.

The Flu (2013)

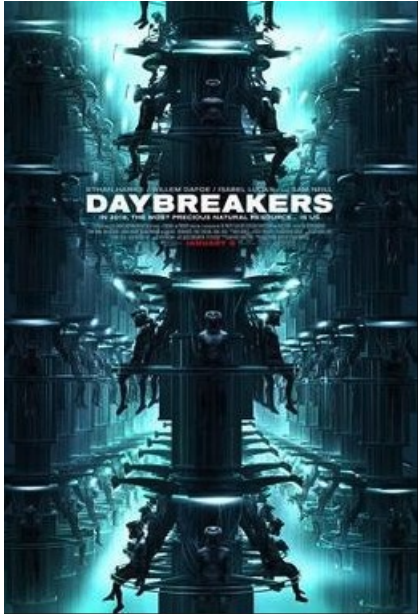
Avian Flu



”Disaster film” where a deadly outbreak of H5N1 (avian flu) becomes airborne.



Rabies



- Daybreakers (2009) - vampire
- Rabid (1977)
- Patient Zero (2018)
- Infection (2019)
- World War Z (2013)
- Quarantine (2008)



"QUITE POSSIBLY THE BEST HORROR FILM THIS YEAR."



Left4Dead + Resident Evil

Multiple Virus Mutations



2. Progenitor virus
3. T-virus
 - 3.1. T-Veronica virus
 - 3.2. NE-T virus
 - 3.3. T-Cameron virus
 - 3.4. T-JCCC203
4. G-virus
5. Other viruses
 - 5.1. Unknown virus
 - 5.2. tG-virus
 - 5.3. C-virus



“The mass hysteria, the suicides, the fear. After GGB, the animals could no longer be eaten because **they’d been infected by a virus that was fatal to humans** ... After GGB, the world changed definitively. They tried vaccines, antidotes, but the virus resisted and mutated.”

"What a compelling, terrible beauty this novel is. My heart was breaking even as my skin was crawling."
—LISA McINERNEY, author of *The Glorious Heresies*

"Provocative, muscular, and entirely unforgiving, this terrifying novel is a timely reminder that words have the power to strip us of our humanity. I gulped it down with my heart racing."
—SUE RAINSFORD,
author of *Follow Me to Ground*

"A brutal tale of what humans are capable of inflicting on themselves when social norms collapse. Grotesque, gloriously nasty. Utterly compelling."
—LUCIE McKNIGHT HARDY,
author of *Water Shall Refuse Them*

"This provocative novel expertly wields a double-edged cleaver."
—THE GUARDIAN

"This is a hideous, bold, and unforgettable vision of the future. Just make sure you've eaten before picking it up."
—i-D magazine (UK)

"Told with a chilly aloofness that makes the horror of it all the more disturbing."
—FINANCIAL TIMES

"A dystopic fable as chilling as it is compelling." —PARIS MATCH (France)

"Sitting comfortably? Not after even the tiniest nibble of this gut-churning, brilliantly realized novel." —DAILY MAIL

"A captivating dystopia that invites [readers] to descend into a hell where anguish and desire come head-to-head."
—LA NACIÓN (Argentina)

"An astounding portrait of a humanity ready to do anything to satisfy itself, even at its own expense."
—LE MONDE (France)

"Heavy, magnetic, disturbing—the novel of the year." —CULTURAMAS (Spain)

“This is a hideous, bold, and unforgettable vision of the future. Just make sure you’ve eaten before picking it up.”

—*i-D* magazine (UK)

“A captivating dystopia that invites [readers] to descend into a hell where anguish and desire come head-to-head.”

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What do we need and how can we use the feared narrative?

Better legislation to change the current system of human exploitation of animals-

- **Moratorium on Factory Farms – stressful, confined spaces, similarly genetic animals is a breeding ground for infection to spread quickly.**
- **Ending Fox/Coyote Penning – wildlife transferred across state lines for sport has caused rabies to spread.**
- **Prevent Wet Markets – wildlife used for human consumption leads to disease spread and wet markets create a hot zone for transfer between species.**
- **End Fur Farming – a form of factory farming that creates hot zones of disease and can help facilitate mutations of diseases.**

First Rabid Moose Recorded in Alaska Was Stumbling Through a Town

T FEBRUARY 15, 2023

Marburg Virus Disease Outbreak Confirmed

By IDSE News Staff

For the first time, Marburg virus

Czech Republic

Britain

What is Marburg

disease

a

Marburg virus is a deadly

same way. It can cause

Equatorial Guinea with

By Pooja Toshniwal Paharia

Reviewed by *Benedette Cuffari, M.Sc.*

Ongoing avian influenza outbreaks in animals pose risk to humans

Situation analysis and advice to countries from FAO, WHO, WOAHA

12 July 2023 | Statement | Geneva/Paris/Rome | Reading time: 6 min (1743 words)

By [CAITLIN TILLEY, HEALTH REPORTER FOR DAILYMAL.COM](#)

UPDATED: 22:30, 4 August 2023

... why is ... so serious?

+

ted

July investigation

PAC: Government “not sufficiently prioritising threat” from animal diseases like COVID-19, avian flu, swine fever

16 November 2022

The next pandemic could spring from the US meat supply, new report finds



KAREN WEINTRAUB USA TODAY

Fur farms are breeding grounds for disease and a public health threat. It's time to shut them down

Experts say the risk of COVID and "bird flu" H5N1 outbreaks outweigh the benefits of these cruel facilities

By **MATTHEW ROZSA**
Staff Writer

PUBLISHED AUGUST 6, 2023 1:59PM (EDT)

In Summary

- Three-fourths of emerging infectious diseases are zoonotic.
- Zoonotic diseases have led to pandemics/epidemics in the past.
- Society has recognized reality in horror films based on disease outbreaks (COVID).
- The situations in horror films are not impossible possibilities, while we may not have a full-on zombie apocalypse, diseases have the ability to change the world and we should be trying to stop them at the source.

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REPENT
THE END IS
EXTREMELY
FUCKING
NIGHT

Thank you.

Mikalah Singer

Mikalah@contemporarysciences.org

Twitter: @MikalahSinger @Contemp_Sci