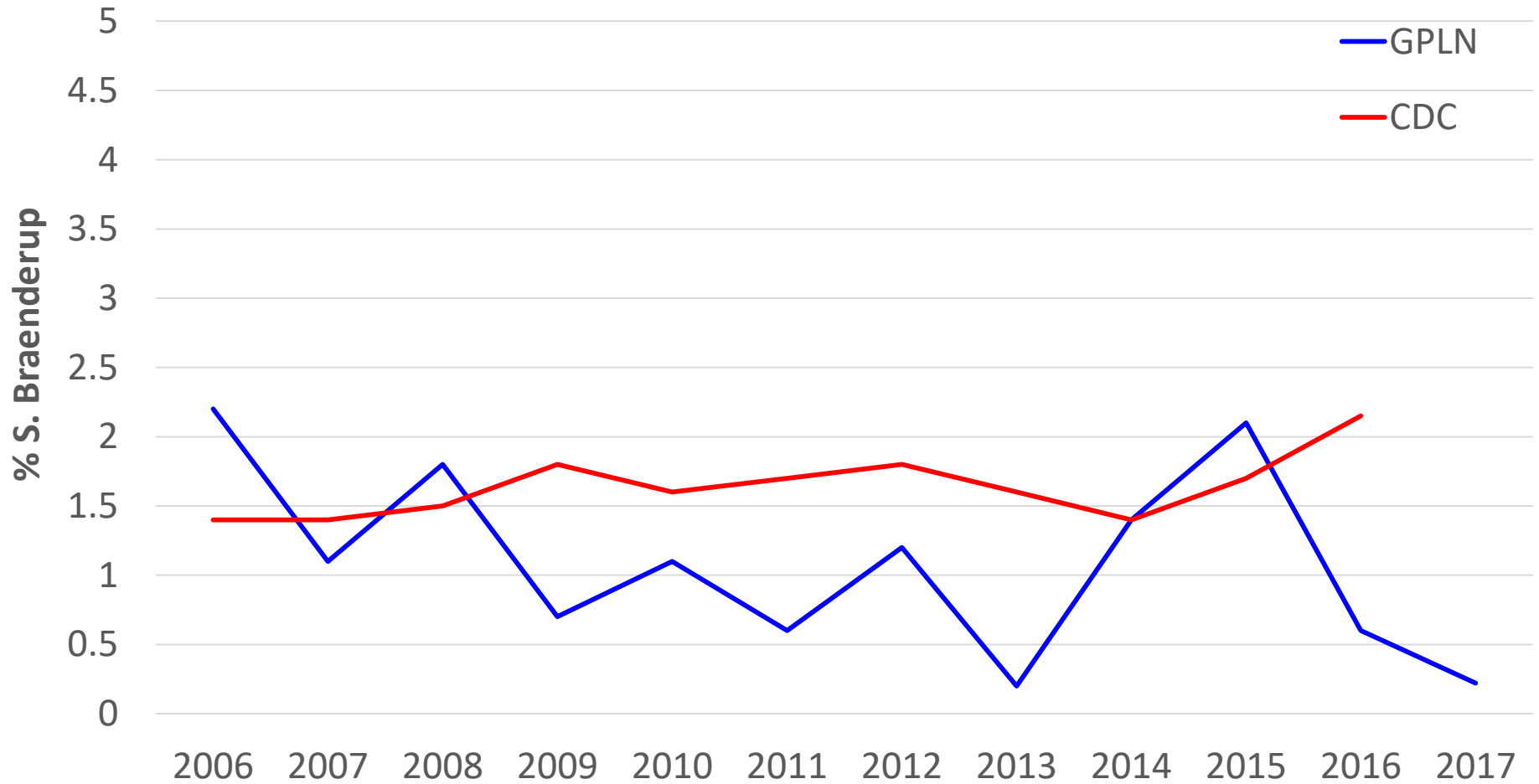
A microscopic image of Salmonella bacteria, showing two rod-shaped cells with numerous long, thin flagella extending from their surfaces. The bacteria are set against a dark, textured background.

Salmonella Update NPIP 2018

Salmonella Braenderup in Shell Eggs

- 45 cases 11 hospitalizations 0 deaths
- 10 states
- One farm
- Recalled >206,000,000 eggs (April 13)
- Outbreak over (June 14)

Isolations of S. Braenderup GPLN and CDC



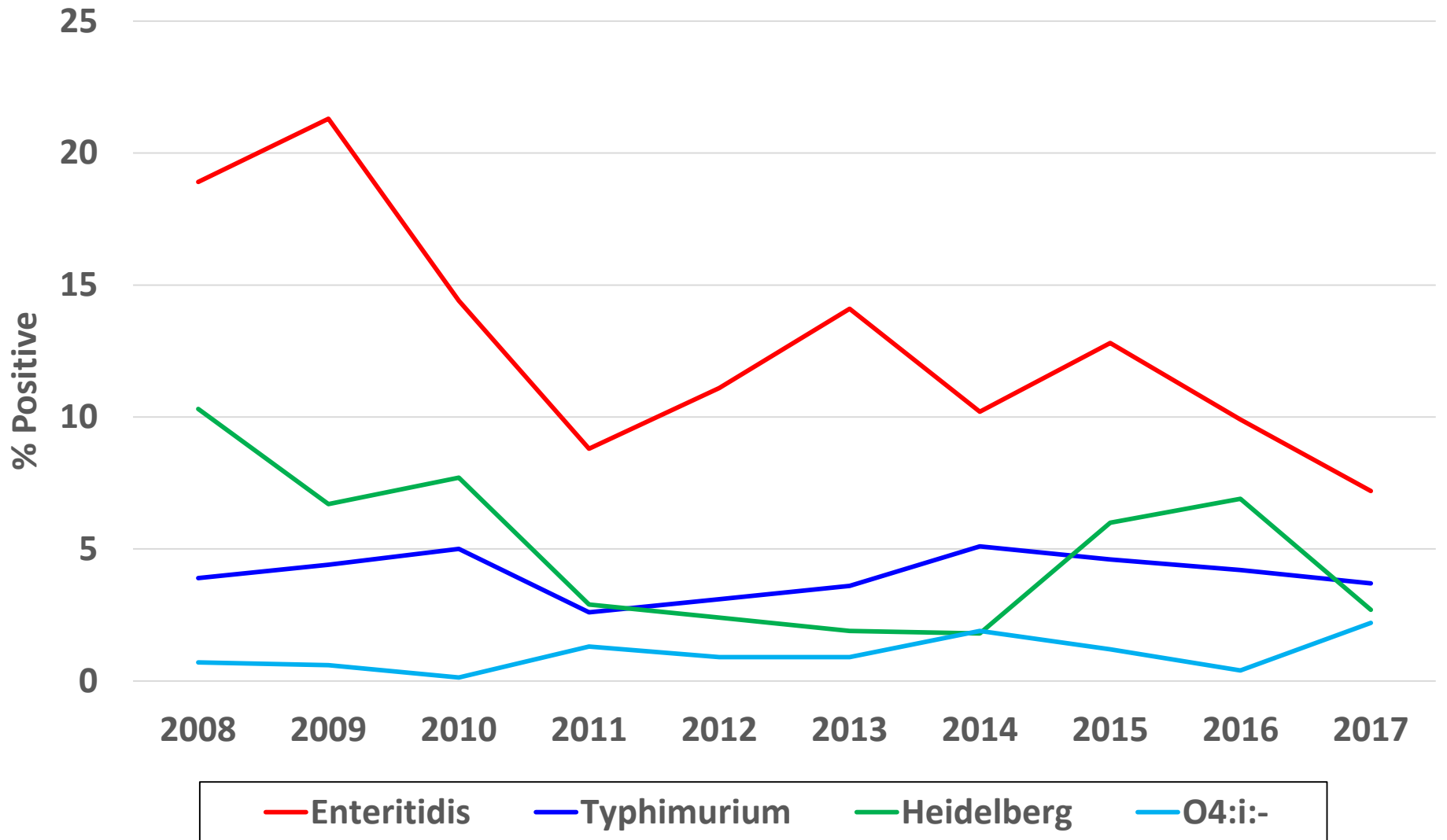
Salmonella Oranienburg in Shell eggs 2015 & 2016

	2015	2016
• No. cases	52	8
• No. hospitalizations	-	2
• No. deaths	-	0
• No. states	6	3
• Recall	yes	yes

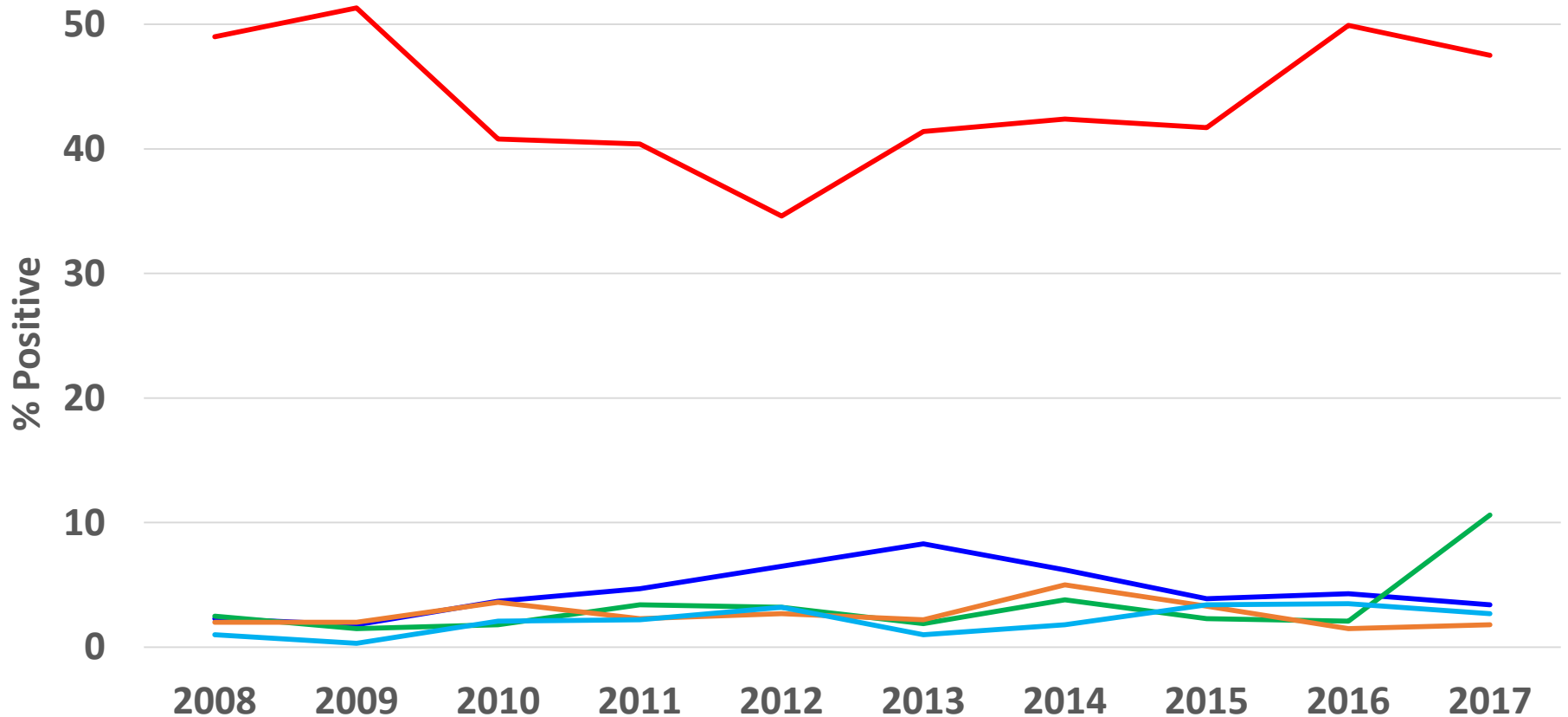
Babu et al., 2018 *In vivo* and *in vitro* evaluation of tissue colonization and survival capacity of Salmonella Oranienburg in laying hens (FDA)

- “Overall, our data suggested that SO infection in layers did not result in egg contamination via vertical transmission ...”
- “Although our data showed no vertical transmission of SO into the eggs, colonization of ovaries and oviducts indicates a discernable potential for such a route of egg contamination early in the infection period”

Percentage of Salmonella Serotypes GPLN 2008 – 2017

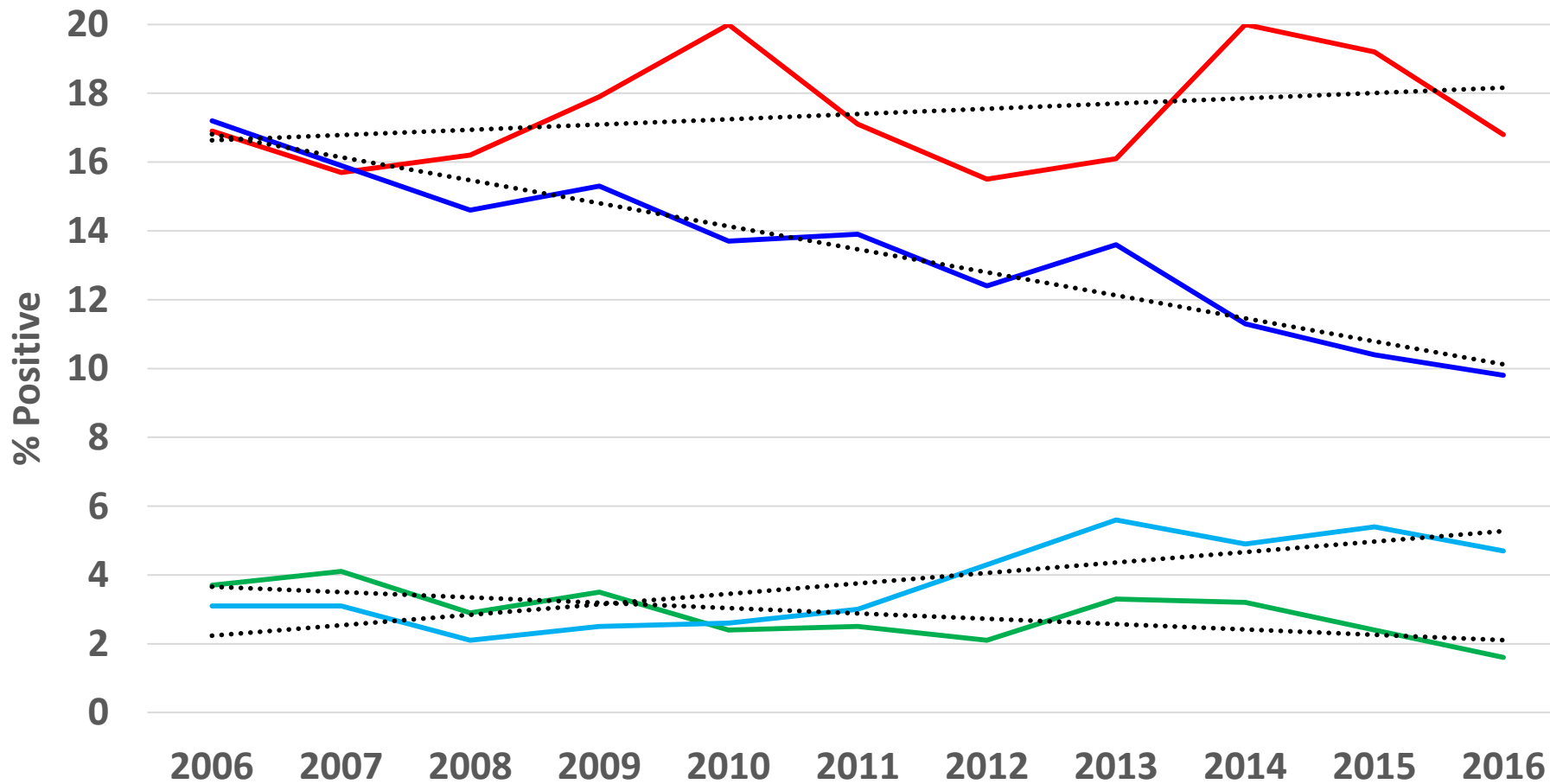


Percentage of Salmonella Serotypes GPLN 2008 – 2017



— Kentucky — Mbandaka — Infantis — Senftenberg — Schwarzengrund

Top Salmonella Serotypes in Humans CDC 2006 – 2016



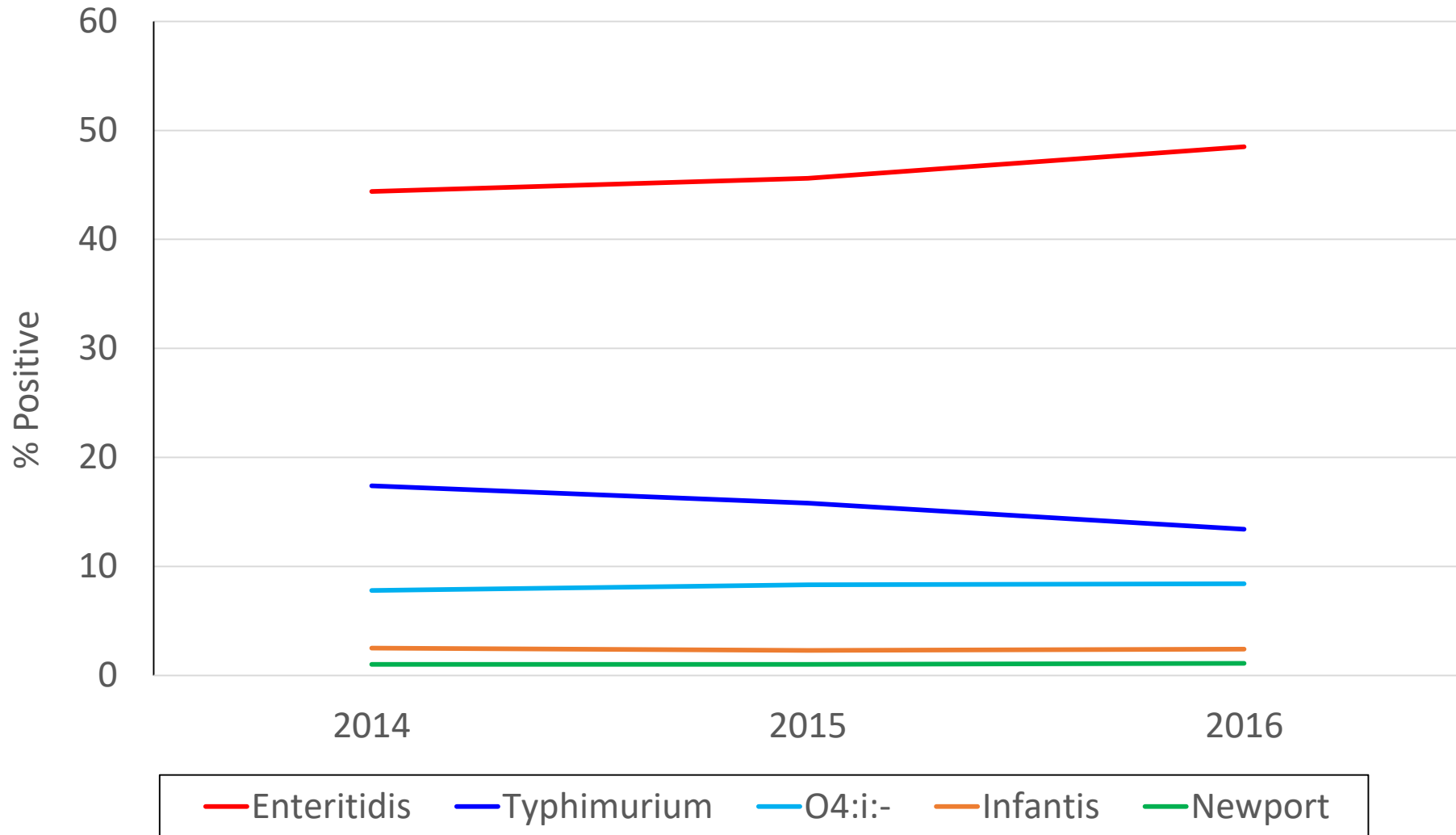
— Enteritidis

— Heidelberg

— Typhimurium

— O4:i:-

Most frequently isolated Serotypes in European Union 2014 - 2016



Philosophical and Retrospective

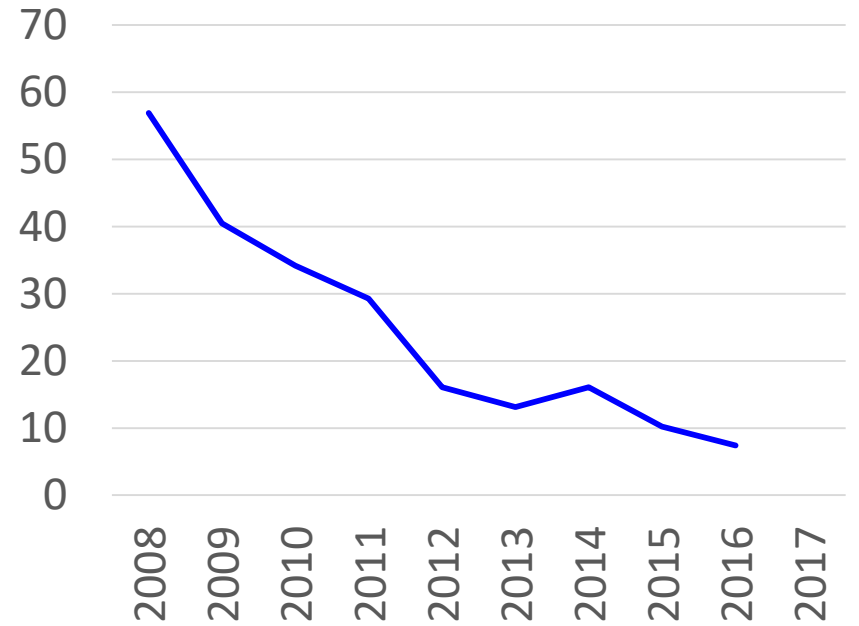
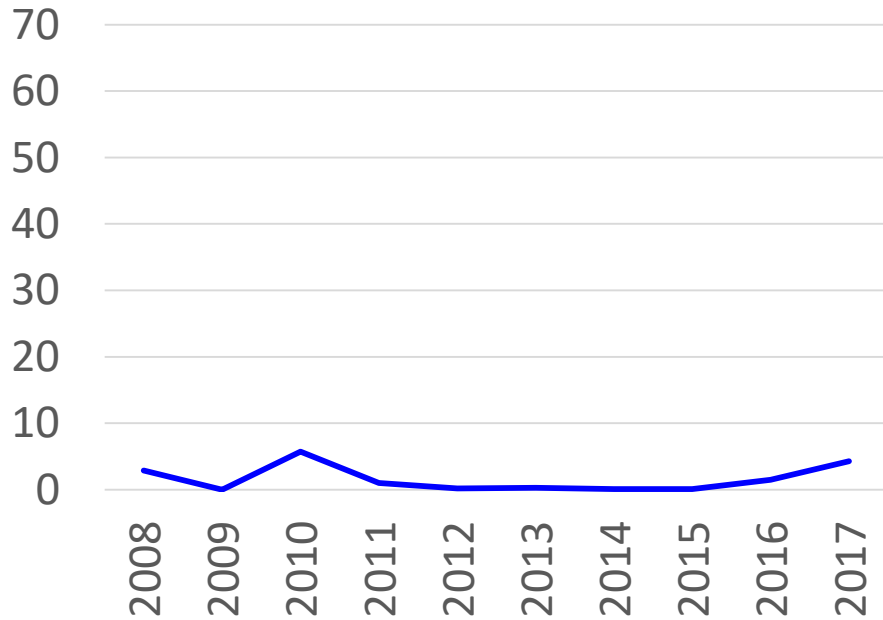
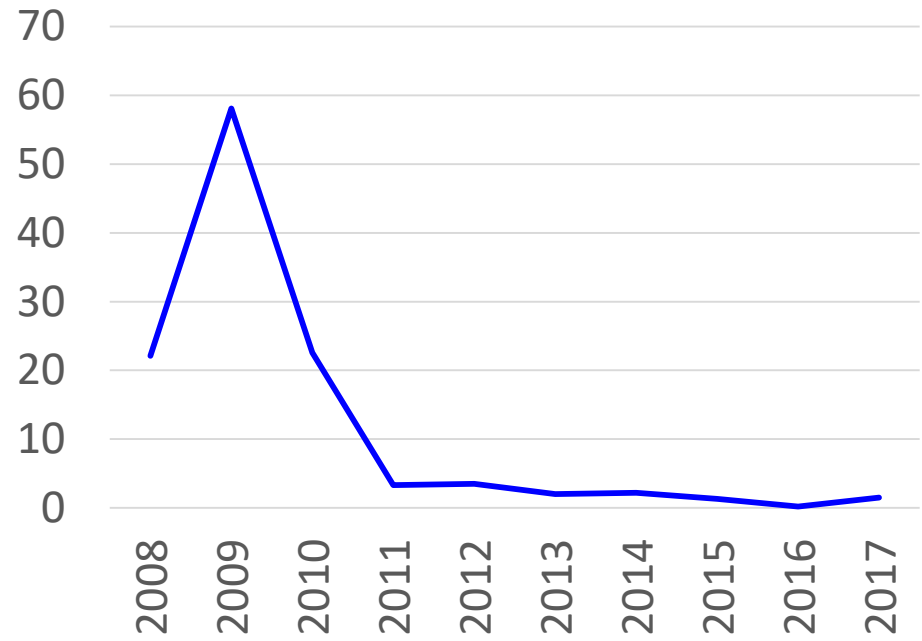


We all get heavier as we get older because there's a lot more information in our heads. So I'm not fat, I'm just really intelligent and my head couldn't hold any more so it started filling up the rest of me!

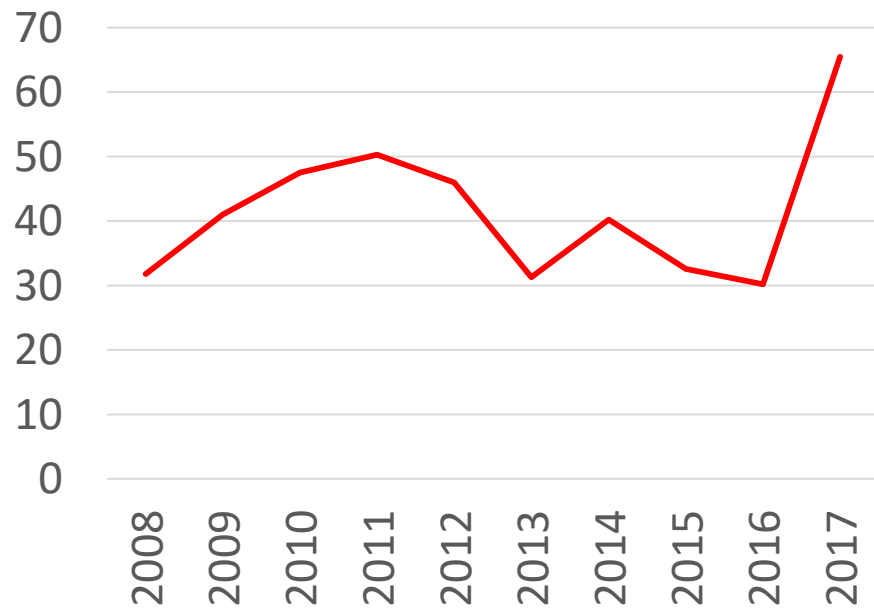
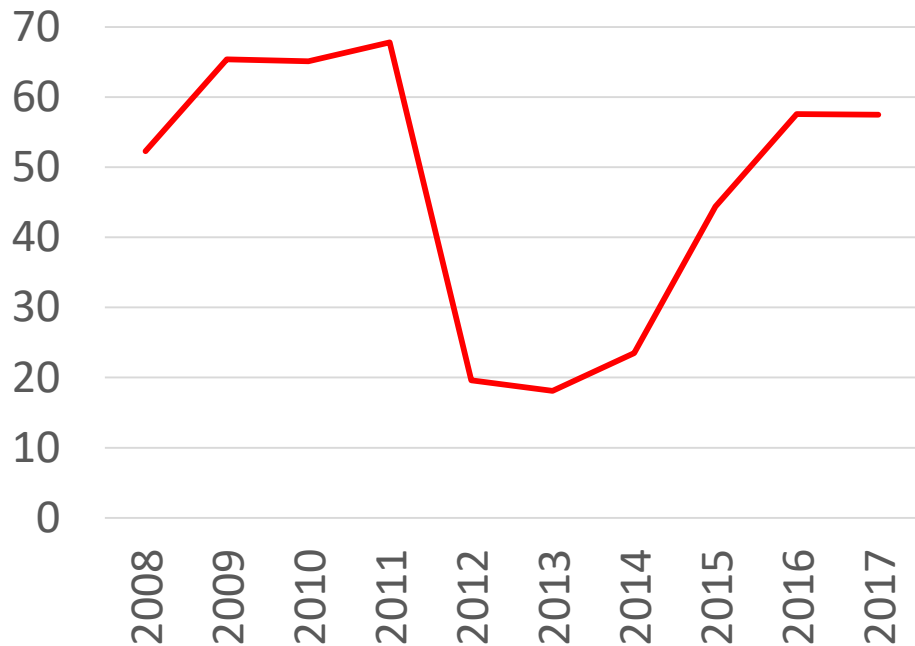
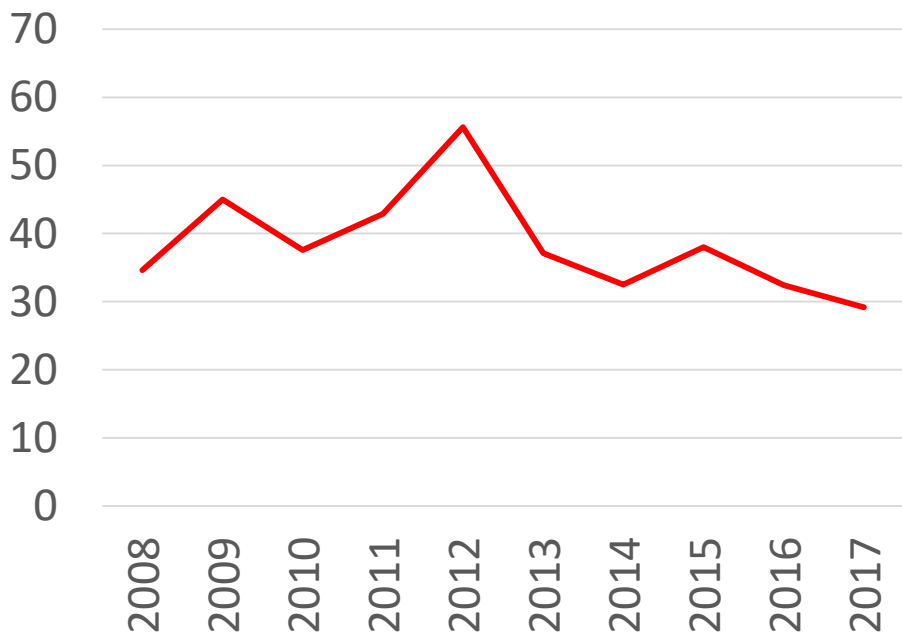


That's my story and I'm sticking to it!

Percentage of Salmonella positive samples for individual companies by year



Percentage of Salmonella positive samples for individual companies by year



NPIP Approved Rapid Systems



June 4, 2018

Re: Salmonella Pullorum Plate Antigen

Dear Valued Customer,

As many of you are aware, Charles River Laboratories is the global supplier of Elanco's (formerly Lohmann Animal Health/LAH) USDA licensed Salmonella Pullorum plate antigen, CRL material number 10100762. Elanco has discontinued the product and has been working with CRL to transfer production of this critical product. While we are diligently working toward USDA licensure, inventory levels have continued to drop and we are now backordering this product.

We continue to work toward licensure and remain hopeful to have product available to ship **by the end of summer**. Further updates will be available as we look to complete pre-licensed serials and make a final license submission to the USDA. Once product is available, we will do our best to manage inventory levels so everyone has enough to complete this vital testing. We apologize for the inconvenience during this transition period.

Please let me know if there are any questions or further concerns. I will be happy to provide updates as we move through the licensing process.

Kind regards,

Douglas Warner

What would happen if ...

Doom



Gloom



What would happen if ...

There was an introduction of *Salmonella Gallinarum* (Fowl Typhoid) in the United States.

Doom

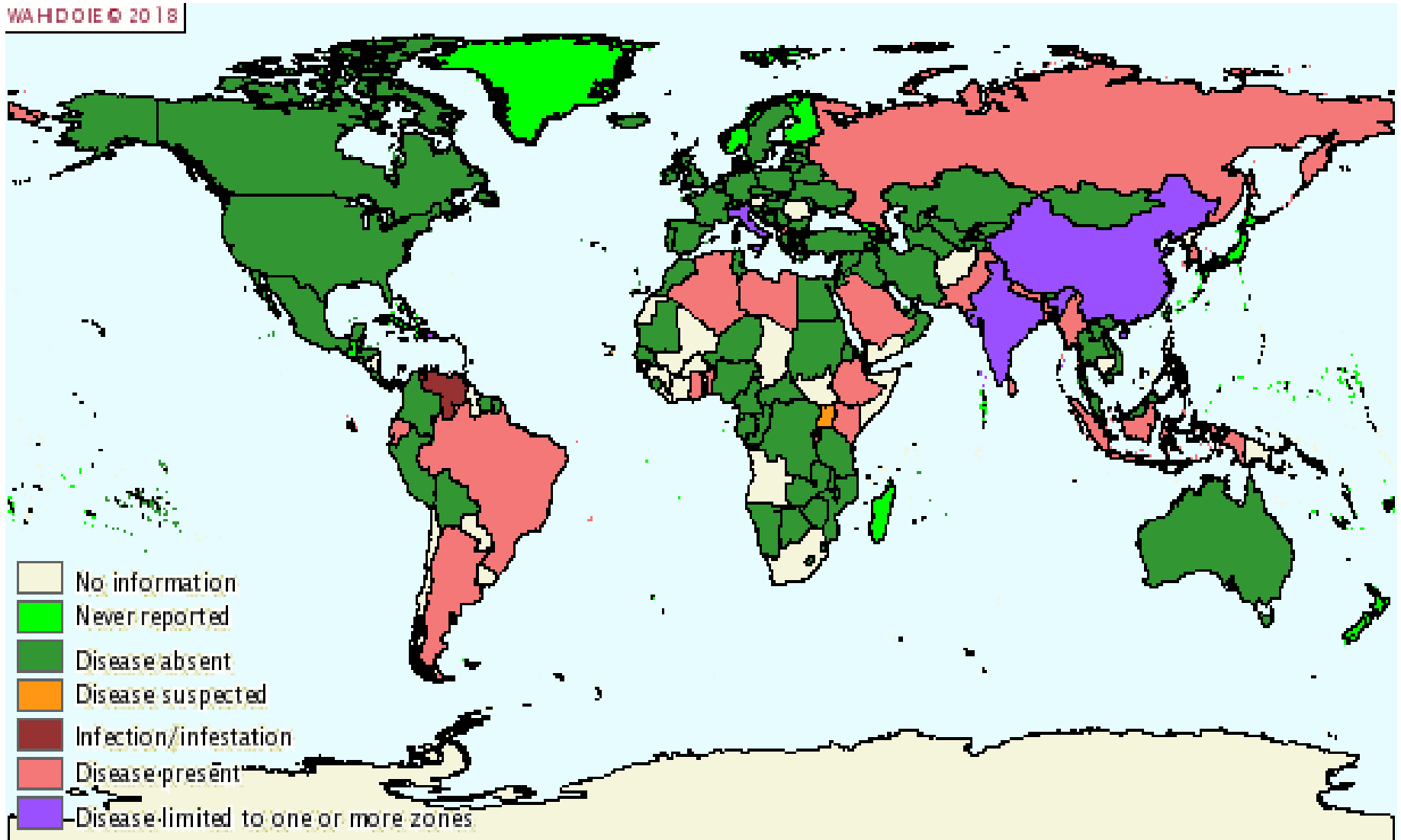


Gloom



Jan 2017 Fowl typhoid worldwide

WHD01E © 2018





"That's all Folks!"

