

# Futures

## Bacteriophages

Unexpected guests. **By Roderick Leeuwenhart**



ILLUSTRATION BY JACEY

**S**everal days after my outpatient cancer treatment, the bacteriophages started whispering to me. I'd got a syringe full of them in my blood stream; they had eaten away the tumour in minutes and that should've been the end of it. My immune system – at least according to the leaflet – ought to have mopped up the intruders by the next day and flushed them out like so much superfluous vitamin C.

Instead, well ...

"We have established a communications array near your auditory cortex. Do not be alarmed. We only do this when something is not going as planned."

"That is the single most alarming thing I've heard in my life."

"This really shouldn't be happening," they continued. "So sorry. We strongly advise you to return to the clinic and inform the staff."

"Do you have any idea how much time I've already lost on this whole cancer thing?" My face flushed. "Why am I arguing with my

medicine!"

The overwork and stressful weeks preceding my treatment – that was all this was. I was tired and had to get back to work. Proper nourishment, brain food, a bowl of yoghurt with açai berries and flax seeds was all I needed. I certainly wasn't going mad and the bacteriophages certainly weren't trying to converse with me.

So I stretched my back, eased into the chair I had prepared with a blankie (even though the doctors assured me I wouldn't suffer malaise or other side-effects) and pulled up my work laptop. After several minutes, they stopped talking. I was right.

Until I woke up with a start, my head at a crooked angle from sleeping in the chair, drooling slightly on the keyboard. It was them again.

"Our numbers are growing. This indicates that we have stayed in your system for too long. We strongly advise you to return to the clinic and inform the staff."

"Can't you just", I asked, wiping the keys clean and racing to check the spreadsheets for errors, "not reproduce?"

"Our reproduction is vital to the successful destruction of the tumour. So sorry."

Which raised the ugly question what exactly were they dining on now that the growth was gone? No, let's not answer that.

I plugged a finger in my ear and jerked it around, as if that would shut them up.

"Please just allow yourself to die off or whatever. There has to be a kill-switch for you lot."

Instead of answering, they just cycled through the dozen-or-so preprogrammed sentences they were working together to induce in my head like unwanted push messages on Android. Even manipulated bacteriophages had their limits, apparently.

The next day, I felt miles better. The drain on my energy had gone, so I threw myself into my work. No more distractions. I was getting proficient at ignoring the intruders. Their warnings came like the chiming of a grandfather clock,

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and just like with a clock, your brain learnt to filter out its repetitious sounds. Another one of biology's neat tricks.

Six days in, my backlog was rapidly shrinking and I didn't feel worse for wear. Phages, shmages. Although my ears perked up when they introduced a new sentence.

"Our numbers are growing. We are reaching critical levels, which threatens to harm you."

"Are you sure?"

They gave me the spiel about visiting the clinic again.

"I just don't have time for this. I have deadlines, you know, real deadlines? I'll lose a big client if I don't get this done."

My microscopic, aggressively colonial friends didn't seem to sympathize. Worse, they started harassing me at night, in bed. No longer whispering either – their voice was booming now. Maybe their numbers were large enough for them to amplify their signal.

"SO SORRY."

I folded a pillow to cover both my ears – dramatic if largely ineffectual.

"... INFORM THE STAFF."

"All right!" Ripping the sheets off my

night-sweat-covered body was a release. "God-damn-it, I'll go to the clinic! If you're that intent on being exterminated – I'll indulge you! Have it your way, see if I care!"

Catching sleep after that was impossible, despite the bacteriophages keeping quiet for the first time in hours. Come morning, I called the dreaded number and the assistants put me through to the physician who'd helped me and he was *aghast* at my message. Why in the world had I waited a full week before taking action? And was I experiencing any physical discomfort? They scheduled an appointment within the hour. Now I had to rush breakfast, too.

Fifty minutes later, they put me on a drip. Slowly but surely, something changed. I felt my head get lighter and the slightly awkward messages stopped coming.

"Hello?" I asked under my breath.

No answer. The visitors were gone.

The doctor smiled like only doctors could – equal parts care and condescension. "Congratulations, you're all good again. I didn't see anyone bring you, but I assume you'll get back on your own?"

"Yes. On my own."

I wanted to thank the man properly, but all I managed was a weak handshake and a nod. I felt worse than anything that the cancer, its treatment or the subsequent bacteriophage squatters had caused.

The way home was eerily quiet.

My house felt larger than before, emptier.

Sitting down in the chair, I pulled the blanket over my shoulders and didn't feel like working at all. The sadness that had crept inside had little to do with the lingering toxins. I hadn't realized how lonely my life had been until now.

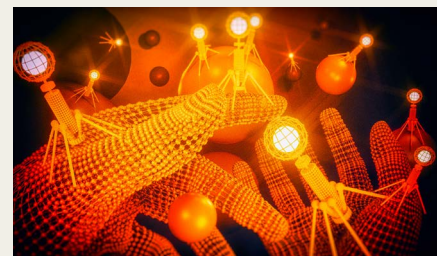
I could ask for another bacteriophage treatment. They might stay again for a week, or maybe a little longer this time?

**Roderick Leeuwenhart** writes SF from a Dutch angle and frequently dreams about east Asia. He won the 2016 Harland Awards, the Netherlands' top prize for speculative fiction. His work is translated all the way to China. His most recent novel is *The Gentlemen XVII*, which asks the question 'what would have happened if the Dutch East India Company had never ceased to exist?' See more at [www.roderickleeuwenhart.nl](http://www.roderickleeuwenhart.nl)

## THE STORY BEHIND THE STORY

Roderick Leeuwenhart reveals the inspiration behind *Bacteriophages*.

There's something wonderfully strange about bacteriophages. Not just the kind that sets up communication arrays in your brain, any kind. Looking at visualizations of the microscopic things (especially certain types, such as the T2 or T4 phages), you get the feeling they're not supposed to be real. Their shape is too geometric, too much like a crude 3D mesh from an early PlayStation game. Their ability is even weirder: they drill into choice bacteria to flush DNA strands into the host from their lightbulb heads. It's alien in all the best ways.



I was first confronted with these life forms at the Micropia science museum in Amsterdam. Before then, they had been abstract entities from news articles talking about the various ways we might hijack their functions to fight off diseases — but suddenly they exploded into view. I didn't know how just yet, but here was a story. Over the years, it came together when I started writing flash fiction and was inspired by Chinese author Xia Jia to try my hand at something for Nature Futures.

The bacteriophages slotted nicely into this plan, and their weird aspect proved perfect for selling the notion that they might awkwardly communicate with you as some sort of medical failsafe. You wouldn't believe any old virus could do this, but a swarm of gangly lightbulbs-on-sticks? Yes, you would.

It should be obvious that I can't wait for this future to emerge. One where cancer has become a mere nuisance and you might just end up with a colony of well-intentioned bacteriophages in your head, offering polite conversation.