Arthritis Research UK | rheumatoid arthritis pathogenesis centre of excellence

Monocytes, Macrophages and their role in Rheumatoid Arthritis

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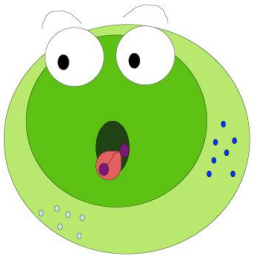
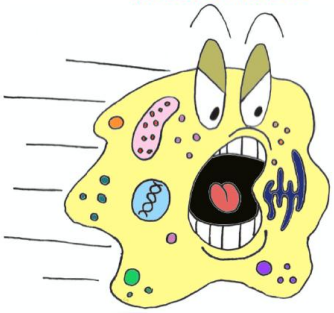
MONOCYTE



- A monocyte is a type of white blood cell that travels in your blood stream. They can be recruited to sites of **inflammation** by inflammatory molecules.

- Monocytes move into the tissue and turn into macrophages.

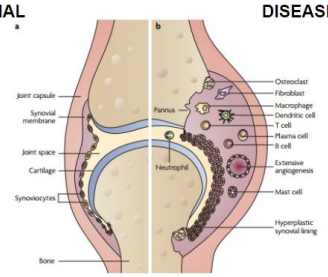
MACROPHAGE



- Macrophages are important cells when we get infections. They work by eating and digesting the invaders.
- These cells clear up our own cells when they die, as they release factors that can lead to further inflammation and damage.
- Importantly they also help in the healing process.

In the joint

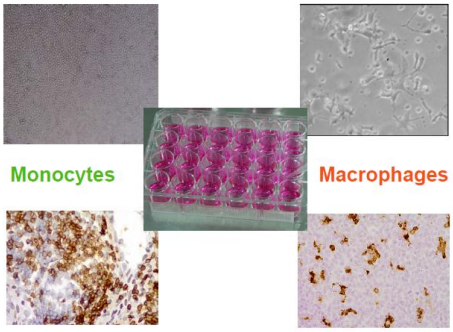
NORMAL DISEASED



- In a normal joint there are no infiltrating inflammatory cells.
- However, there are macrophages that reside in the joint and keep the joint healthy.
- In autoimmune disease (i.e., Rheumatoid arthritis) the inflamed joint contains numerous immune cells.
- The recruitment of these cells is dependent on monocyte/ macrophage dysregulated activity.

In the Lab

- As scientists we can grow monocytes and macrophages outside of the human body on special plastic plates. We try to mimic the healthy and disease environment that these cells encounter in the body.



- This helps us to understand what is happening to these cells, and can aid development of future therapies.

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