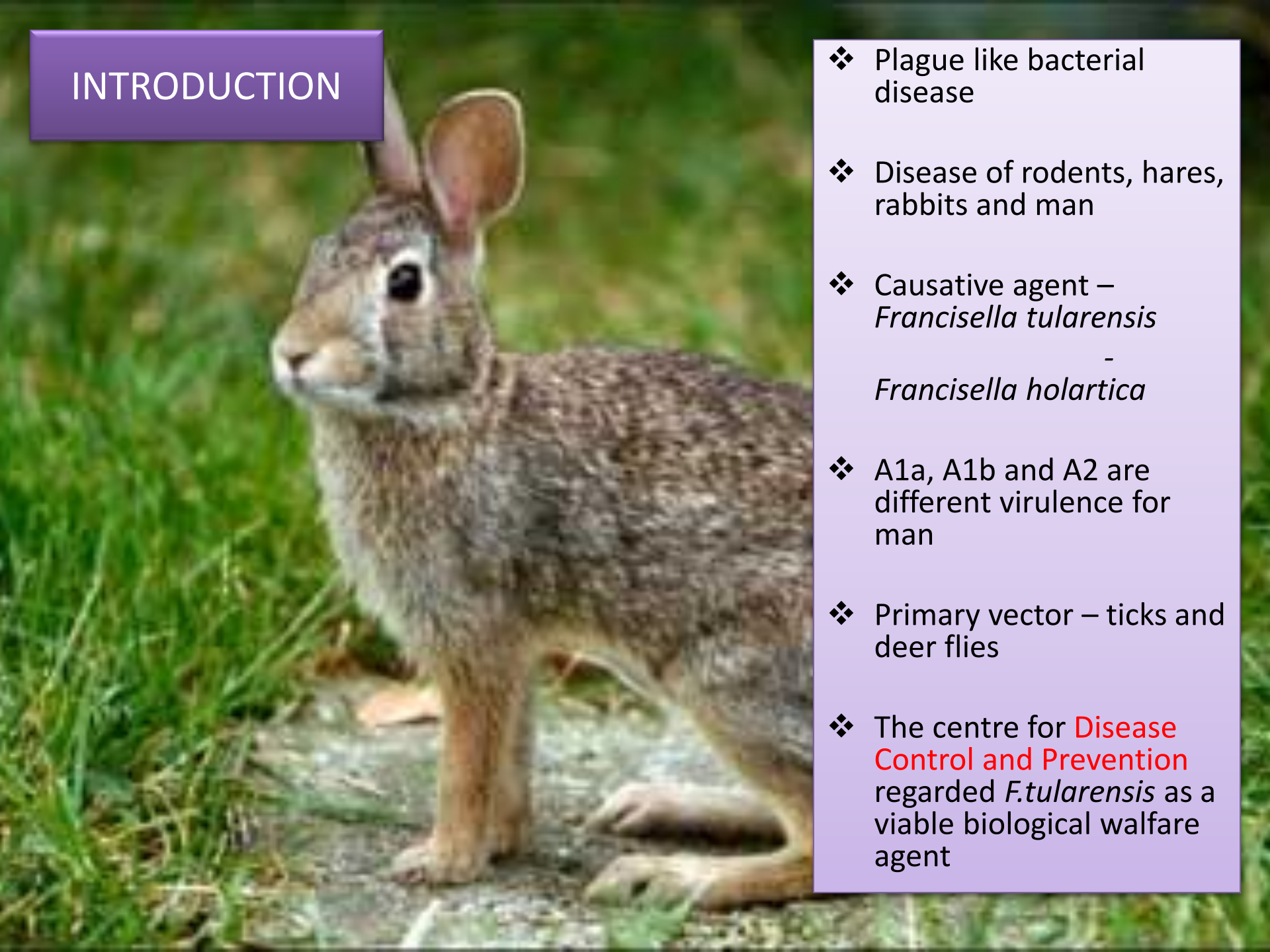
TULARAEMIA

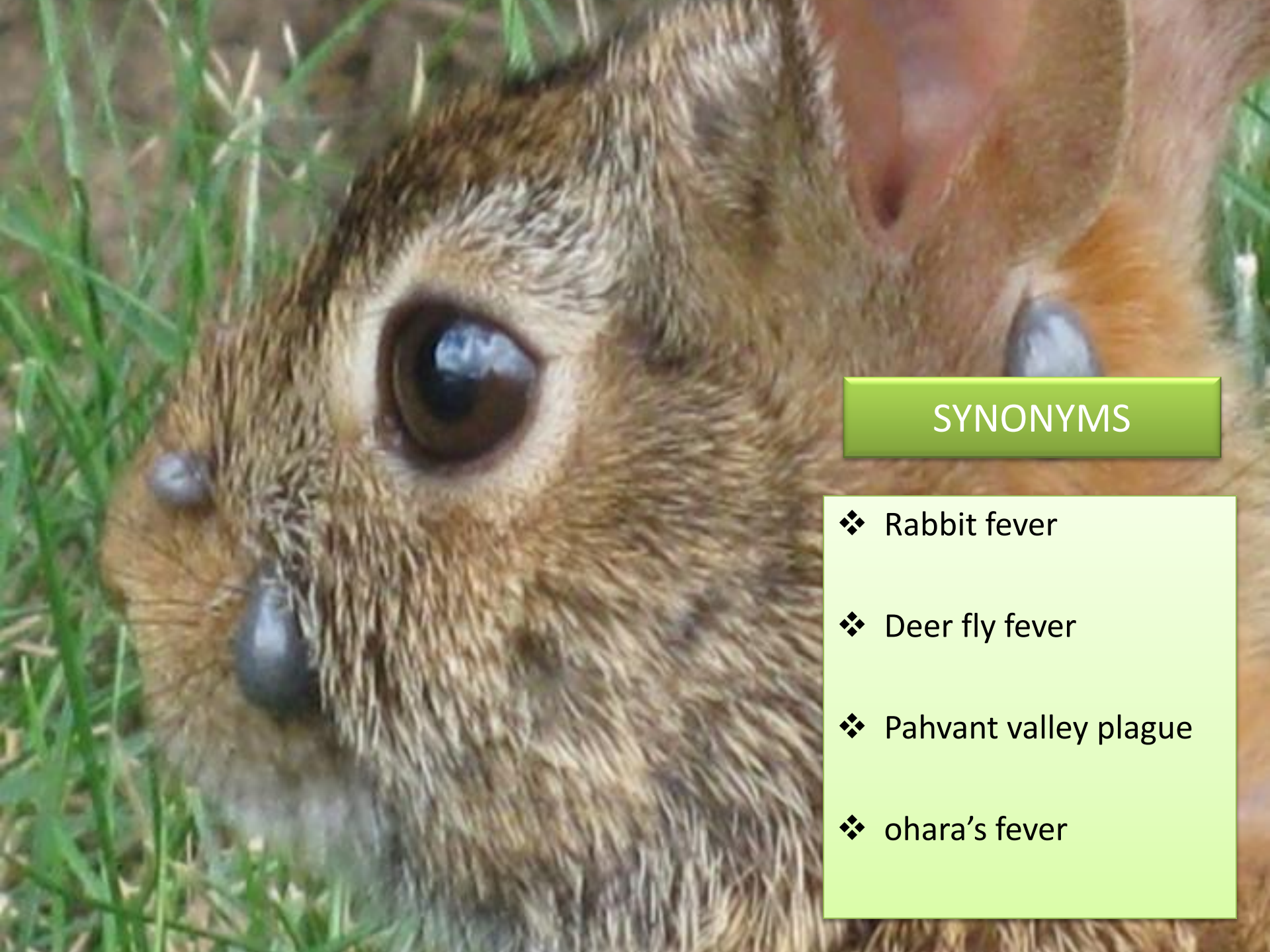
LEARNING OBJESTIVES

- Introduction
- Synonyms
- Taxonomy
- Hosts
- Epidemiology
- Clinical Manifestations
- Diagnosis
- Prevention and control
- Treatment

INTRODUCTION



- Plague like bacterial disease
- Disease of rodents, hares, rabbits and man
- Causative agent – *Francisella tularensis* - *Francisella holartica*
- A1a, A1b and A2 are different virulence for man
- Primary vector – ticks and deer flies
- The centre for Disease Control and Prevention regarded *F.tularensis* as a viable biological walfare agent



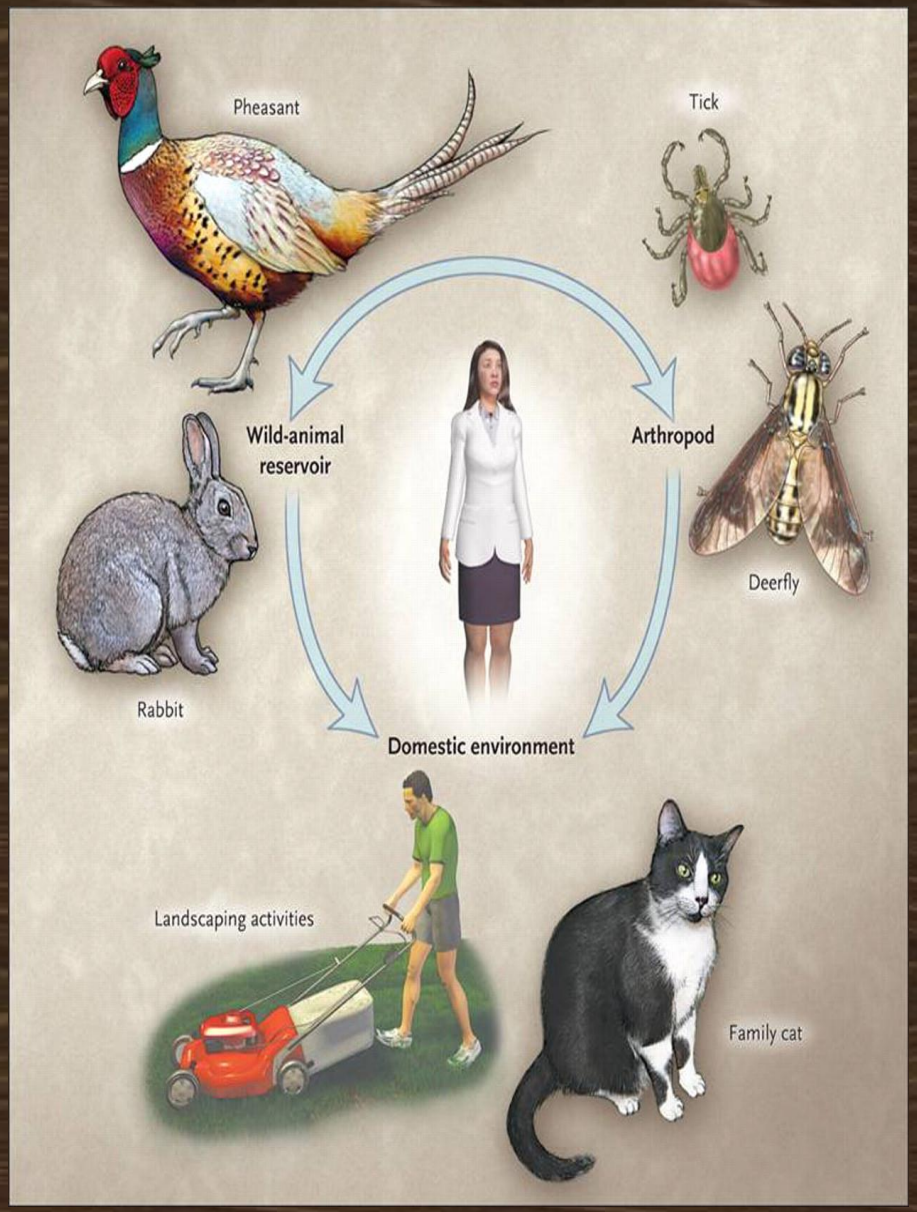
SYNONYMS

- Rabbit fever
- Deer fly fever
- Pahvant valley plague
- ohara’s fever

ETIOLOGY

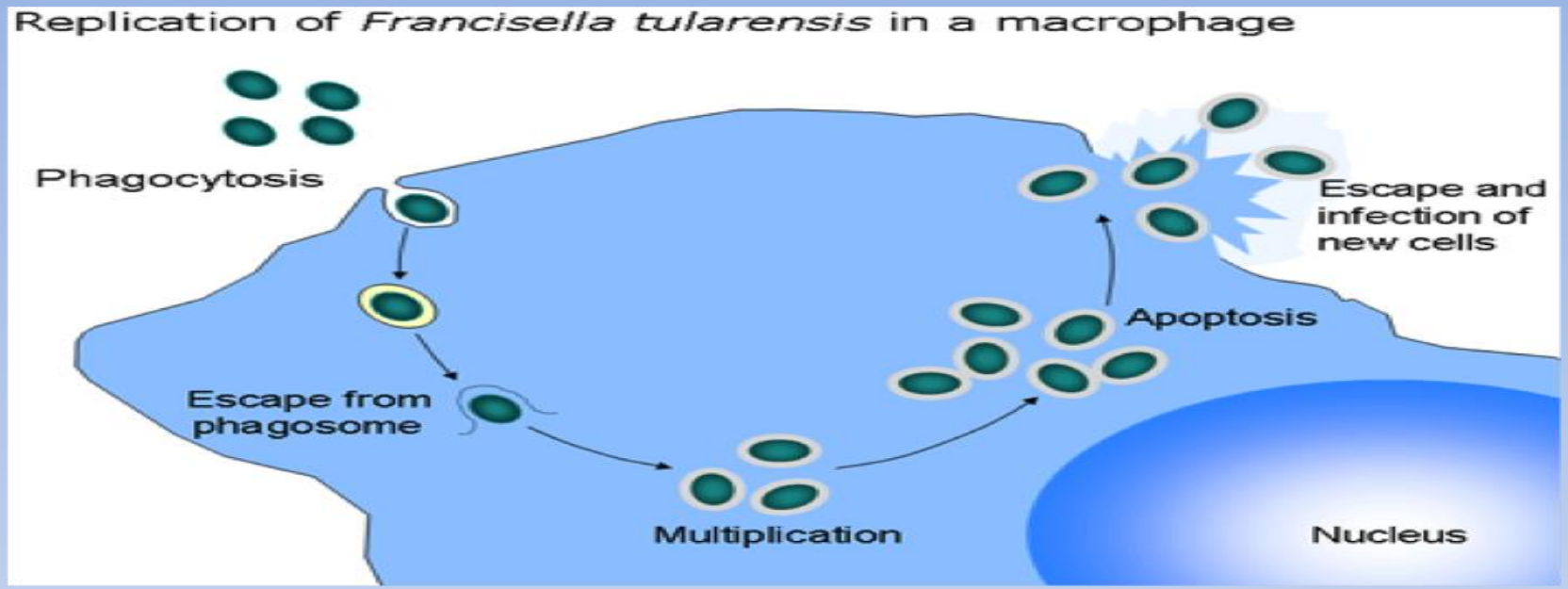
- Intracellular bacteria
- Francisella tularensis tularensis (type A) – Rabbit, Hares and Pikas in North America
- Francisella tularensis palaearctica (type B) – Aquatic rodents in North America

HOSTS



- ❖ Animals –
- Intra cellular pathogen
- Produce fulminant acute infection in the susceptible animals
- Chronic granulomatous infection in moderately susceptible species

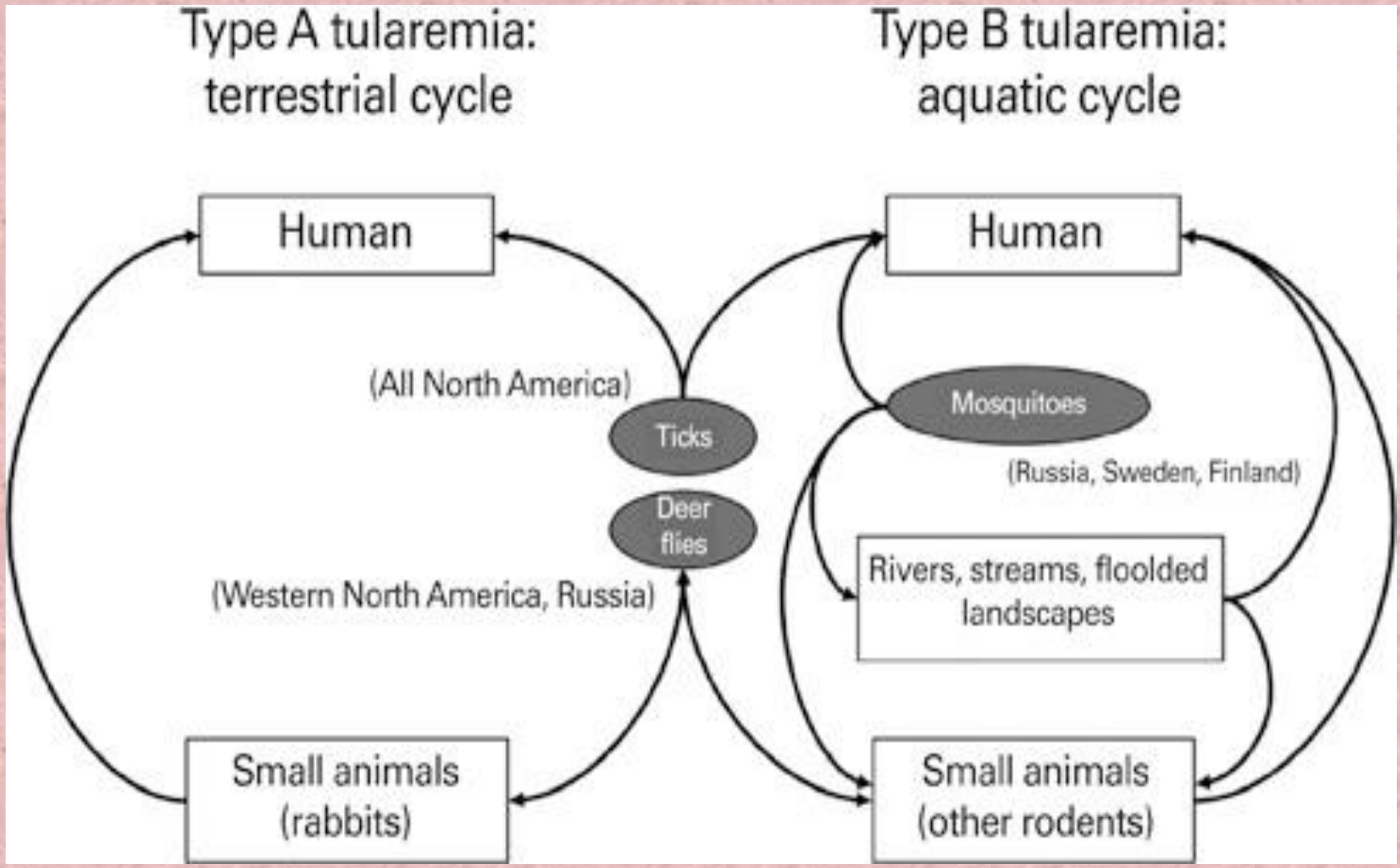
- ❖ Humans –
- Through infected rodents, rabbits and hares
- Through insect bite



Bacteraemia and cause type of clinical forms

Death but fatality rate about 1%

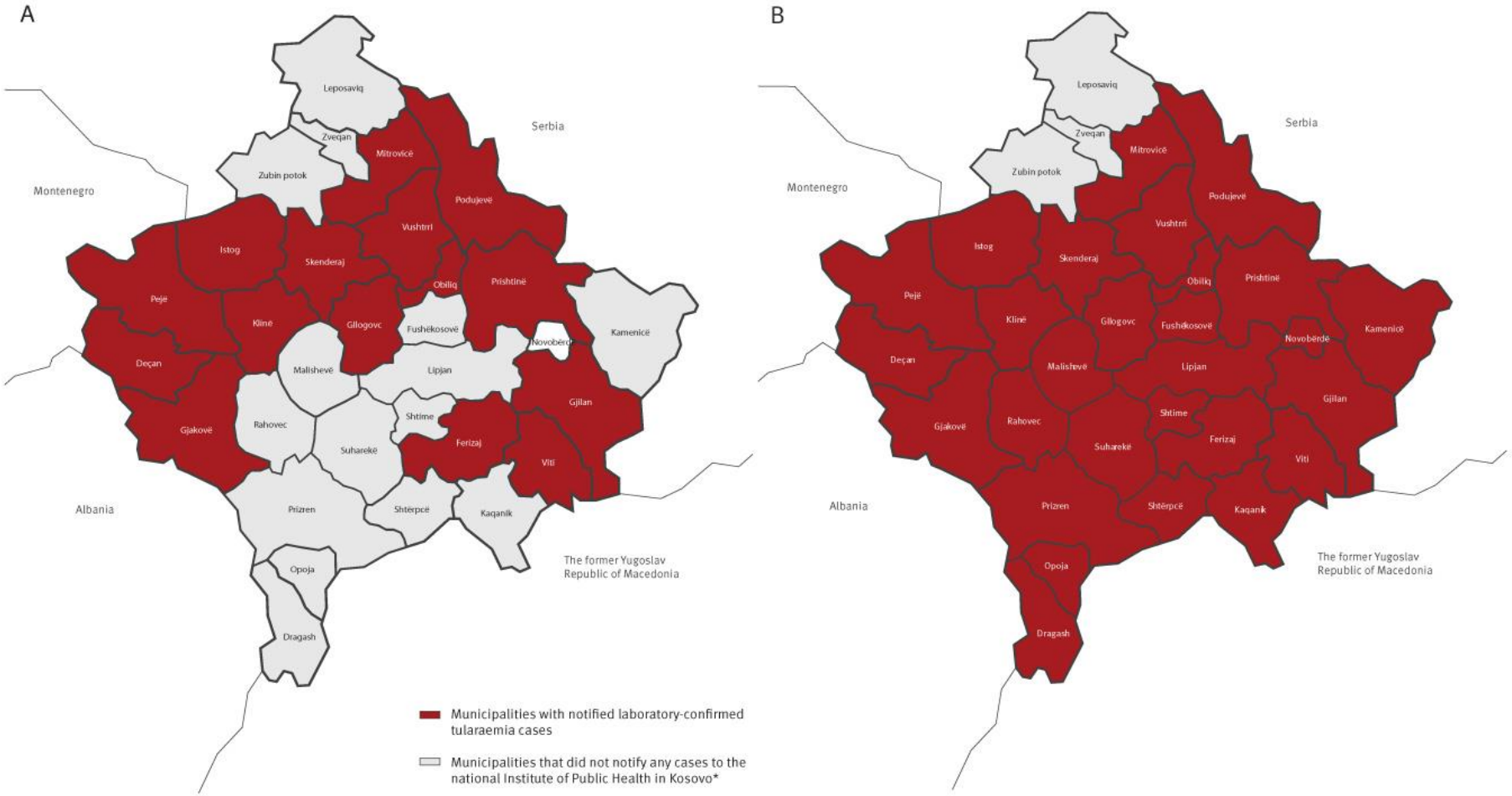
PATHOGENIC CYCLES



EPIDEMIOLOGY :-

FIGURE 3

Distribution of confirmed tularaemia cases, Kosovo*, Panel A: 1999–2000 (n=247), Panel B: 1999–2010 (n=1,221)



The three municipalities marked in grey in Panel B were not participating in the surveillance system.

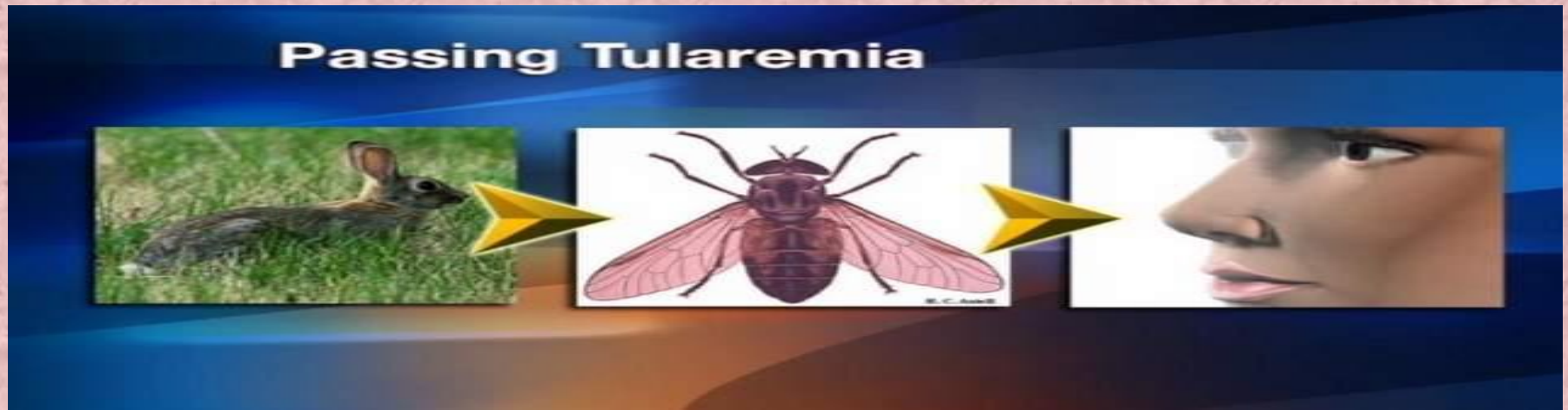
* This designation is without prejudice to positions on status, and is in line with United Nations Security Council Resolution 1244/99 and the International Court of Justice Opinion on the Kosovo declaration of independence.

CLINICAL MANIFESTATION

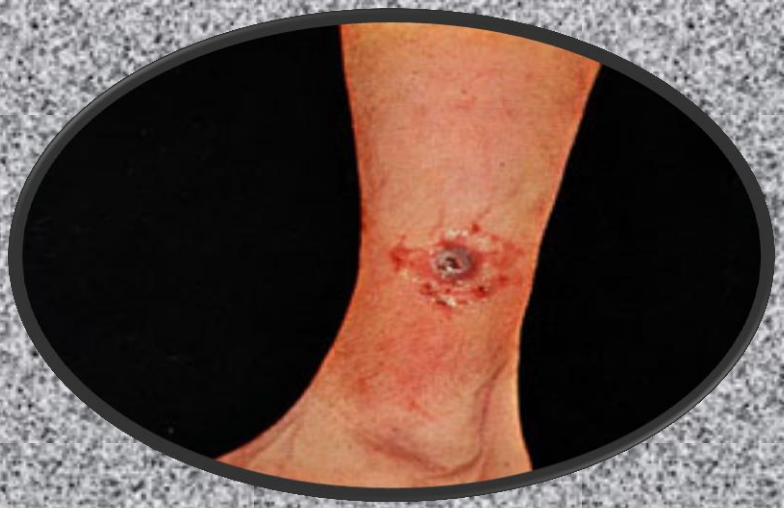
1) Ulcero – glandular
2) Glandular
3) Oropharyngeal
4) Pneumonic
5) Oculoglandular
6) Typhoidal

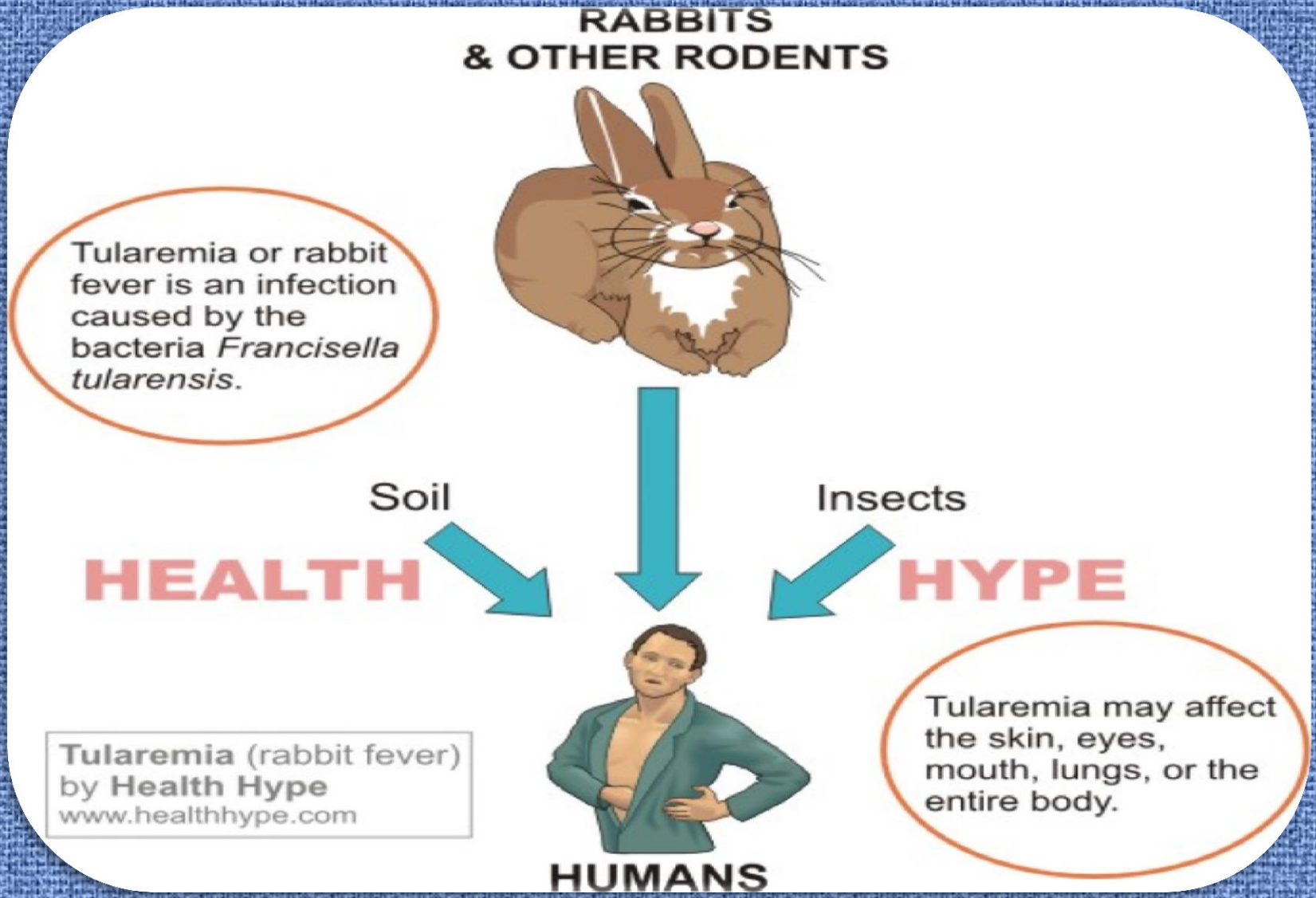
CLINICAL FORM OF TULARAEMIA TO TRANSMISSION

CLINICAL FORMS	TRANSMISSION ROUTE
1. Ulceroglandular or Glandular	Vector borne or by touching infected animals
2.Oculoglandular	Touching the eye with contaminated fingers or by infected dust
3.Oropharyngeal	Ingestion of contaminated food and water
4. Typhoid	Ingestion of contaminated food and water
5. Respiratory	Inhalation of contaminated dust and laboratory materials



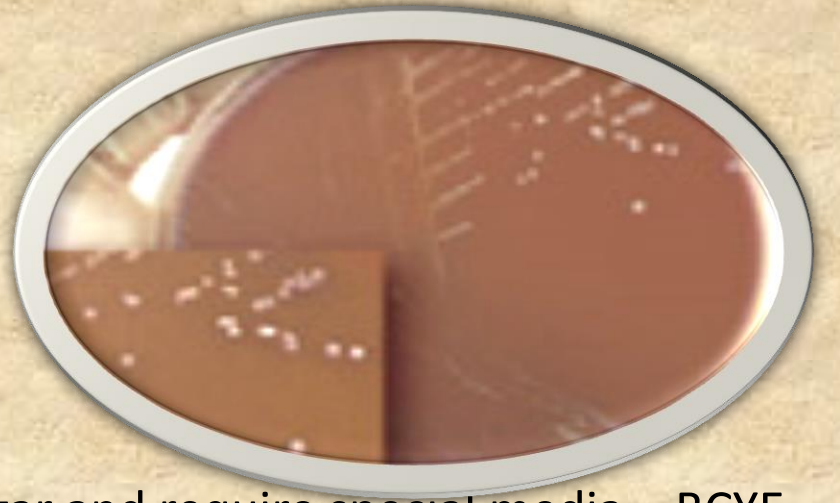
TULARAEMIA SKIN & GLANDULAR




RABBITS
& OTHER RODENTS
Tularemia or rabbit fever is an infection caused by the bacteria *Francisella tularensis*.
Soil
Insects
HEALTH
HYPE
Tularemia (rabbit fever)
by Health Hype
www.healthhype.com
HUMANS
Tularemia may affect the skin, eyes, mouth, lungs, or the entire body.

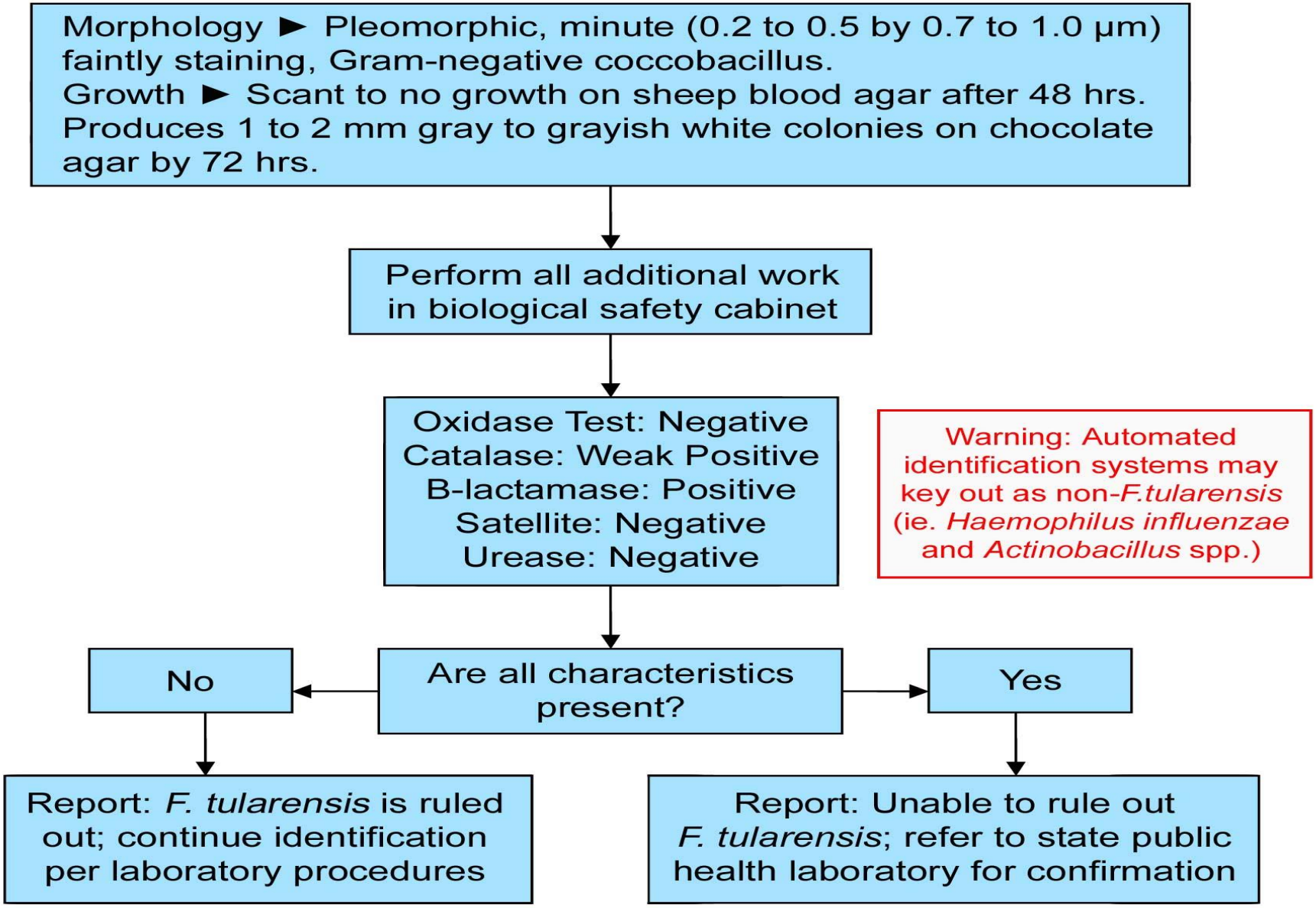
DIAGNOSIS

1. Direct fluorescent antibody staining, using a FITC-labelled rabbit antibody
2. Slide agglutination

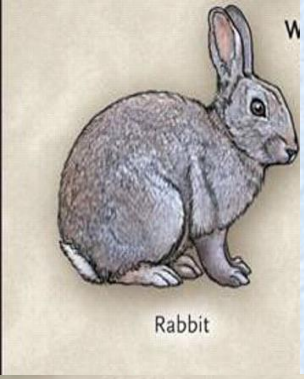


3. Immuno histochemical staining
4. Variety of PCR methods
5. Culture on Cysteine supplemented agar and require special media – BCYE (BUFFERD CHARCOAL AND YEAST EXTRACT)
6. Serological test – Micro agglutination OR Tube agglutination
7. ELISA test incombination with Western blot technique

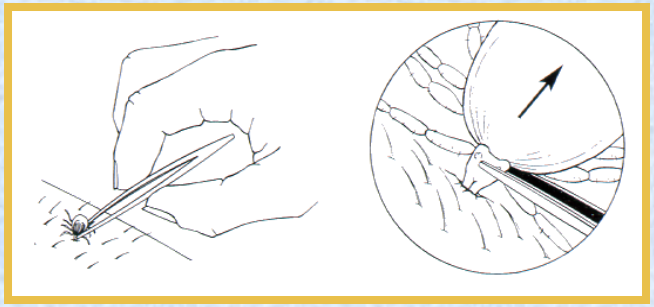
Francisella tularensis
Sentinel Laboratory Flowchart



PREVENTION AND CONTROL

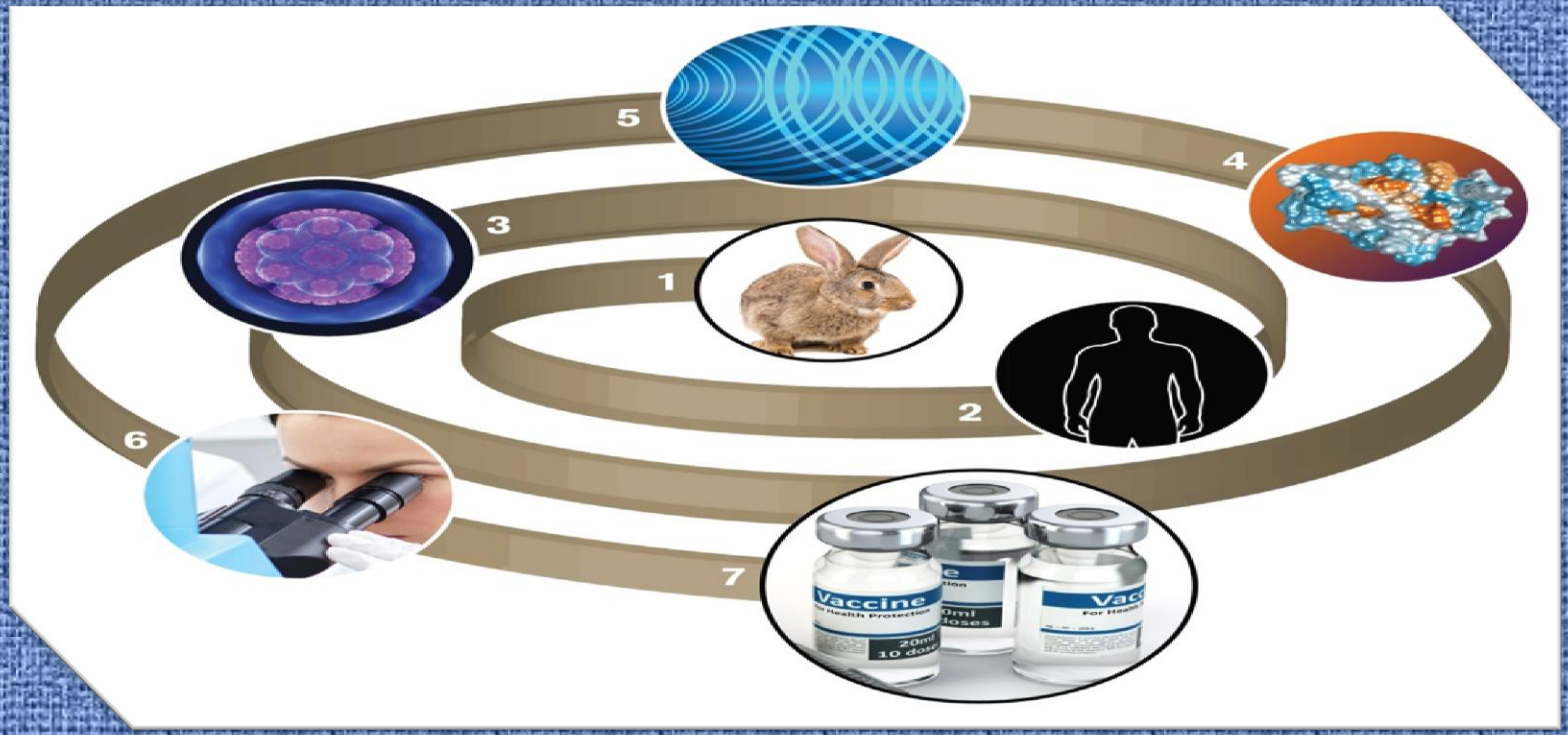


- Reduce contact with potentially infected animal species
- Control on ticks and mosquito
- Education and awareness programme
- Use of rubber gloves and eye protection when handling potentially infected wild animals
- Vaccination in selected high risk groups like endemic area due to 2nd world war
- Vaccination programme for laboratory workers



VACCINATION

- An attenuated, live vaccine is available
- Live vaccine for inhalation
- Live attenuated stains of holartica biotype




THANK YOU.....