MEDICAL ACADEMY NAMED AFTER S.I.GEORGIEVSKY

Topic : theory of phylembryogenesis

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SCENTIFIC LEADER:

SVETLANA SMIRNOVA

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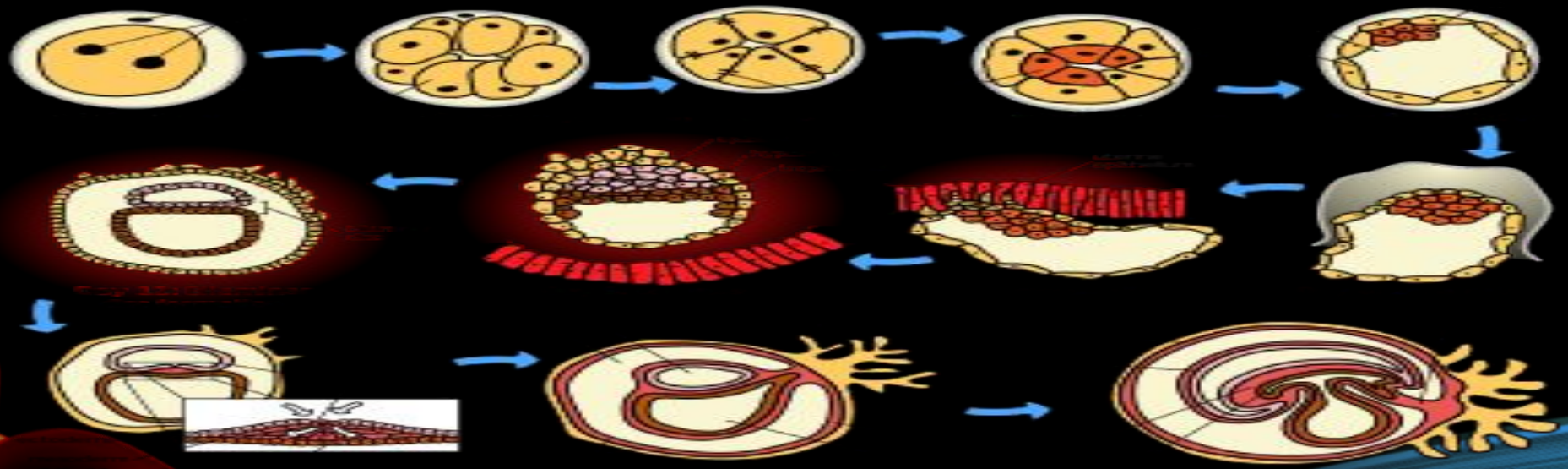
landscape endemiology. Dynamics of natural foci of infectious and viral diseases.

of invasive diseases as a result of anthropogenic landscape changes.

Poisons and allergens of plant and animal origin, their effect on the human body.

EMBRYOGENESIS



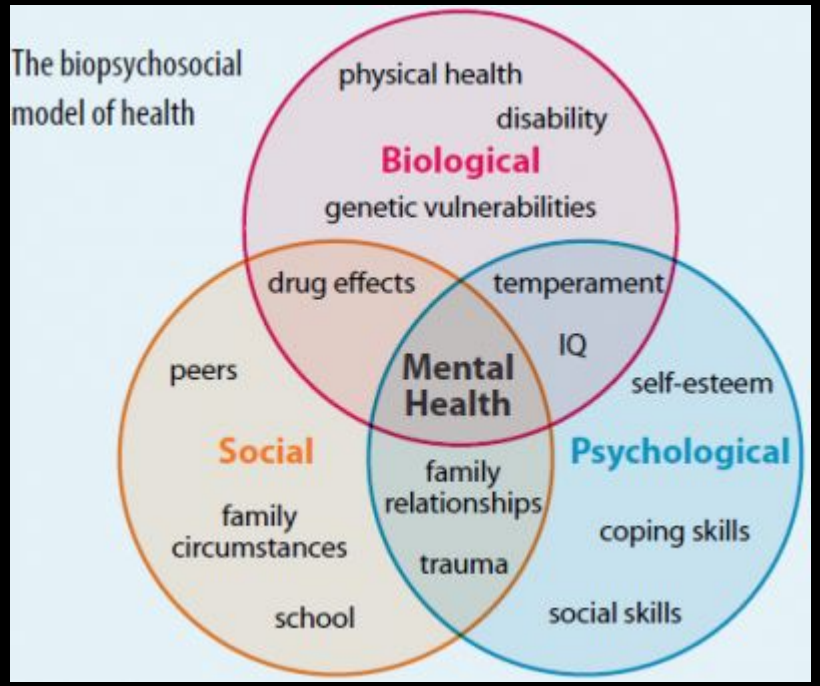
Embryonic development also **embryogenesis** is the process by which the embryo forms and develops. In mammals, the term refers chiefly to early stages of prenatal development, whereas the terms fetus and fetal development describe later stages

THEORY OF PHYLEMBRYOGENSIS

A **theory** put forth by Russian palaeontologist Severtsov, postulating that phylogenetic changes in organisms are conditioned by ontogenetic alterations, in that certain events are added, modified or deleted in the development of an embryo based on the events of ancestral development.

ONTOGENESIS

Ontogeny is the development of a single individual, or a system within the individual, from the fertilized egg to maturation and death



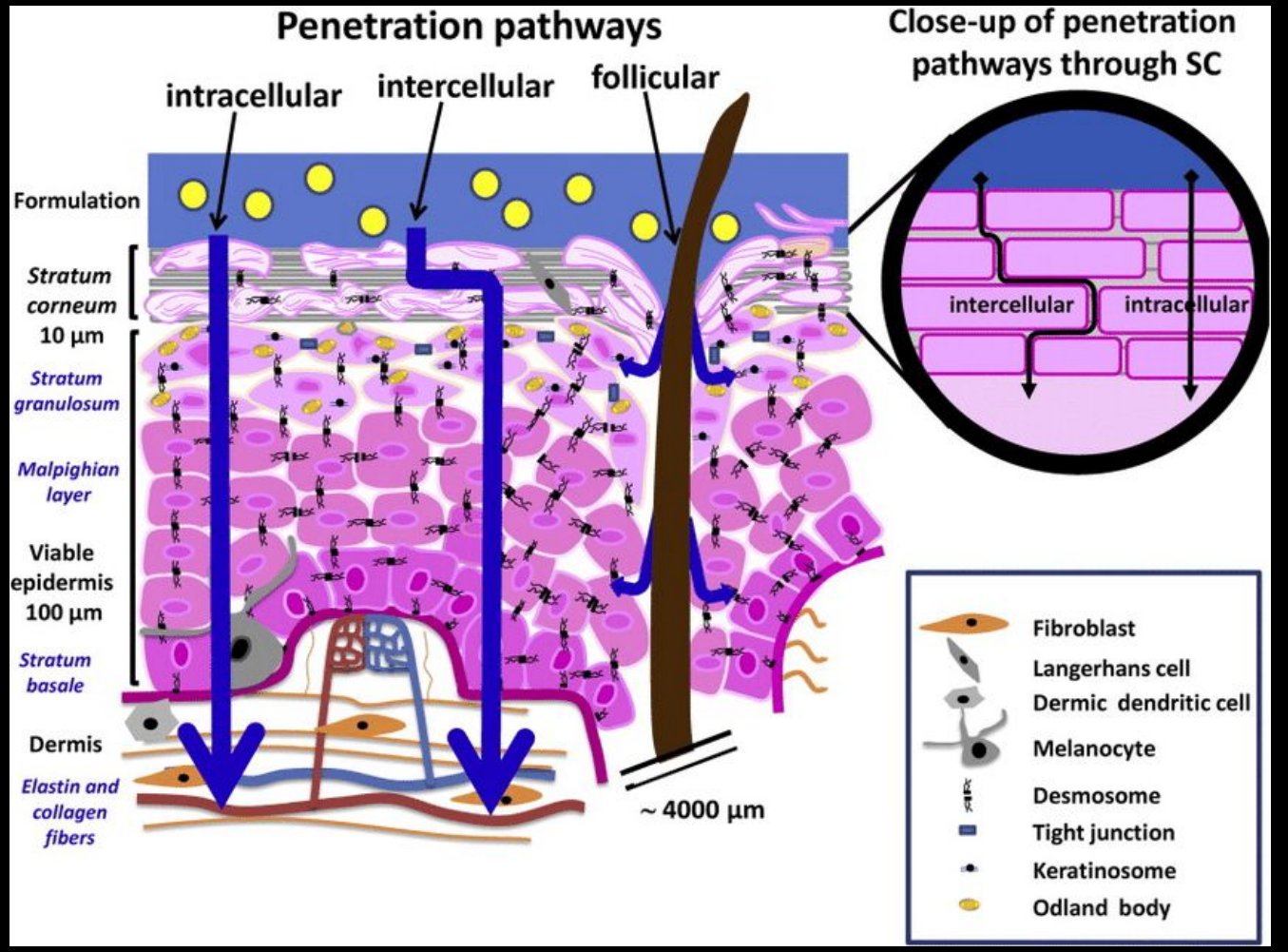
Microbial Agents of Infectious Disease

- Bacteria
- Viruses and rickettsia
- Mycoses (fungal diseases)
- Protozoa
- Helminths
- Arthropods

PENETRATION PATHWAYS

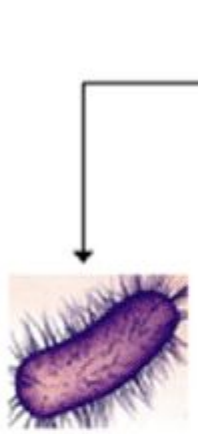
The human body has three large epithelial surfaces namely skin,respiratory mucosa,and ailmentary tract.

They have two lesser surfaces namely genital tract and conjuctiva



CLASSIFICATION OF INFECTIOS DISEASE

Human Infectious Diseases and their causative agents



Bacteria

- Tuberculosis
- Pneumonia
- Streptococcal Infections
- Gonorrhea
- Scarlet Fever
- Tetanus
- Diptheria
- Pertussis
- Bubonic Plague

Viruses

- AIDS/HIV
- Influenza
- Herpes Simplex/Zoster)
- Hepatitis (all types)
- Common Cold
- Poliomyelitis
- Measles, Mumps and Rubella
- Infectious mononucleosis

Fungi

- Candidiasis
- Athlete's foot (Tinea pedis)
- Jock itch (Tinea cruris)
- Nail fungus (Tineu unguis)
- Ringworm
- Histoplasmosis

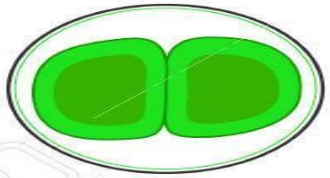
Protozoa

- Amebiasis
- Amebic meningoencephalitis
- Malaria
- Trichomoniasis
- Toxoplasmosis
- Giardiasis
- Balantidiasis
- Cryptosporidiosis
- Pneumocystosis

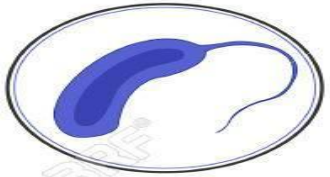
Helminthes/parasites

- Trichuriasis
- Hookworm
- Lymphathic filariasis (Elephantiasis)
- Schistosomiasis (Bilharzia)
- Ascariasis

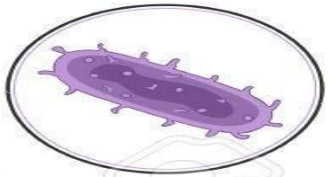
Causative agents of dangerous infectious diseases



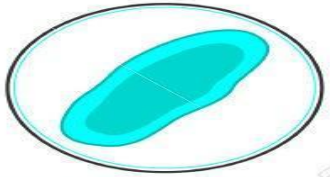
Meningococcus
(Meningococcal desease)



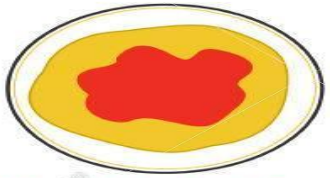
Vibrio Cholarae
(Cholera)



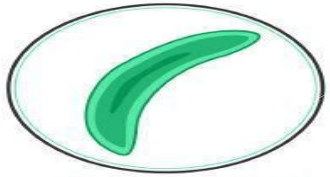
Yersinia Pestis
(Plague)



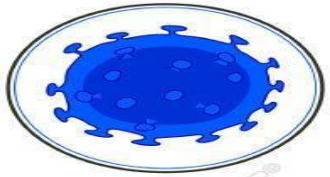
Francisella Tularensis
(Tularemia)



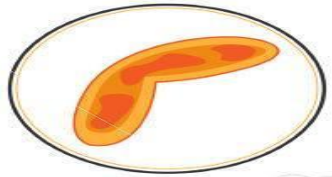
Variola Major
(Smallpox)



Plasmodium falciparum
(Malaria)

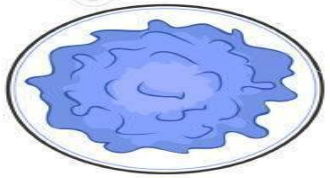


HIV
(AIDS)

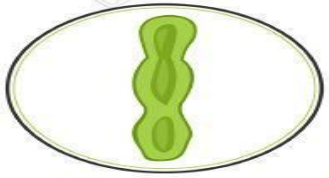


Mycobacterium
tuberculosis

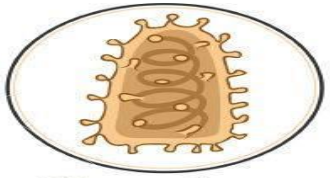
Ebolavirus



Poliovirus
(Poliomyelitis)



Bacillus antracis
(Anthrax)



Lissavirus
(Rabies)

WORKS OF E.N. PAVLOVSKY

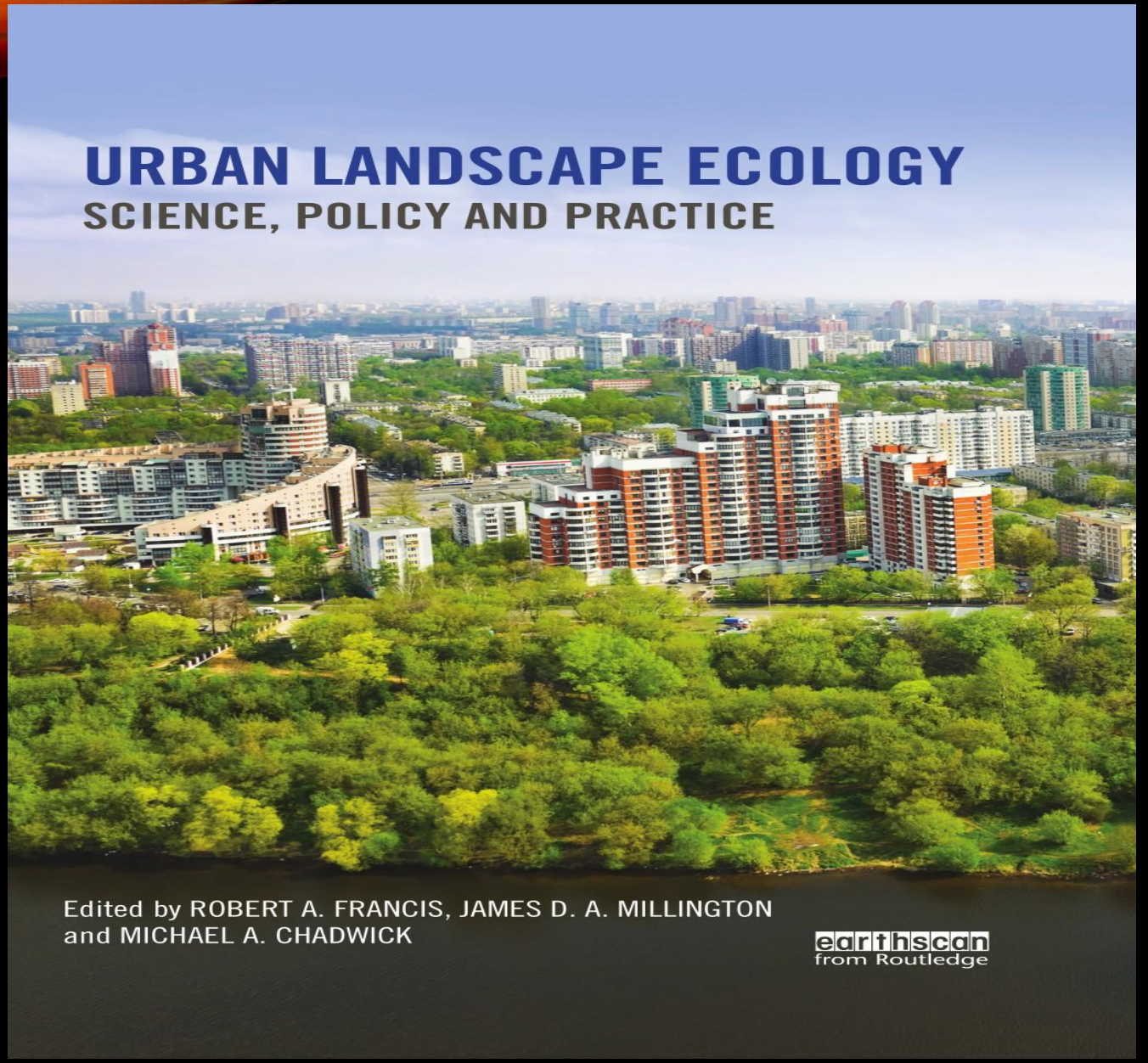
The founder of school of thought Evgenni Nikanorovich Pavlovsky (1884 – 1965) worked at the zoological institue of the USSR academy of sciences from 1930 – 1965 and was the director of the institur from 1942 to 1962

E.N. Pavlovsky was twice a prize winner of state price (1941, 1950) and lenin prize (1965). President of the all- union entamological socoietyu of the USSR sciences (1931 -1965)

Major publications of E.N. pavlovsky

Handbook on parasitology of man and theory on vectors of transmissive diseases

Natural focality of transmisssive disease


URBAN LANDSCAPE ECOLOGY
SCIENCE, POLICY AND PRACTICE
Edited by ROBERT A. FRANCIS, JAMES D. A. MILLINGTON
and MICHAEL A. CHADWICK
earthscan
from Routledge

The basis of landscape science

it is the theory that the geographic **landscape** is the primary element in the physicogeo-graphical differentiation of the earth. ...

Elementary geographic complexes are studied as parts of related, regularly structured territorial systems (**landscapes**).

TASKS OF LANDSCAPE SCIENCE

ITS TASKS IS TO STUDY THE PARTS OF THE LANDSCAPE (the lowest level geosystems)

Localities‘

Natural boundaries

Their relative arrangement and interactions

The types of spatial structures formed by lanscapes,

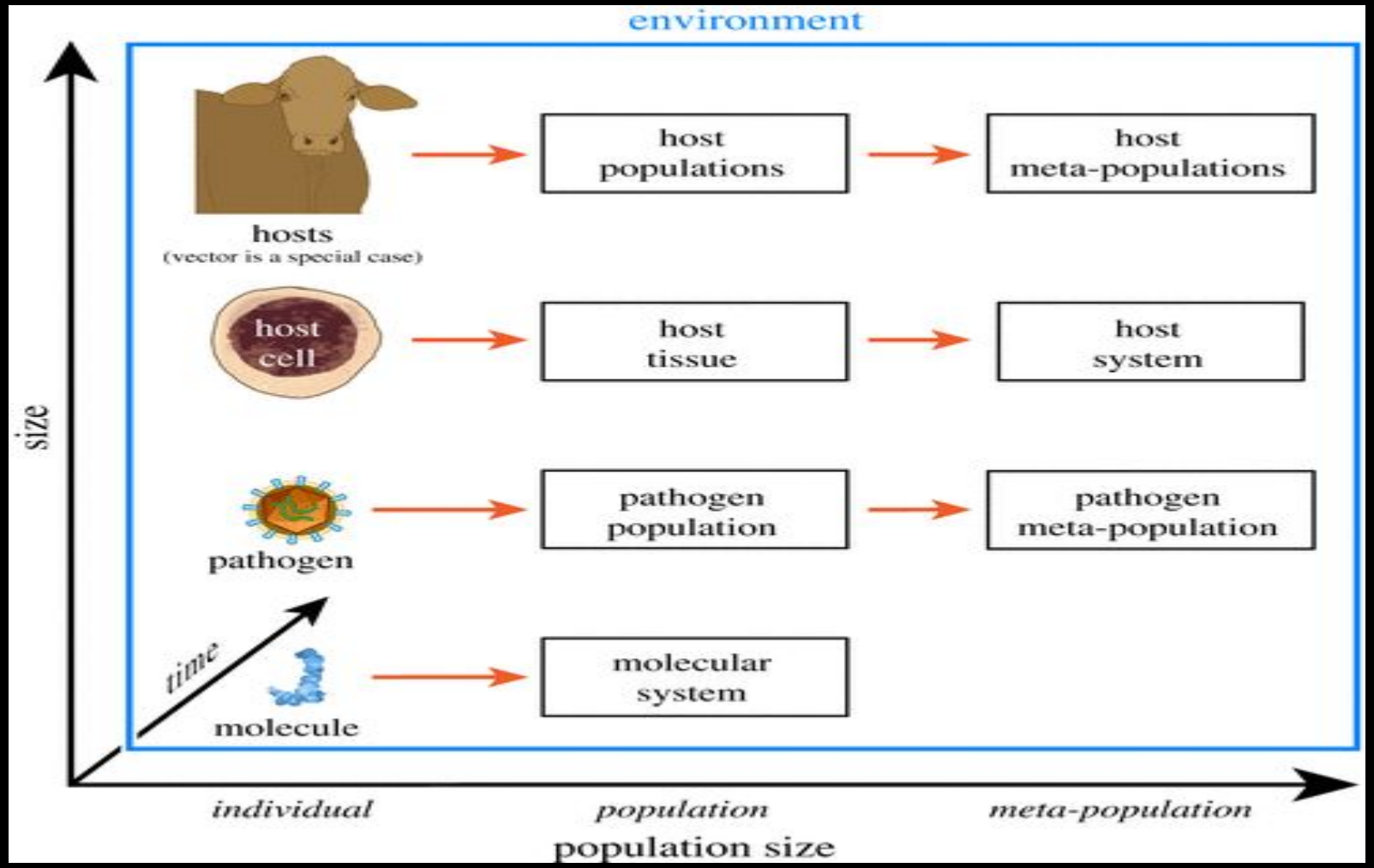
DYNAMICS OF INVASIVE DISEASES

The dynamics of any infections disease are heavily dependant on the rate of transmission from infectious to susceptible hosts

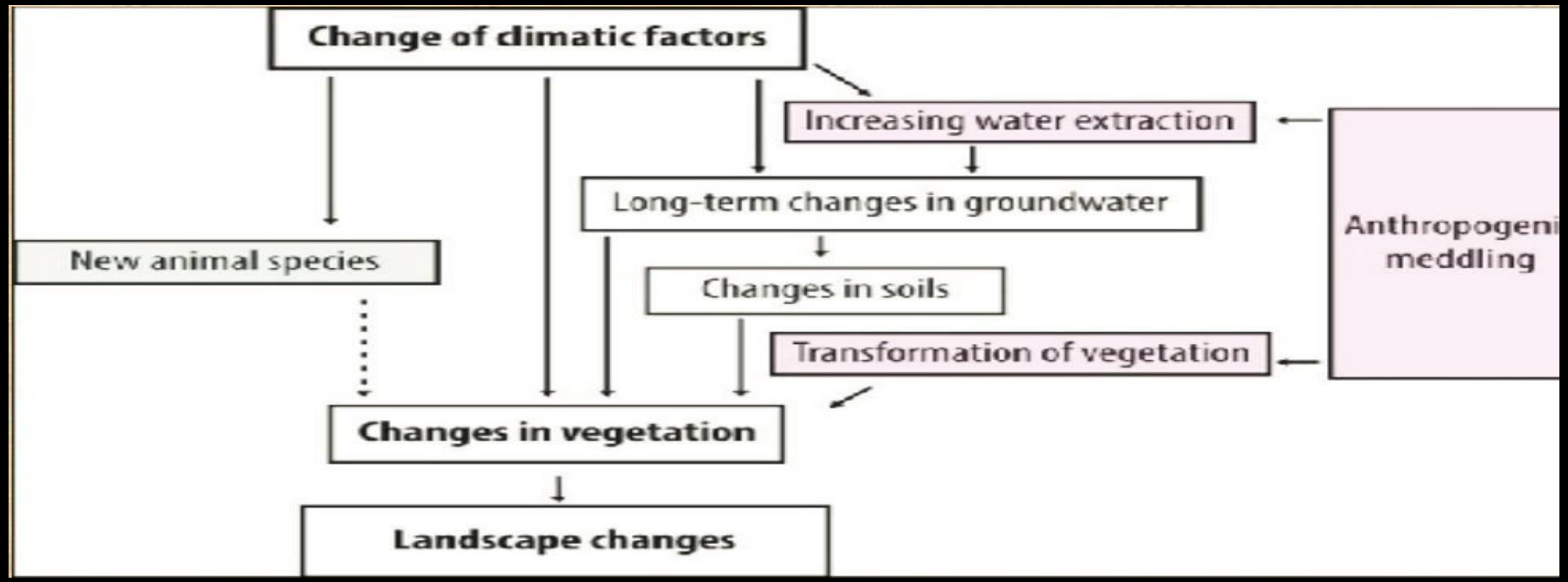
In many disease models, this rate is captured in a single compound parameter,the probability of transmission B

Concepts underlying the different approaches to modeling disease transmission and by laying out why a more detailed understanding of the variables involved is usually desirable

DYNAMICS OF NATURAL FOCI OF INFECTIOUS DISEASE



ANTHROPOGENIC LANDSCAPE DAMAGE



Poisons and allergens of plant origin

The study of plant poisons is known as phytotoxicology.

Most of the poisonous higher plants are angiosperms, or flowering plants

Poisonous plants may be classified according to the chemical nature of their
toxic constituents

Toxic effects on humans

Plants contain substances that may exert toxic effects on skin, lung, cardiovascular system, liver, kidney, bladder, blood, nervous system,bone, and
the endocrine and reproductive systems

Contact dermatitis and photosensitivity are common skin reactions with many
Plants

Gastrointestinal effects range from local irritation to emesis and/or diarrheaToxic effects on humans

Poisons of animal origin(zootoxin)

- Venomous animals produce poison in a highly developed secretory gland or group of cells and can deliver their toxin during biting or stinging

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DEVELOPMENT DISORDERS OF HUMAN RESPIRATORY SYSTEM

1)ASTHMA.
2)CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)
.3)CHRONIC BRONCHITIS.
4)EMPHYSEMA.
5)LUNG CANCER.
6)CYSTIC FIBROSIS/BRONCHIECTASIS.
7)PNEUMONIA.
8)PLEURAL EFFUSION.

Developmental disorder of human vascular system

Coronary artery disease
Atherosclerosis
arteriosclerosis
Stroke
Hypertension
Heart failure
Aortic dissection
aneurysm.
Myocarditis
Pericarditis
Cardiomyopathy.

DEVELOPMENTAL DISORDERS OF NERVOUS SYSTEM IN HUMANS

The neurodevelopmental disorders are:

1. Intellectual disability (ID) or intellectual and developmental disability (IDD), previously called mental retardation
2. Specific learning disorders, like dyslexia or dyscalculia.

3. Autism spectrum disorders, such as Asperger's syndrome or Autistic Disorder2 / 2

4. Motor disorders including developmental coordination disorder and stereotypic movement disorder

5. Tic disorders including Tourette's syndrome

6. Traumatic brain injury (including congenital injuries such as those that cause cerebral palsy)

7. Communication, speech and language disorders8. Genetic disorders, such as schizophrenia

DEVELOPMENT DISORDER OF HUMAN REPRODUCTIVE SYSTEM

Reproductive disorders are diseases involving the reproductive system,
including
- reproductive tract infections,
- congenital abnormalities,
- cancers of the reproductive system and
- sexual dysfunction.

Developmental disorders of skin human

Acne (Fifty-million Americans are affected by acne annually, making it the most common skin condition in the U.S. Acne often appears on the face, neck, shoulders, chest and upper back.)
Cold Sores
Hives
Rosacea
Eczema
Psoriasis
Keratosis Pilaris
Melanoma.

Developmental disorders of the excretory system in human:-

1) Renal failure uremia is a syndrome of renal failure characterized by elevated levels of urea and creatinine in the blood
2)The type of renal failure is determined by the trend in the serum creatinine.
3)In renal failure, there may be problems with increased fluid in the body
4) Increased acid levels, raised levels of potassium, decreased levels of calcium, increased levels of phosphate, and in later stages, anemia.
5) Renal failure can be divided into two categories: acute kidney injury or chronic kidney disease.
6) Renal failure is mainly determined by a decrease in the glomerular filtration rate, which is the rate at which blood is filtered in the glomeruli of the kidney.

THANK YOU MAM