

4 - H. Pylori/Antigenic Shift

Source: [Crunchyroll](#)

Translator:

Editor:

Timer:

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(Please feel free to edit the speaker names if incomplete or inaccurate. Names are handled on a best-effort basis depending on the info on the source file. Dialogue is left as is.)

[01:31] ---

CELL

[01:41] ---

EPISODE 4:

H. PYLORI

[01:42] ---

"*H. Pylori.*"

[01:46] ---

FRAGILE

CONDENSED GAS

[01:48] ---

There are virus-infected cells here, too!

[02:01] ---

We have a situation near the pharynx.

[02:03] ---

Immune Cells...

[02:04] ---

are to head to the site immediately!

[02:06] ---

WHITE BLOOD CELL

[02:06] ---

Target sighted!

[02:08] ---

Come on, come on, come on!

[02:10] ---

We're going to slaughter 'em all!

[02:12] ---

Die!

[02:13] ---

Don't let any get away!

[02:17] ---

Die!

[02:21] ---

And so, it's the same old,
same old again today.

[02:24] ---

The Immune Cells come swooping in,

[02:27] ---

defeat the infected bad guys,
and now the town is peaceful again.

[02:32] ---

And so, just like any other day,

[02:35] ---

we ordinary cells are stuck
on the sidelines again.

[02:42] ---

What a drag!

[02:46] ---

I mean, those Immune guys
just don't play fair!

[02:49] ---

OUT OF ORDER

[02:50] ---

The way they put on that whole superhero act
when they're just a bunch of assassins...

[02:54] ---

And then, when we get attacked
by viruses, they're like...

[02:57] ---

"It's your own fault for not protecting yourselves!"
or "You should've done your homework!"

[03:03] ---

Jeez.

[03:05] ---

Just once in my life,
if someone would say,

[03:07] ---

"Thank you for rescuing me!"

[03:09] ---

What wouldn't I give to hear those words?

[03:18] ---

If only I was stronger!

[03:21] ---

Nyuuu!

[03:22] ---

Nyuuu! Nyuuu! Nyuuu!

[03:26] ---

G-G-Germs?

[03:28] ---

Oh man, I've stumbled upon something I shouldn't
have! I've got to let the Immune Cells know!

[03:33] ---

Nyuuu! Nyuuu! Nyuuu!

[03:36] ---

Wh-What's wrong?

[03:38] ---

- Nyuuu!

- You can't get out of there?

[03:41] ---

You're germs! Don't beg a cell for help!

[03:45] ---

Nyuuu! Nyuuu! Nyuuu!

[03:49] ---

What am I going to do?

[03:51] ---

I'll help you, but you'd better go
back to where you came from, okay?

[03:54] ---

What, are you still babies?

[03:57] ---

That's it! You've got this!

[03:59] ---

You can do it! Almost there!

[04:02] ---

Nyuuu!

[04:06] ---

Look at those happy faces.

[04:09] ---

Hey, I just rescued some germs.

[04:11] ---

Oh man.

[04:12] ---

Nyuuu! Nyuuu! Nyuuu!

[04:13] ---

Hey, don't get attached to me!
You guys are germs, aren't you?

[04:18] ---

Hey! Ordinary Cell there!
What are you being so sneaky about?

[04:21] ---

N-N-N-N-Nothing! It's nothing!

[04:24] ---

I just kind of overate! I wasn't feeling well,
so I decided to crouch here to rest!

[04:30] ---

Is that right? Take care, then!

[04:33] ---

Jeez, that was close! There's no telling
what they would do if they spotted you.

[04:39] ---

Nyuuu!

[04:40] ---

Now, be good and go back
to where you came from.

[04:42] ---

- Nyuuu?
- See ya.

[04:46] ---

Nyuuu! Nyuuu!

[04:48] ---

Hey, stop following me, dammit!

[04:51] ---

I don't want to get yelled at, all right?

[04:53] ---

I'll pretend I never saw you,
so try to make it back to—

[04:56] ---

Nyuuu?

[05:00] ---

Nyuuu! Nyuuu! Nyuuu!

[05:07] ---

NYUUU

[05:07] ---

Nyuuu!

[05:10] ---

I went and brought them home.

[05:13] ---

Jeez, this is bad! I'm so going to get yelled at!

[05:17] ---

Wait, worst case, I could get killed, too!

[05:29] ---

My receptor's definitely
picking something up,

[05:32] ---

so where are the antigens?

[05:34] ---

Hey, White Blood Cell!

[05:36] ---

Thank you for saving us earlier!

[05:38] ---

Sure.

[05:40] ---

Is something the matter?

[05:42] ---

No. I've been patrolling this area
for antigens, and...

[05:47] ---

Not at home?

[05:48] ---

Hello? I've come to deliver your oxygen!

[05:52] ---

Ordinary Cell?

[05:53] ---

Nyuuu!

[05:54] ---

NYUUU

[05:56] ---

Dummies! Shush! Shush!

[05:58] ---

Keep it down, all right?

If we're caught, they're going to kill you!

[06:02] ---

Hello? Cell boy? Are you in there?

[06:07] ---

No answer, huh?

[06:08] ---

Do you think maybe he was talking
in his sleep?

[06:11] ---

Well, never mind.

[06:12] ---

I have to find those antigens first.

[06:16] ---

No, hold up!

[06:17] ---

Maybe the antigen's threatening
Cell boy inside there,

[06:21] ---

and there's no way
for him to call for help,

[06:23] ---

so he emitted that sound
just now as a last resort?

[06:27] ---

If you call for help, you're dead!

[06:29] ---

Nyuuu!

[06:29] ---

NYUUU

[06:31] ---

I-It's all quiet out there now.

[06:34] ---

Are they gone?

[06:35] ---

All right.

[06:37] ---

I'm going to slip out now
and take them back.

[06:39] ---

Hey, Cell boy! Are you okay?
I'm coming to save you now!

[06:48] ---

Nyuuu! Nyuuu! Nyuuu!

[06:52] ---

And what exactly...

[06:53] ---

is your explanation for this?

[06:55] ---

W-Well, long story short, I rescued them,
but then they got attached to me.

[06:55] ---

Nyuuu! Nyuuu! Nyuuu!

[07:00] ---

And when I thought about them being killed,
I couldn't turn my back on them.

[07:05] ---

I see.

[07:06] ---

I can see how it'd be hard
to turn your back on them.

[07:09] ---

- Nyuuu! Nyuuu! Nyuuu!
- Oh? You're hungry?

[07:14] ---

I don't have anything for you.

[07:16] ---

I said, I have nothing. See?

[07:18] ---

Nyuuu! Nyuuu! Nyuuu!

[07:21] ---

Cell boy...

[07:22] ---

I understand how you feel,

[07:24] ---

but I can't allow germs
to multiply inside this body.

[07:28] ---

Once they multiply, germs go on to release toxins,
harming the cells inside the body.

[07:33] ---

In some cases, this could trigger hemolysis
which would destroy the Red Blood Cells

[07:37] ---

or take away their nutrients.

[07:40] ---

You understand, right?

[07:44] ---

I guess it would be cruel to do it before his eyes.

[07:48] ---

Thank you for your help
in capturing the antigens.

[07:50] ---

Oh...

[07:51] ---

Nyuuu! Nyuuu! Nyuuu!

[07:58] ---

This is No. 4989!

[08:00] ---

We're battling germs in the stomach,
and it's not looking good!

[08:02] ---

We need your backup right away!

[08:05] ---

Roger that! I'm on my way!

[08:07] ---

Cell boy, sorry, but I'm taking
custody of these germs!

[08:14] ---

Ordinary Cell?

[08:15] ---

S-Sure, of course.

[08:17] ---

He's only doing his job.

[08:19] ---

Protecting us all is the Immune Cells' job, after all.

[08:26] ---

U-Uh...

[08:29] ---

Hey, wait, Ordinary Cell!

[08:31] ---

Sign this!

[08:37] ---

That's right! Run around in a frenzy!

[08:42] ---

What's going on?

[08:43] ---

Where's the enemy?

[08:45] ---

Hey, 1146!

[08:47] ---

Um, it's on the other side of that wall!

[08:53] ---

Pylori!

[08:55] ---

H. pylori.

[08:57] ---

Resistant to gastric acid.

[08:58] ---

*Can trigger gastrointestinal diseases, causing
ulcers and sometimes leading to stomach cancer.*

[09:04] ---

*It's a type of harmful bacteria,
detrimental to the human body.*

[09:08] ---

Officially known as "Helicobacter pylori."

[09:11] ---

H. pylori? Who would've thought?

[09:15] ---

There's nothing you cells can do to stop me!

[09:19] ---

We H. pylori have bodies that are tough as nails,
so we can operate in gastric acid! Unlike you lot!

[09:28] ---

It's like chaos here!

[09:30] ---

So, this is the front line, huh?

[09:34] ---

Nyuuu...

[09:36] ---

B-But it's not like we can go to him, you know!

[09:40] ---

We'll get dissolved in that gastric acid!

[09:42] ---

I'll go!

[09:43] ---

I'll land a fatal blow on him
before I get dissolved!

[09:45] ---

What? But 1146,
if you do that, you'll die!

[09:50] ---

There's no way around it!
It's for the sake of this body!

[09:53] ---

For the sake of this body...

[09:54] ---

That's right.

It's for the sake of this body.

[09:58] ---

To die for someone else's sake...

How cool is that?

[10:02] ---

For someone like me...

[10:04] ---

For a humble ordinary cell like me,

that would be impossible.

[10:08] ---

How powerless am I anyway?

[10:10] ---

This world belongs to the H. pylori now!

[10:14] ---

Oh, crap! The stomach lining!

[10:17] ---

At least put this on!

It's made of acid-resistant enamel!

[10:21] ---

It's crumbling!

[10:25] ---

Look out!

[10:33] ---

C-Cell boy!

[10:38] ---

Sorry. I'm nothing but an ordinary cell,

[10:42] ---

so I can't protect you like I should.

[10:47] ---

You guys are bacteria inside this body,
so you're going to end up dead.

[10:52] ---

But you know what?

[10:53] ---

I would've saved you if I could.

[10:57] ---

Just remember that you did have
somebody who cared about you.

[11:04] ---

Well, now, I've seen everything!

A cell, protecting germs?

[11:08] ---

Hmm... I just know

I've seen you somewhere before.

[11:12] ---

Are you all right?

[11:14] ---

Oh, never mind!

I'm going to eliminate you all in one go!

[11:18] ---

Take this! Gastric Acid Hell!

[11:21] ---

Uh-oh!

[11:24] ---

Nyuuu!

[11:27] ---

Those germs opened up a hole,
so now we have a pathway!

[11:30] ---

This is our chance to take over this—

[11:33] ---

Nyuuu?

[11:34] ---

Nyuuu!

[11:35] ---

Huh?

[11:37] ---

The other germs that happened to show up
just got turned into slush!

[11:39] ---

Can you believe how powerful that was?

[11:41] ---

Nyuuu! Nyuuu! Nyuuu!

[11:45] ---

W-Wait! One's missing!

[11:51] ---

No way! So, I guess he's—

[11:55] ---

Nyuuu...

[11:58] ---

Nyuuu...

[12:01] ---

Hey, he's alive!

[12:05] ---

Wh-What's going on?

[12:08] ---

That germ's acting...

[12:20] ---

Wh-What was that? Did the H. pylori
just take a hit from that germ's attack?

[12:24] ---

Grrr! I-Impossible! You actually dared to inflict a wound on me?

[12:31] ---

Huh? W-Wait, don't tell me you're...

[12:34] ---

a lactic acid bacterium?

[12:36] ---

Nyuuu!

[12:39] ---

Lactic acid bacteria.

[12:40] ---

Rather than refer to a specific bacteria, it is the blanket term for germs

[12:44] ---

that produce lactic acid in massive quantities

[12:46] ---

by breaking down sugars to produce the energy necessary for growth.

[12:51] ---

Nyuuu! Nyuuu! Nyuuu!

[12:53] ---

Stop it!

[12:57] ---

I can't take this!

My only option is to flee— Oh no...

[13:01] ---

You finally came out from the sea of acid!

[13:04] ---

N-N-N-Now I've done it!

[13:06] ---

Nyuuu!

[13:07] ---

Nyuuu!

[13:08] ---

You pylo-ing scum...

[13:10] ---

Die!

[13:11] ---

Nyuuu!

[13:12] ---

Pylori!

[13:17] ---

Nyuuu! Nyuuu! Nyuuu!

[13:20] ---

D-Did he just beat that huge H. pylori?

[13:24] ---

Nyuuu! Nyuuu! Nyuuu!

[13:26] ---

Wh-Wh-What's up with you guys?

[13:28] ---

Hey, don't jump on me! You're all covered
in gastric acid! It's bad for me!

[13:31] ---

Hey, are those germs...

[13:34] ---

Yeah.

[13:34] ---

Nyuuu! Nyuuu! Nyuuu!

[13:35] ---

It looks like it.

[13:38] ---

Cell boy...

[13:39] ---

I'm so sorry!

[13:41] ---

After what just happened,
I get it now...

[13:43] ---

exactly what kind of germs
those guys are.

[13:45] ---

Nyuuu!

[13:48] ---

Those germs...

[13:50] ---

are good bacteria
that work for the sake of this body.

[13:55] ---

Good bacteria.

[13:56] ---

*The layperson's term for the bacteria
found in the digestive system*

[13:59] ---

*that are beneficial
for the human body's health.*

[14:04] ---

*Well-known examples include
lactic acid and lactobacillus bifidus.*

[14:07] ---

*Some lactic acid bacteria
are resistant to gastric acid*

[14:11] ---

and can suppress the activation of H. pylori.

[14:15] ---

Nyuuu!

[14:17] ---

Nyuuu!

[14:18] ---

They must've entered this body
along with food or something.

[14:23] ---

I've never seen them in an inactive state,

[14:26] ---

so I didn't realize it at first.

[14:28] ---

All right, I have to get back to patrol duty.

[14:32] ---

Because bacteria might invade
through that hole the H. pylori ripped open.

[14:36] ---

B-But what about these guys?

[14:47] ---

Hey, you want to go to your friends, don't you?

[14:49] ---

Nyuuu!

[14:50] ---

Nyuuu! Nyuuu!

[14:54] ---

I can't go with you. I'll melt.

[14:57] ---

Nyuuu?

[14:58] ---

Nyuuu...

[14:59] ---

Nyuuu...

[15:00] ---

Nyuuu?

[15:04] ---

Go on.

[15:05] ---

Nyuuu...

[15:08] ---

Nyuuu! Nyuuu! Nyuuu!

[15:11] ---

Take care of yourself.

[15:14] ---

All right, Cell boy...

[15:17] ---

I'm about to tell you something
that has nothing to do with you.

[15:21] ---

There are all kinds of types
of lactic acid bacteria,

[15:23] ---

and I hear they all work with their friends
near different digestive organs.

[15:28] ---

I'm heading out to patrol those areas now.

[15:32] ---

Wanna come along?

[15:34] ---

Yeah!

[15:38] ---

Hey!

[15:40] ---

So, there you are, Ordinary Cell!

[15:42] ---

I was wondering where you'd gone!

[15:44] ---

If you could just stamp that receipt...

[15:46] ---

or your signature will do, too. Right here, please.

[15:49] ---

Sorry, I forgot all about that.

[15:52] ---

Nyuuu! Nyuuu! Nyuuu!

[15:54] ---

Ordinary Cell, haven't you put on
some weight since I last saw you?

[15:58] ---

Huh? Oh, yeah...

[16:07] ---

ANTIGENIC SHIFT

[16:09] ---

"*Antigenic Shift.*"

[16:12] ---

SMALL INTESTINE

[16:15] ---

All right, I'm heading this way.

[16:17] ---

Right.

[16:19] ---

Good work!

[16:21] ---

WELCOME
TO THE
SMALL INTESTINE

[16:26] ---

This is the small intestine.

[16:29] ---

Okay! Hoist up the microvilli
from No. 1 through 10!

[16:34] ---

There are all sorts of stuff
coming in again today.

[16:36] ---

Nice to get some balanced nutrition, huh?

[16:39] ---

Nyuuu!

[16:41] ---

So, this is the small intestine, huh?

[16:43] ---

I've never been to a place
like this before! It's awesome!

[16:47] ---

Put those lactic acid bacteria away
or they'll be spotted.

[16:49] ---

It looks like they're scooping something up
with a huge net. What is that?

[16:54] ---

There are nutrients that got dissolved
in the stomach on the other side of this wall.

[16:58] ---

It's here in the small intestine that
they get absorbed into the body,

[17:01] ---

processed and turned into nutrients for you cells.

[17:02] ---

SAMPLES

[17:05] ---

Hey, you're right!

We eat that stuff all the time!

[17:08] ---

- Wow!

- Nyuuu!

[17:09] ---

But if they're from outside, doesn't that mean
all kinds of substances get in? Like viruses?

[17:15] ---

Bad stuff like that
isn't absorbed by mistake, right?

[17:18] ---

Most of it gets destroyed by gastric acid,

so it's all good.

[17:21] ---

Still, there are other things, too,
that can get tricky.

[17:24] ---

Whoa! What's all this?

[17:27] ---

What are we going to do with all this?
Did you have to absorb this boatload of purines?

[17:32] ---

B-But, sir,

[17:33] ---

we have no recourse
against the mass production of purines.

[17:37] ---

Don't make excuses!

[17:38] ---

Listen, you know that uric acid is formed
when the body breaks down purines!

[17:41] ---

And if there's an excess buildup of uric acid,
sharp crystals will form,

[17:42] ---

Oh man, he's getting yelled out. Poor guy...

[17:44] ---

and that would mean major trouble!

[17:46] ---

Yeah.

[17:47] ---

I'm telling you, it's like every other word
out of your mouth is some excuse!

[17:52] ---

That's why you're no good!

[17:53] ---

Nyuuu...

[17:55] ---

Nyuuu!

[17:56] ---

TASTY LACTOSE

[17:57] ---

- Nyuuu! Nyuuu!
- Hey! Hey you, get back here!

[17:59] ---

- Nyuuu!
- Huh? Wh-What's that thing?

[18:02] ---

Nyuuu! Nyuuu! Nyuuu!

[18:05] ---

Nyuuu! Nyuuu! Nyuuu!

[18:06] ---

It's eating the purines!

[18:10] ---

Nyuuu! Nyuuu! Nyuuu!

[18:12] ---

BURP

[18:12] ---

Burp.

[18:15] ---

Nyuuu!

[18:16] ---

Nyuuu! Nyuuu! Nyuuu!

[18:17] ---

Is it happy because it's eaten its fill?

[18:20] ---

Nyuuu?

[18:21] ---

Nyuuu!

[18:25] ---

Nyuuu!

[18:34] ---

Nyuuu! Nyuuu! Nyuuu!

[18:34] ---

OM

NOM

NOM

[18:35] ---

Wait! Huh? All they're doing
is devouring the purines?

[18:38] ---

These guys are pretty docile, huh?

[18:41] ---

Hey, you're doing us a favor!

[18:43] ---

Here, eat up these purines, too!

[18:45] ---

Nyuuu!

[18:47] ---

Aren't they amazing?

Watch them gobble it all up!

[18:51] ---

- Nyuuu!

- Smug!

[18:51] ---

NYUUU

SMUG

[18:53] ---

I see.

[18:54] ---

So, this is what these lactic acid bacteria do?

[18:57] ---

Lactic acid bacteria coexist with cells in the body
in various ways according to type.

[19:02] ---

*These guys can make friends
with all kinds of cells!*

[19:06] ---

That's incredible!

[19:08] ---

I guess the small intestine might be
the ideal place for those germs to live.

[19:13] ---

Yeah.

[19:15] ---

Hey!

[19:16] ---

Nyuuu?

[19:18] ---

Nyu-nyu-nyuuu!

[19:22] ---

Take care.

[19:29] ---

Well, who knew? Lactic acid bacteria
really does a lot for the body, huh?

[19:34] ---

Do these guys totally rock or what?

[19:36] ---

Well, don't get too carried away, Cell boy.

[19:39] ---

They may be useful, but germs are germs.

[19:41] ---

If they ever start acting sketchy,
I'm going to deal with them right away.

[19:45] ---

And one more thing. Whatever you do,
don't ever let anyone see them.

[19:49] ---

If any of the other Immune Cells
spot them, I—

[19:51] ---

Hey, check this out, will you?

[19:53] ---

Nyuuu! Nyuuu! Nyuuu!

[19:54] ---

Ta-da!

[19:55] ---

A lactic acid bacterium in the hand
and one on the head!

[19:58] ---

These guys are so fluffy and adorable!

[20:01] ---

Go ahead and pet them,
White Blood Cell!

[20:04] ---

Huh? Germs nearby? My receptor!

[20:06] ---

Moron! Hide them! Do you want them to get killed?

[20:07] ---

Whoa! Don't yell at me!

[20:09] ---

Huh? There's nothing here.

[20:11] ---

Wh-Whoa!

[20:12] ---

Malfunction, I guess.
This receptor of mine...

[20:14] ---

Nyuuu!

[20:17] ---

Nyuuu! Nyuuu! Nyuuu!

[20:18] ---

The lactic acid bacterium!

[20:20] ---

- Come back here!
- Cell boy!

[20:22] ---

Nyuuu!

[20:25] ---

- Nyuuu!
- Lactic Acid Bacterium!

[20:32] ---

What should I do? It's too dangerous
for him to be on his own!

[20:34] ---

I have to look for him!

[20:36] ---

But there's no telling
where he'll end up inside this vast body.

[20:40] ---

I know! White Blood Cell, can you notify
the other Immune Cells right now?

[20:44] ---

Tell them not to kill
that lactic acid bacterium!

[20:47] ---

I'm sorry. I can't do that.

[20:49] ---

We Neutrophils are unable to present antigens.

[20:53] ---

I can't tell other Immune Cells
not to attack him because he's good bacteria.

[21:00] ---

If he reaches an Immune Cell who can see
that he's good bacteria, he'll be fine.

[21:06] ---

But if he gets dealt with
as a mere foreign substance,

[21:09] ---

then it would be out of my hands.

[21:11] ---

Sorry.

[21:12] ---

No way.

[21:14] ---

Nyuuu?

[21:16] ---

I don't get it, White Blood Cell.

[21:21] ---

You know he's not a bad guy.

[21:24] ---

Right. Even still...

[21:26] ---

That little guy...

[21:27] ---

That little guy must've given it all
for this this body, too! I know it!

[21:32] ---

Why would you kill someone like that?

[21:35] ---

You Immune Cells are jerks!

[21:39] ---

That's...

[21:40] ---

That's my...

[21:42] ---

That's our...

[21:43] ---

It's our job, that's why.

[21:46] ---

That voice just now...

[21:51] ---

Long time no see.

[21:53] ---

NK Cell!

[23:24] ---

NEXT EPISODE

PREVIEW

[23:25] ---

Nyuuu! Nyuuu!

[23:27] ---

What, you want to take part in the preview?

[23:29] ---

Nyuuu! Nyuuu!

[23:31] ---

Hey! Sounds like it'll be fun!

[23:34] ---

Next episode of "Cells at Work!!"...

[23:35] ---

"Cytokines."

[23:35] ---

EPISODE 5:

CYTOKINES

[23:37] ---

Nyuuu! Nyuuu!

[23:37] ---

Please look forward to it!

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