

## One Day in the Immune System

*Casting: B cells, T cells, Macrophage, Purple Bacteria (staphylococcus aureus), Yellow Bacteria (pseudomonas aeruginosa), Enzymes (histamine)*

大纲：在炎热的七月，这个身体的主人不小心摔了一跤，虽然对他而言仅仅是擦破皮流点血的事，但对他的免疫系统而言，这可不是一件简单的事。

城市的中心忽然出现了一个洞，许多红细胞都掉了出去，过了一会儿更是有许多细菌飞了上来，此时周围的开始释放组胺，让血液流动得更快，这时 b 细胞迅速赶到开始杀死细菌，但是寡不敌众，b 细胞已经无法解决这个问题，这时，训练有素的杀手 t 细胞赶了过来，局面开始慢慢好转，巨噬细胞也旁边支援清理死去的细菌...

Narrator: On a sunny day, all the cells are in good order. Red Blood cells are conveying oxygen. Blood Platelet are clear up fibrous protein. Killer T-cells are on patrol...

Narrator: As the cells walk on blood vessels close to the skin, suddenly the ground began to shake...

Red Blood: There's light in there!!!

Narrator: There was a huge explosion and a big hole in the ground. A lot of red blood cells were sucked out. Red Blood runs to a corner and hides itself.

Red Blood: What the hell is going on?

Enzyme: Hey, stop!!!

B Cell: As you see, because of the external hit, the vascular wall was broken, red cells are carrying away, which means, our host was, was... bruised!!

Narrator: Bruise refers to hurt that only damages the epidermis (better known as the skin). For example, when we fall down and our arm is hurt and changes color, that is a bruise.

B Cell: Even just drop out of that wound, you can never go back to this world. The wound will be taken care of in a minute, but there will be trouble before then. That is...

Narrator: Before the B Cell had finished talking, their hiding place was under attack. The reason is that bacteria got into the host's body.

Bacteria Yellow: Is this the human body?

Bacteria Green: Sure enough, it's the same as rumored: "Suitable for reproduction".

Bacteria Purple: Nice! Start work! Let's take over this place.

Narrator: B Cells went to war against the germs.

Enzyme: This way, this way. All support cells, this way, please.

T Cell: Thanks buddy.

Narrator: Assisting cells come with speed to the bacteria invasion place to fight with the bacteria, but they still can't keep up with the rate of bacterial invasion.

Bacteria purple: This world is captured by me!

Bacteria green: Kill red blood cells that do not deliver nutrients!

Red Blood: Let us out. Let us out.

Narrator: The red blood cells are blocked by venous valves. At the critical moment, the B cells appear to fight the bacteria.

(B cells kill the bacteria)

B cells: Where are the other bacteria!?! Where is the scratch!?!

Enzyme: In this direction.

Narrator: On the other side, B cells are being attacked by bacteria.

Bacteria green: Catch him quickly!

Bacteria brown: Got him.

Bacteria purple: Ha ha ha ha ha! How do you feel surrounded by stabbing knives? Ha ha ha!

B cells: Just, go to hell!!

(B cell kicked the bacteria on the ground.)

B cell: THAT IS NOT POSSIBLE !!

(B cell killed the bacteria, and stands up.)

B cell: that was so weird, they can go deeper inside the body instead of fight with me...

(At the time, the sounds comes from B cell's radio)

Radio: 1146, can you hear me?

B cell: Yes.

Radio: 2048 near you is fighting now. Go get them!

(B cell 2048 talks to the radio.)

B cell 2048: I don't know why, the germs rush in at their own risk. Be careful guys!

B cell 1106 (talking to radio): Got it. You be careful too.

Narrator: All the B cells went near the wound to destroy the bacteria. But with so many bacteria, the B cells are locked in a battle with the bacteria.

Bacteria Yellow: Ha ha ha ha, go to hell!

Enzyme: Wait! Please don't, come on! Let's stop them!!!

(Attack B Cells, one B cell and enzyme die)

Bacteria Green: Ha, you can't beat me!

Narrator: At this time, a strong man come in sudden. That's T cell and Macrophage.

Macrophage and T cells: Sorry we are late!

T cell: Bacteria! As the man who protects this world, you can not hurt my family!

Never! Ever!

Macrophage: I'm finally here! I will protect my host and friend.

Narrator: The arrival of the support cells turned things around.

Macrophage: Check it out, little bacteria!

Bacteria Green: Oh no, I'm gonna die.

B Cells: You're missing the most important thing: I actually have powerful helpers, which are the platelets.

Narrator: It turns out that when blood vessels are damaged, platelets are attached to the subcutaneous blood vessels tissue. They use clotting factors to bind fibrin together and von Willebrand to activate the platelets, they come together and plug the wound, then proteins in the blood called clotting factors come into play.

Enzyme: Come on everybody, let's kill them.

T cell: Don't worry Platelet. I'll protect you.

Macrophage: Yeah!!! Platelet are finished the clotting factors. We don't have to worry about falling out!

Bacteria Purple: We can't call any new bacteria in here! This place is so dangerous!

Enzyme: Come on everybody.

T cell: Let's work together to kill them.

Narrator: With the T cells' organized efforts, the bacteria were all killed. We must protect our bodies from injury.