
Reaction of Immune System on Parasites and Bacteria

Salmonella spp

The immune system is constructed to defeat any bacteria that can be a threat to body. However, salmonella knows when it enters the body of the host and it can change its behaviour to deal with our immune system and to cause infection and spread around the body to cause diseases. The immune system is constructed to detect any kind of bacteria and then digest it and kill it. When the bacteria enter the host body it will have a contact with two defence lines of our immune system. The first line will be innate immune system which will immediately be ready to fight the bacteria and prevent it from spreading. The second line that the bacteria will meet in our body is called adaptive immune system, which might take few days to develop, however, when its fully developed it sends the t-cells to recognise the type of bacteria. After it recognises what bacteria it is, it allows it to memorize it for future infection, then attack it and as a result kill it.

Mycobacterium bovis

If the mycobacterium has entered the body by the inhaling the infected droplets the alveolar macrophage will be the first phagocytic cell involved in killing the mycobacteria by the phagolysosome fusion. If the cell will manage to invade and kill the bacteria no infection will take place. However, if the cell will be defeated by the mycobacterium the animal will become infected and it will develop into the exhibit disease. When this will happen the dendritic cells and monocytes will try to stop the infection taking part in the phagocytic process. In fact, macrophage cell is one of the preferred cells for the mycobacteria, but at the same time it is also responsible for control and destruction of those pathogens.

Microsporium canis

When the microsporium canis has infected the body, the first defence line that it will meet in our body as a form of immune system is non-specific immunity which contains mechanisms that construct an immediate natural barrier. It will also meet a local defence mechanism which contain: unsaturated transferrin, phagocytosis by polymorphonuclear leucocytes and medium chain-length fatty acids that are produced in sebum. Then the fungi will come across T-cells that help B-cell with killing the infected cells. However, cell-mediated immune response has the major role in fighting the fungi with the positive result.

Need help with the assignment?

Our professionals are ready to assist with any writing!

[GET HELP](#)

Aspergillus spp

If the host has compromised immune system what can be caused by immunosuppressive therapy prior to organ transplantation or there is pre-existing pulmonary malfunction which can be caused by asthma, cystic fibrosis etc. the fungi will use those weaknesses what can result in saprophytic, allergic or invasive aspergillosis. The innate immune response should stop conidia from developing and forming invasive hyphae which can penetrate pulmonary tissues. However, if the innate immune response will not be able to stop the conidia from developing the anatomical barriers like mucociliary elevator, and professional phagocytes and neutrophils will stop the development of the fungi by inhibiting the growth of conidia and hyphae.

Canine parvovirus

When the host gets infected with canine parvovirus, the immune system recognises the antigen of the virus it starts to produce the antibodies IgG and IgM that are specified in antigens of the virus. By producing those antigens, the immune system is ready to attack the virus to prevent it from reproducing in the host cells and infecting the body.

Rabies virus

The rabies virus is one of the viruses that are good at hiding from the immune system. This virus is also able to overcome the immune system and all of its mechanisms. By overcoming the immune system it is able to spread through the nervous system and kill its host in the end.

Siphonaptera spp

The immune system does not react directly on the fleas. However, it reacts to its bite as it breaks one of the immune system mechanisms which is skin and irritates it. The irritation caused by the flea can turn into allergy or inflammation. Fleas can also transfer diseases like plague, typhus and tularaemia which immune system will imiditaly recognise and attack to defend the body and prevent the disease from spreading around the hosts body. Depending on the type of the disease, different antibodies will be produced to kill the pathogen/parasite.

Fasciola hepatica

Fasciola hepatica is a parasite what means the immune system will have a specific reaction to the parasite which will be producing the antibodies - IgG and IgM. The T-cells will attack the parasite and try to prevent it from spreading and reproducing what will eventually result in the

Need help with the assignment?

Our professionals are ready to assist with any writing!

GET HELP

antibodies killing the parasite.

gradesfixer.com

Need help with the assignment?

Our professionals are ready to assist with any writing!

GET HELP