



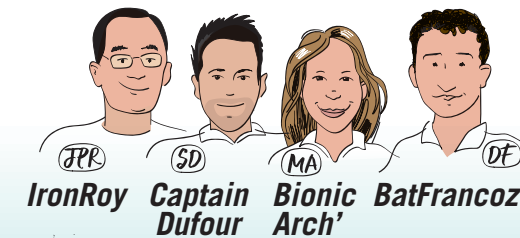
"EXTRANTIBIORDINARY ADVENTURES" © Op+lait 2020

Op+lait
Regroupement pour un lait de qualité optimale
oplait.org

THE MAIN CHARACTERS



THE RESEARCHERS



EXTRANTIBIORDINARY ADVENTURES



Op+lait
Regroupement pour un lait de qualité optimale
oplait.org

Université
de Montréal

Cultivons l'avenir 2
Une initiative fédérale-provinciale-territoriale

Canada Québec

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Illustrations and colours: **Pierre-Yves Clerson**, illustrator at Catherine Imagine (catherineimagine.com).

Front cover: **Pierre-Yves Clerson**.

English translation: **Marketa Kopal**.

Third and fourth cover: **Hélène Lardé** and **Jonathan Massé** (text), **Ibtissem Doghri** and **Aida Minguez Menendez** (graphics and design), and **Marco Langlois** (photographs).

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IA116596 – Prevalence, cause and control of antibiotic resistance on Quebec dairy farms.
IA115330 – Evaluation of antimicrobial use by Quebec veterinarians and dairy cattle producers.

This research was conducted with financial assistance from the Programme Innov'Action agroalimentaire, a program resulting from the Growing Forward 2 agreement concluded between the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec, and Agriculture and Agri-Food Canada.

The main characters



Hélène Lardé
WonderH
PhD Candidate



Jonathan Massé
SuperJ
PhD Candidate

The researchers



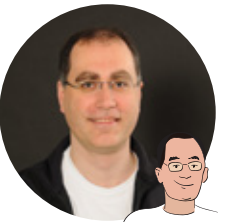
Marie Archambault
Bionic Arch'
Full Professor



Simon Dufour
Captain Dufour
Associate Professor



David Francoz
BatFrancoz
Full Professor



Jean-Philippe Roy
IronRoy
Full Professor

The Support Team



Hélène Poirier
Liaison and
Transfer Agent



Ibtissem Doghri
Liaison and
Transfer Agent



Marketa Kopal
Liaison and
Transfer Agent



Aida Minguez Menendez
Scientific Illustrator

Acknowledgments

The authors would like to thank Hélène Poirier for the original idea, Marketa Kopal, and Ibtissem Doghri for their contribution to the project.

Special thanks to our four teachers (our superheroes) that step out of their comfort zone to allow us to illustrate our ideas through their persona.

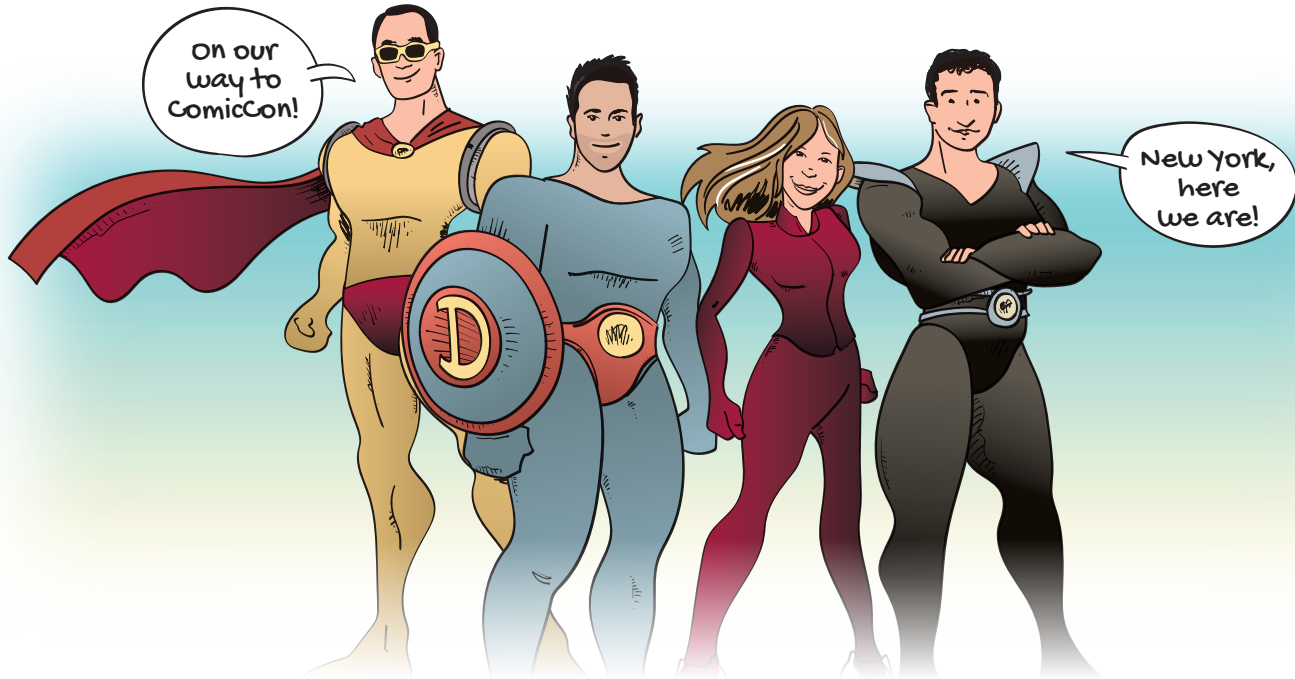
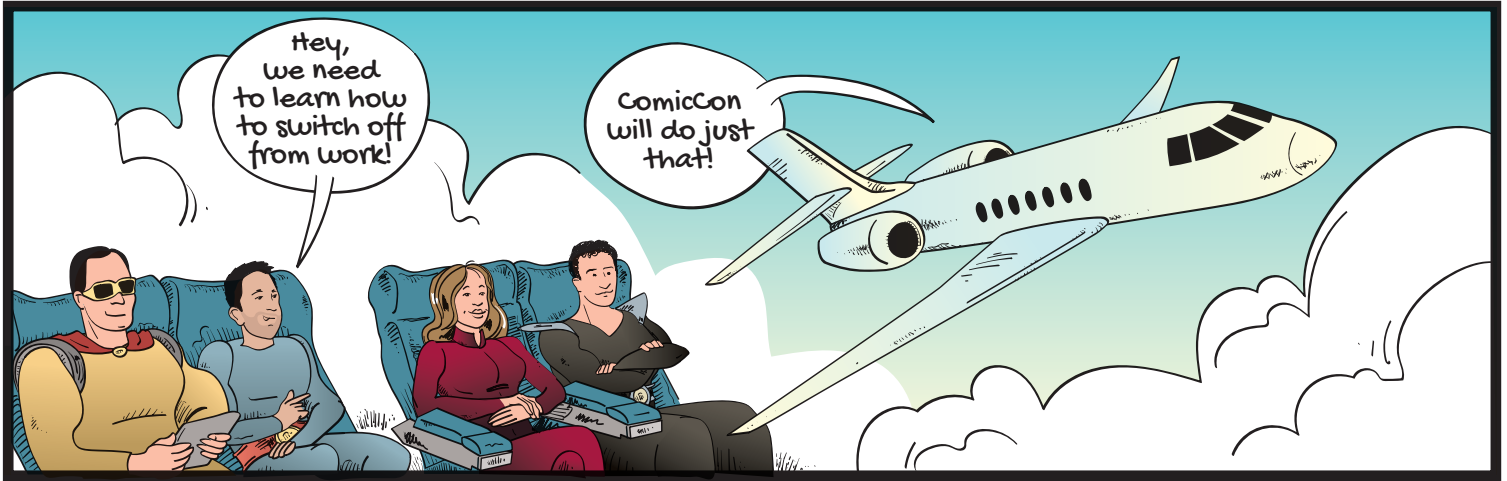
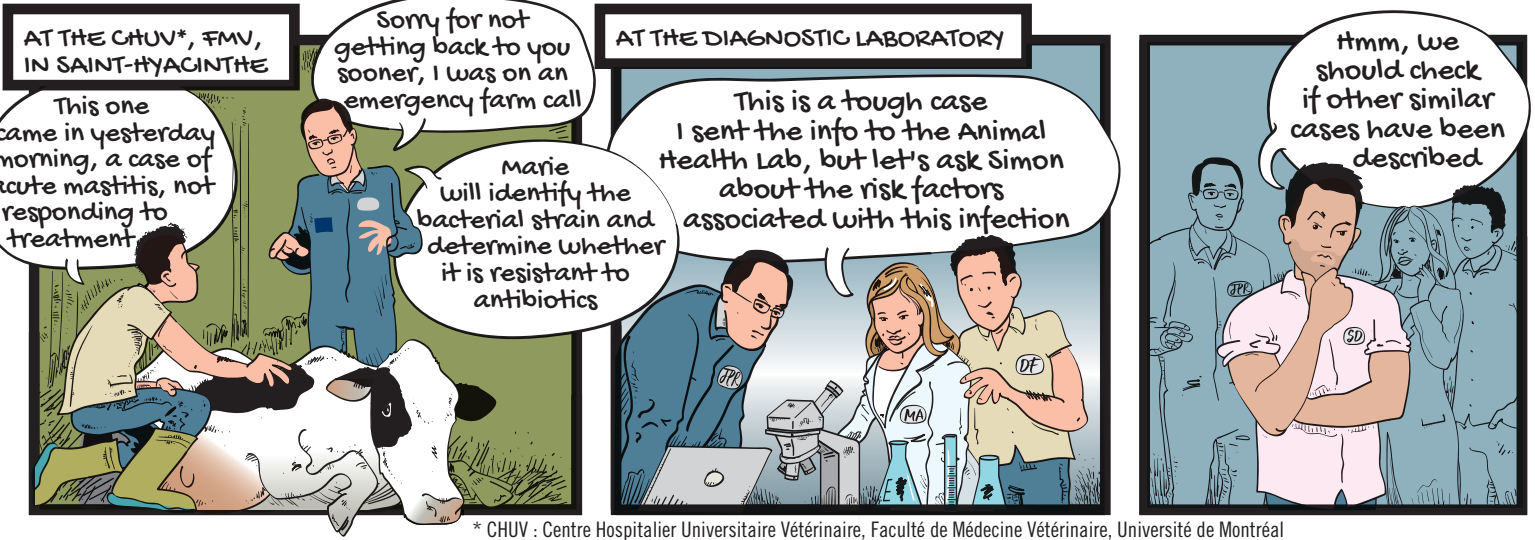
Thanks to Pierre-Yves Clerson of the Catherine Imagine firm for its outstanding illustrations, from the first idea of the scenario to the last modification. This wonderful work would not have been possible without your outstanding brushstroke!

Thanks to acolytes who work in the shadows (students and professionals) that are unfortunately not depicted in the comic. Your help was essential to the success of this research project!

A particular thank to the direction team of the strategic cluster FRQNT *Op+lait* for its financial support to this truly extra-antibiordinary adventure!

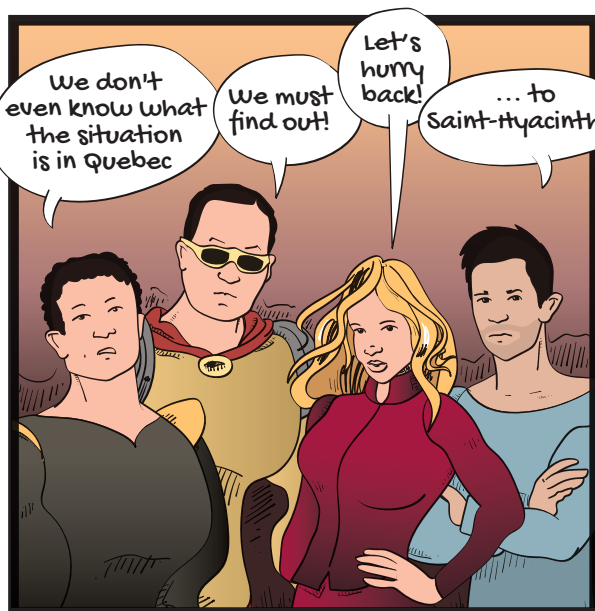
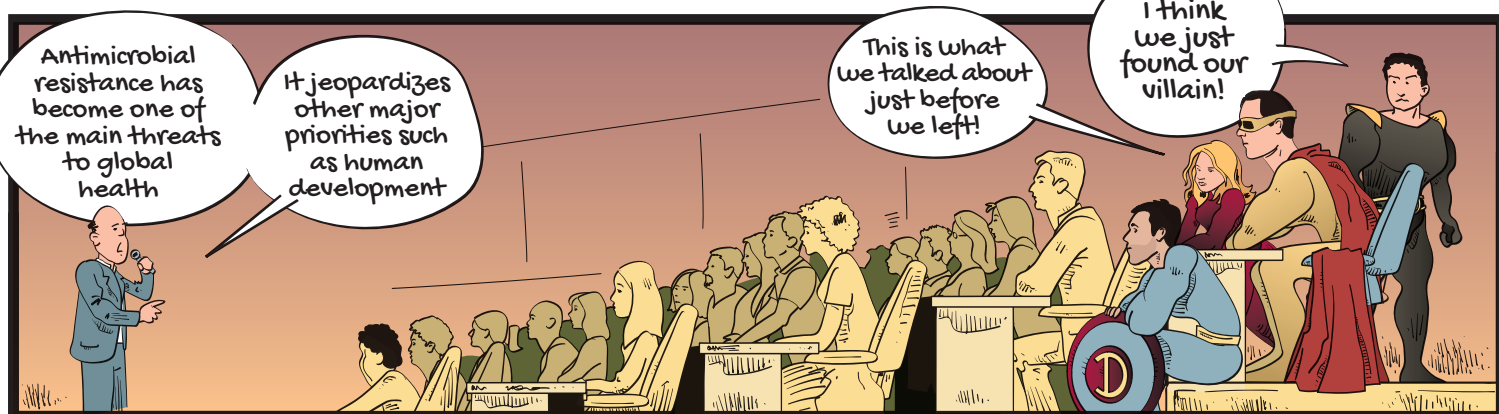
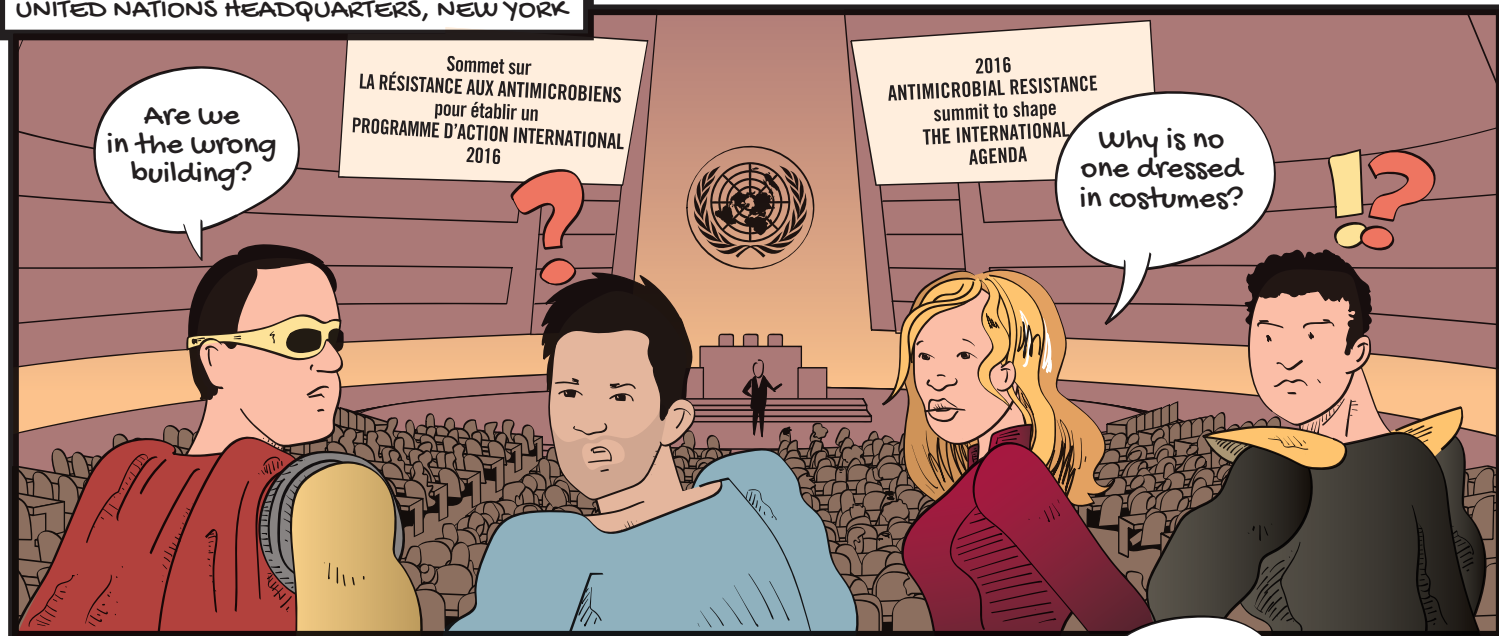
And thank you, dear readers! We sincerely hope you had as much fun reading it as we did making it!

Hélène and Jonathan

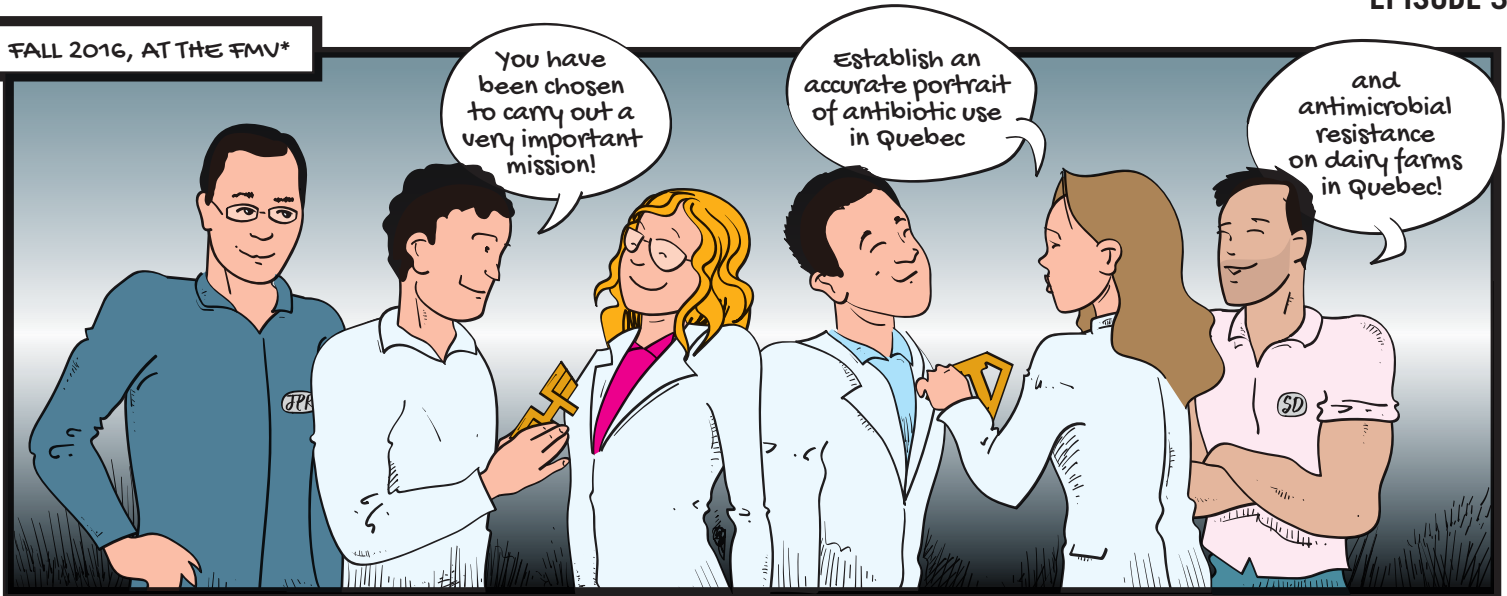


EPISODE 2

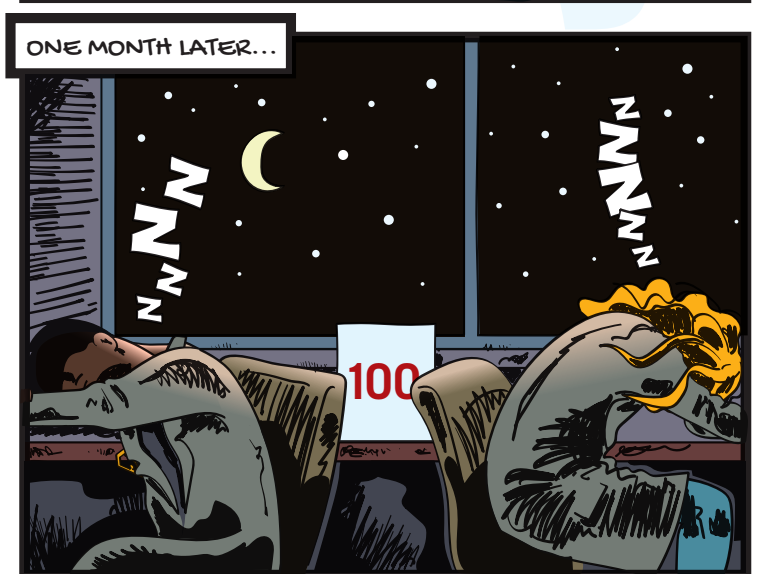
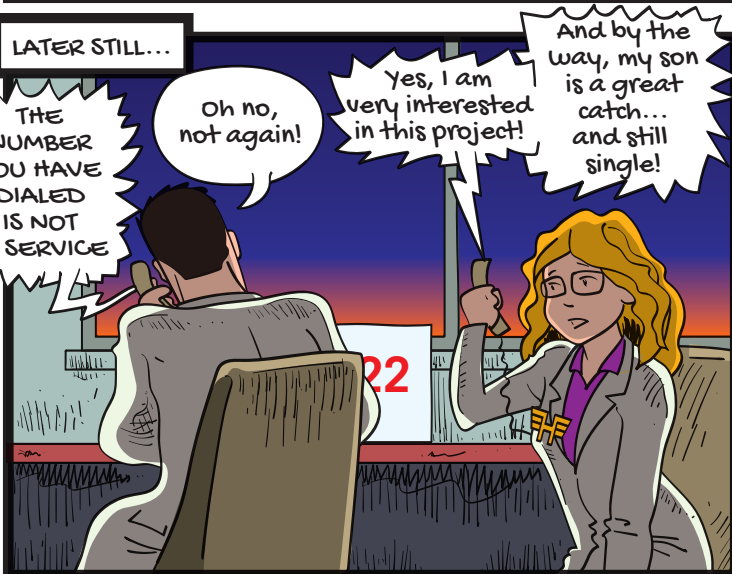
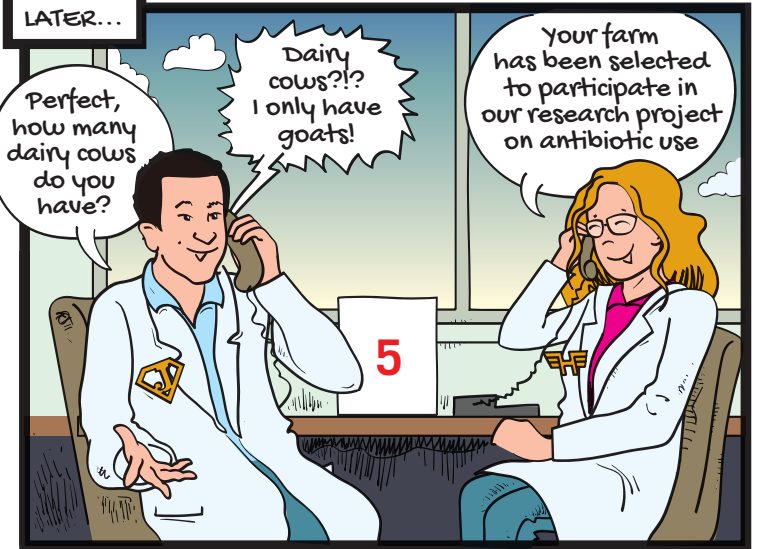
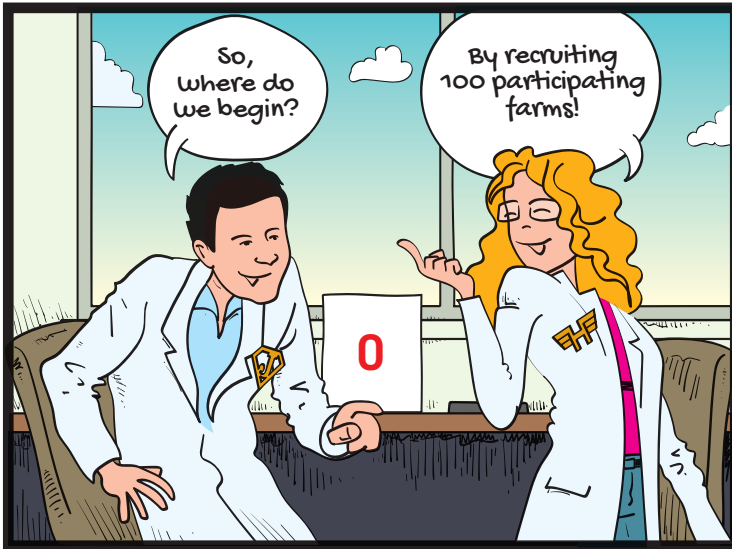
UNITED NATIONS HEADQUARTERS, NEW YORK



FALL 2016, AT THE FMV*



*FMV : Faculté de Médecine Vétérinaire, Saint-Hyacinthe, Université de Montréal



EPISODE 4

IN DAIRY FARM # 27...

Thank you for participating in this project!

This large antibiotic survey is important

for the future of milk production

First, we need to collect data

Tell us what we need to do!



The idea is to compile all the antibiotics used in one year on your farm

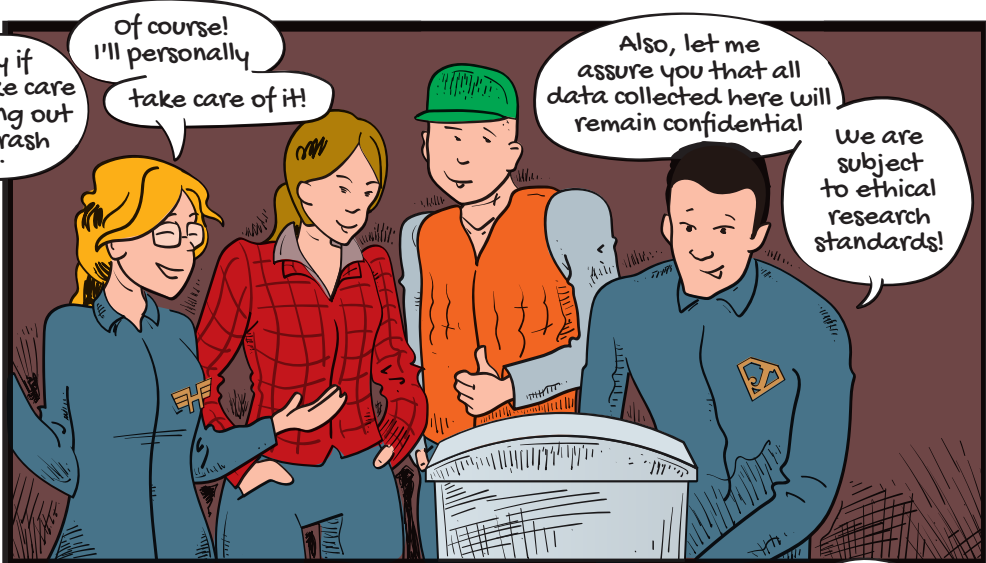
Whenever you're done with a medicine bottle, you need to throw it away in this trash can

Only if you take care of taking out the trash ...

Of course! I'll personally take care of it!

Also, let me assure you that all data collected here will remain confidential

We are subject to ethical research standards!



LATER...

Hey! Get out of there Caramel! you are going to distort the data!

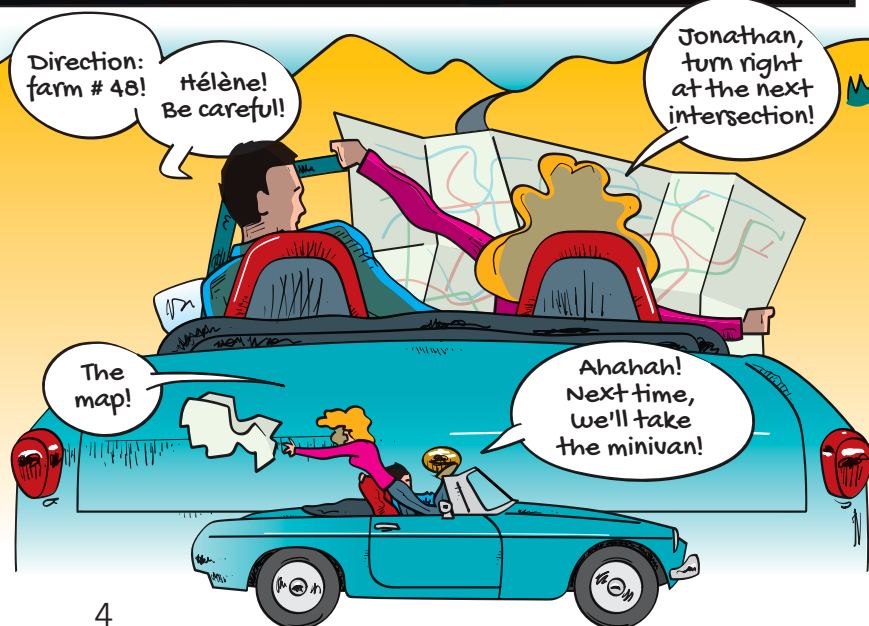
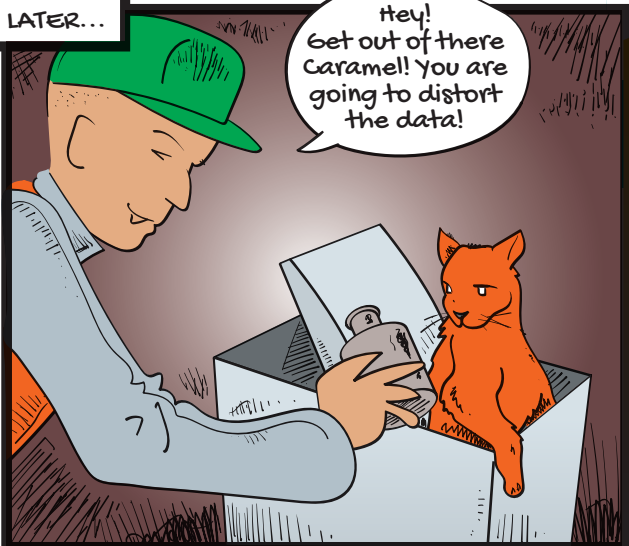
Direction: farm # 48!

Hélène! Be careful!

Jonathan, turn right at the next intersection!

The map!

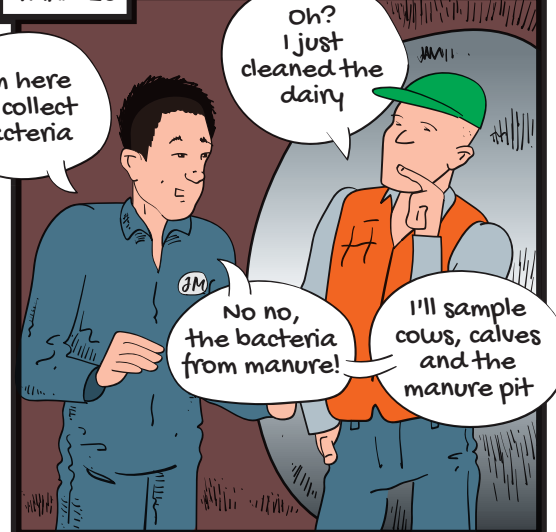
Ahahah! Next time, we'll take the minivan!



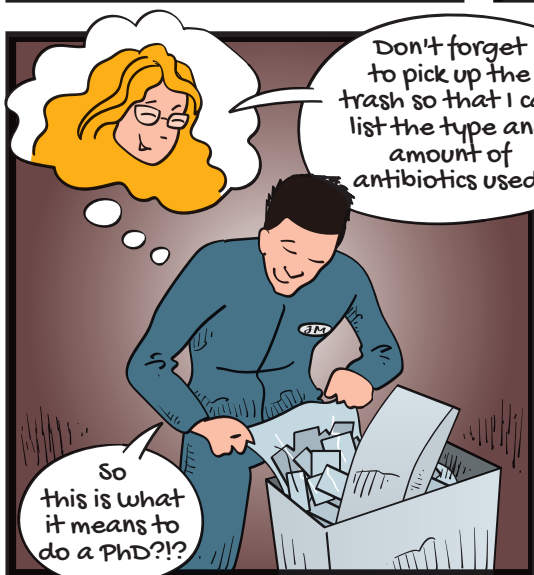
FALL 2017, AT THE FMV* IN SAINT-HYACINTHE



FARM 23



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BACK AT THE FMV* LABORATORY



EPISODE 6

AT THE FMV* IN SAINT-HYACINTHE...

Here is my S2nd version of the questionnaire ...

I think we're getting there!

I'm really curious as to how Quebec dairy producers use antimicrobials

ONE WEEK LATER...

...NOW FOR YOUR WEATHER UPDATE: MODERATE TO HEAVY SNOWFALL AND STRONG WINDS WILL REDUCE VISIBILITY IN CERTAIN AREAS...

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FARM #75

Between April 1st 2017 and March 31st 2018, have you used or plan to use antibiotics to treat calves aged between 0 and 14 days, with a fever between 39.5 and 41 degrees Celsius but without any other symptoms while preserving the nature of the specifications relating to the general health of the animals...

Huh? Say that again?

Off to the next farm!

FARM #99

How many cows do you have?

It depends, I would have to check my books. I would have to do that counting of animals in the old barn next to the newer one built with corrugated steel, and considering that I sold one yesterday and Rosie who began lactation last evening. So in total, that's 42 animals, multiply that by 10, then divided by 2, add Rosie...

What was the question again?

ON THE WAY BACK

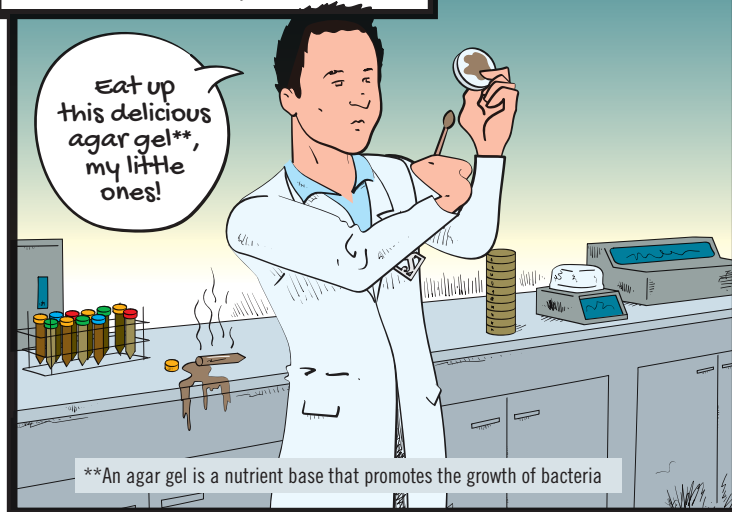
Everything is cool Super J!

And since we've no place to go,

Let it snow! Let it snow! Let it snow!



IN THE FMV-MAPAQ LABORATORY*



THE FOLLOWING DAY

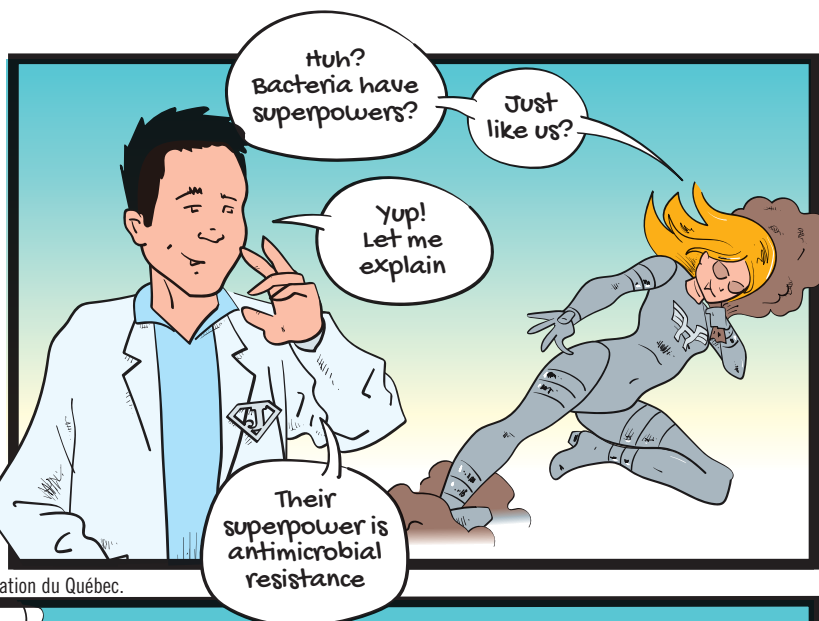


*Université de Montréal – Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec

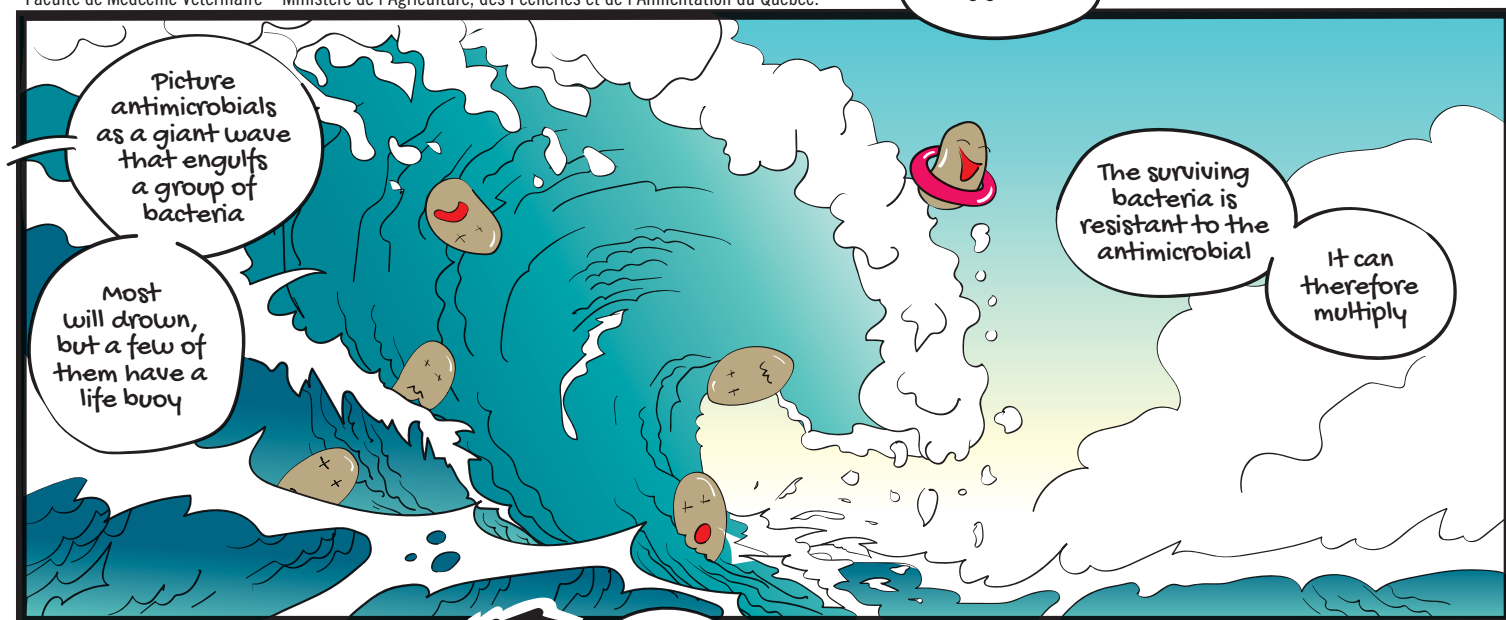


EPISODE 8

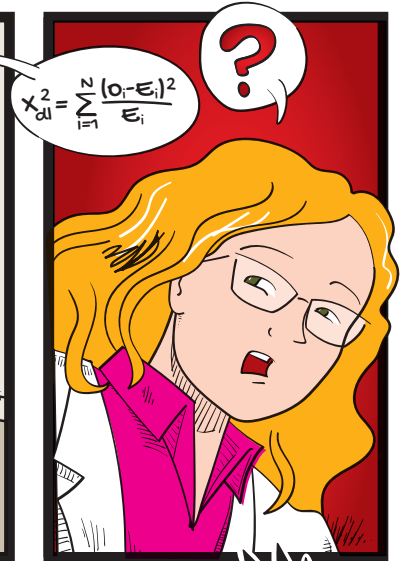
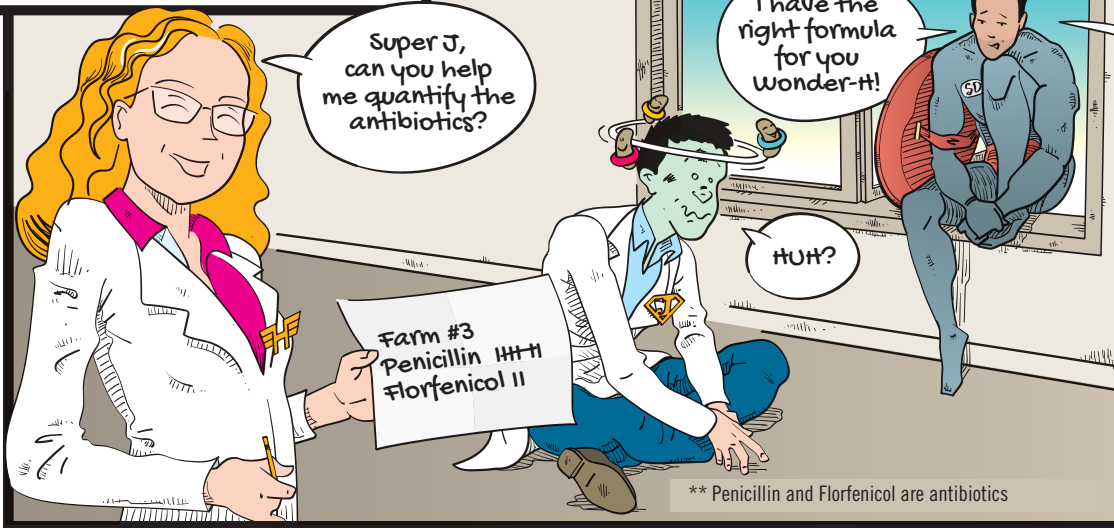
IN THE FMV-MAPAQ LABORATORY*



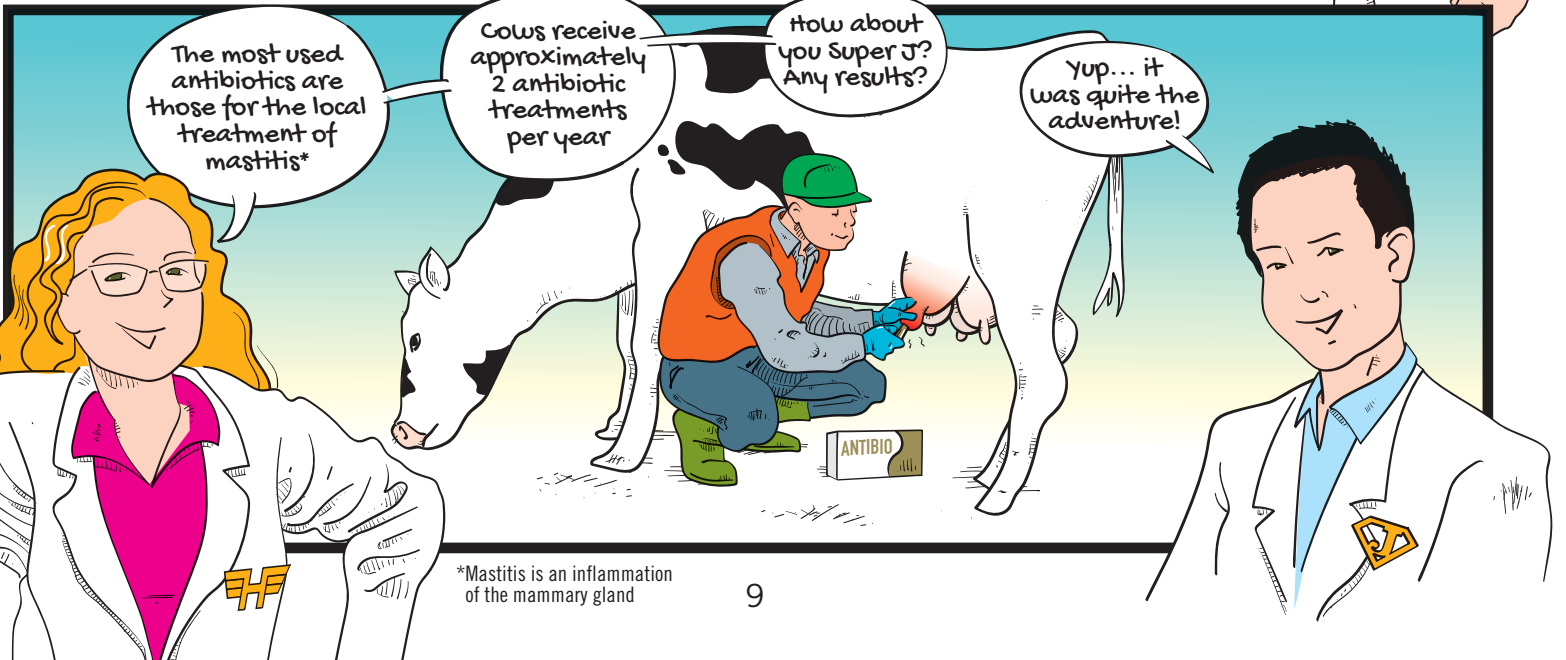
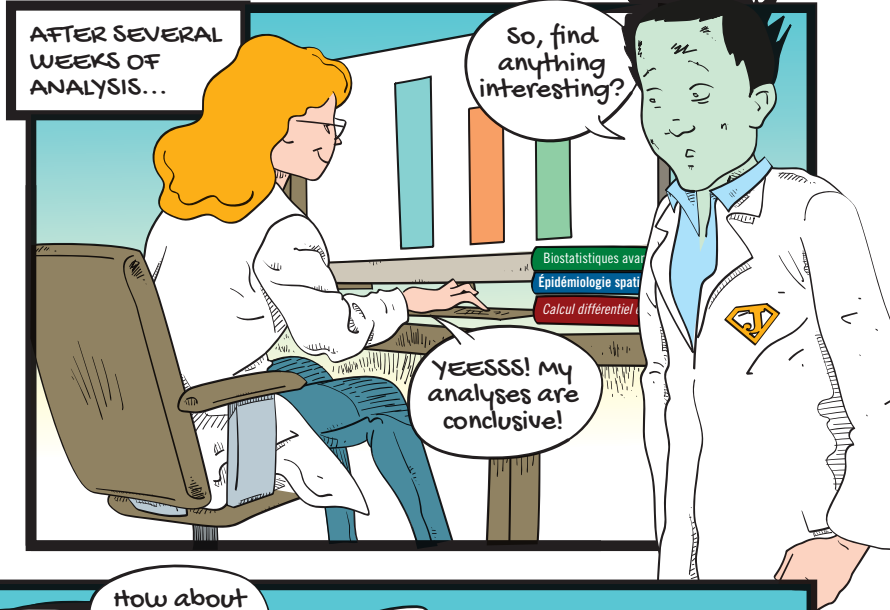
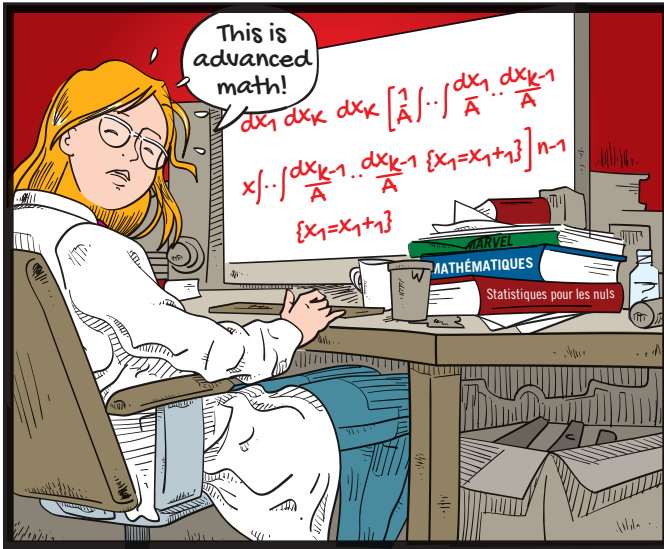
*Faculté de Médecine Vétérinaire – Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec.



IN THE FMV-MAPAQ LABORATORY*

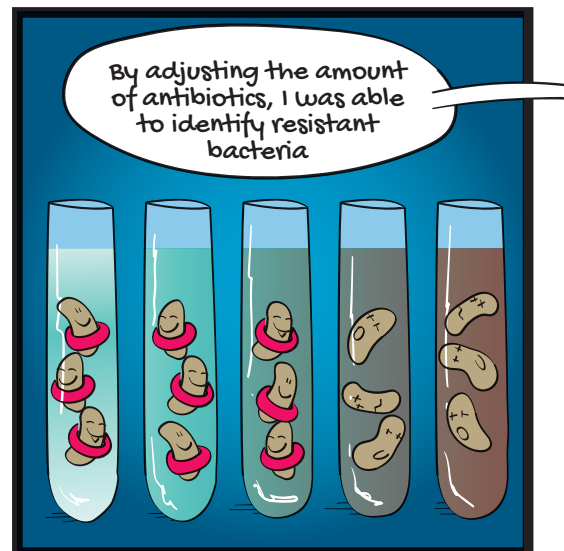


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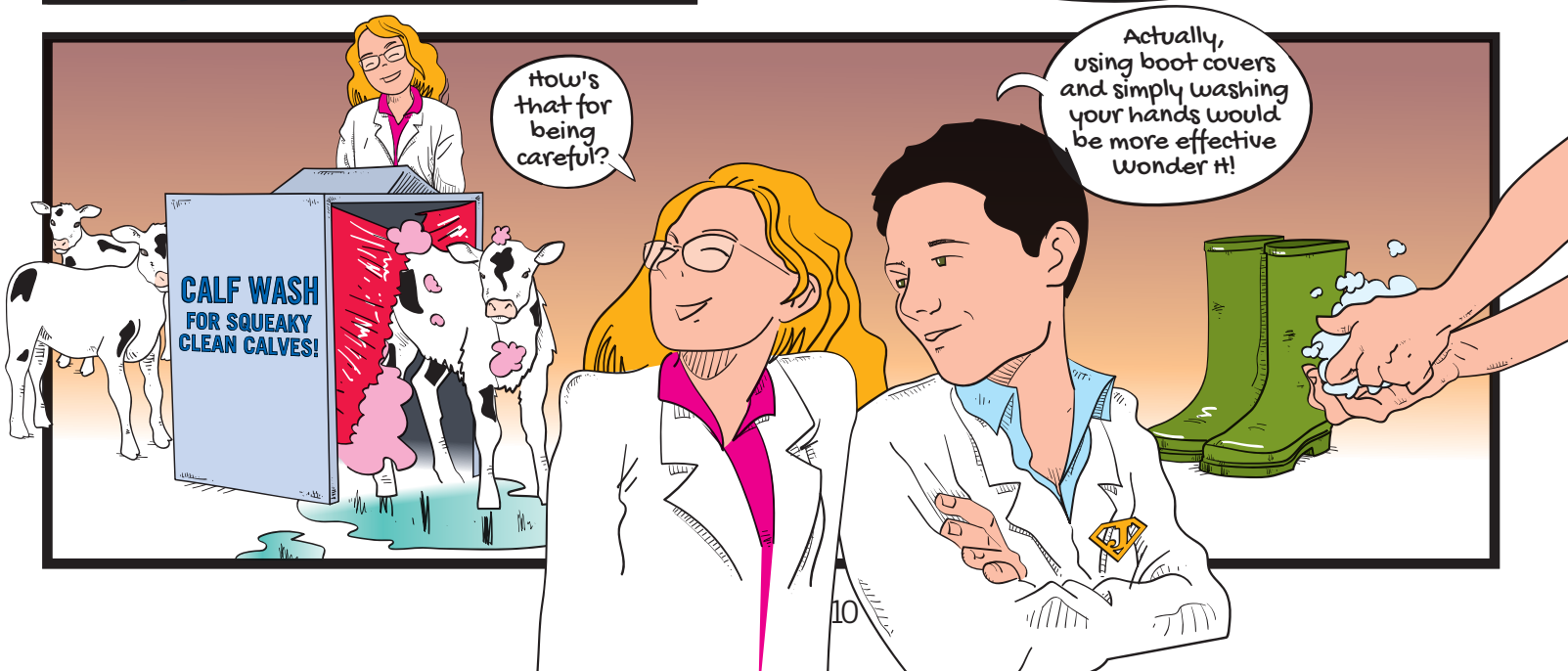
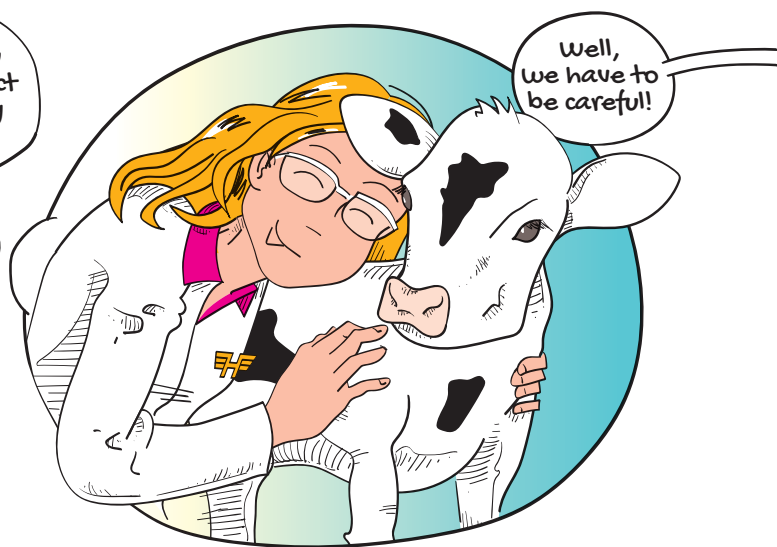
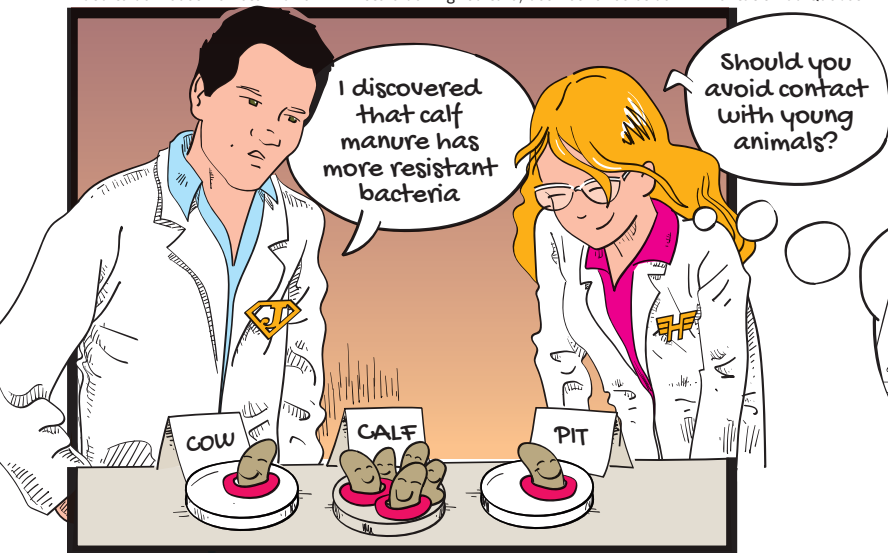


EPISODE 10

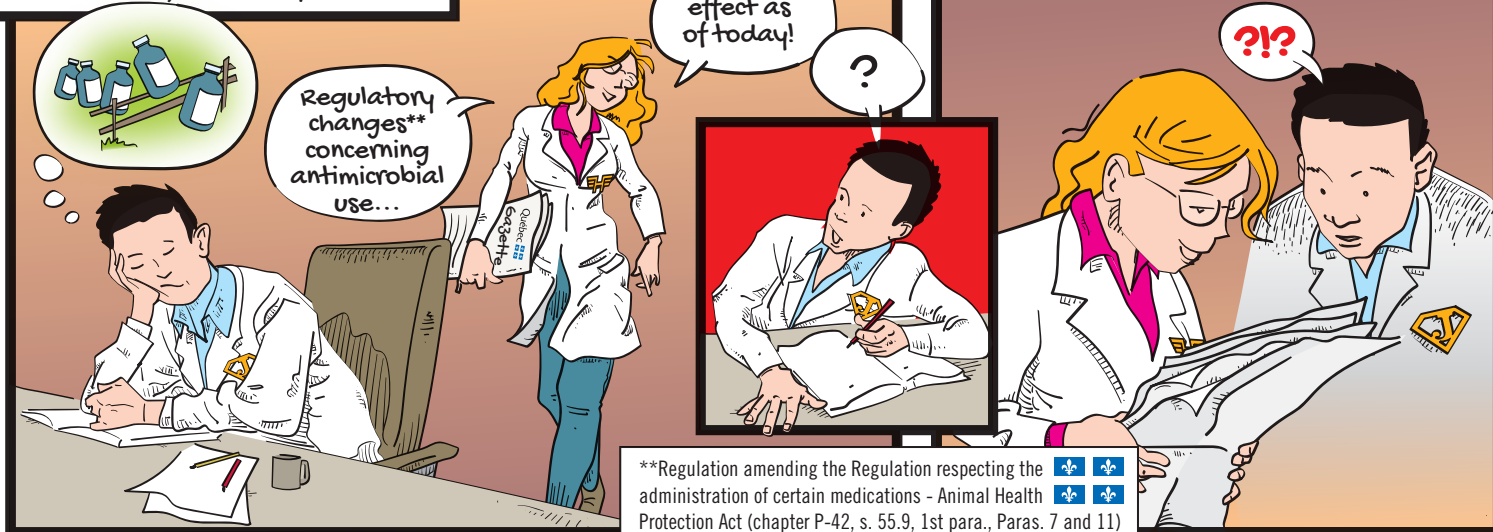
IN THE FMV-MAPAQ LABORATORY*



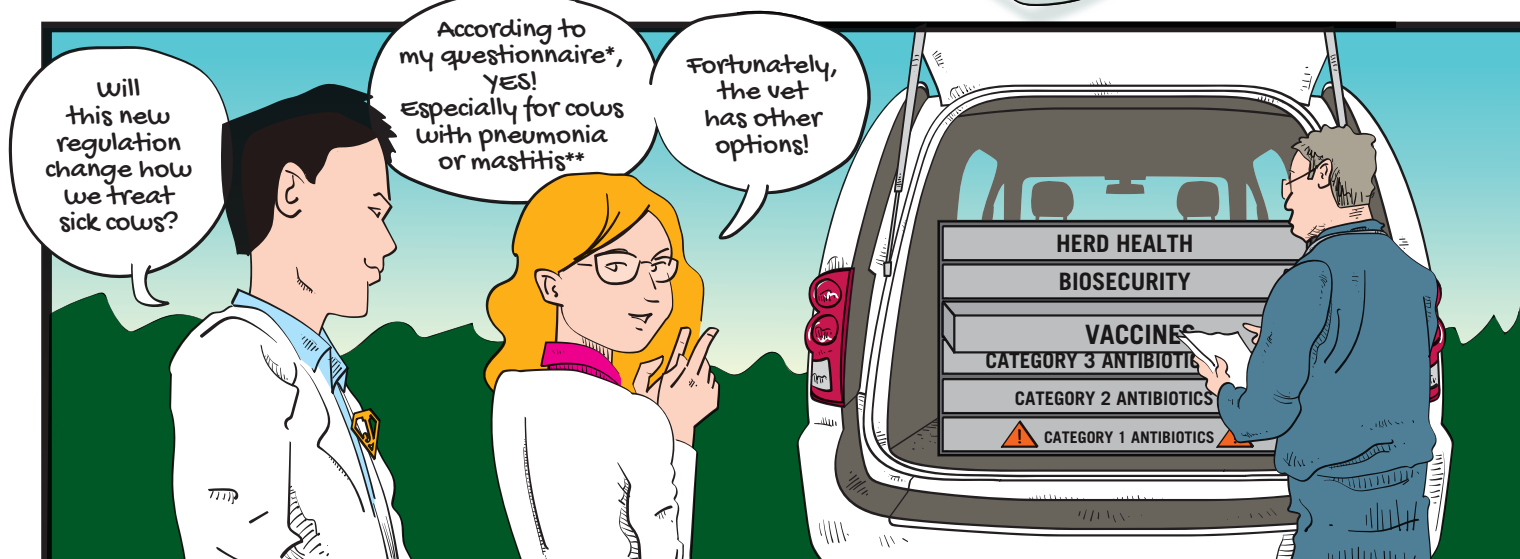
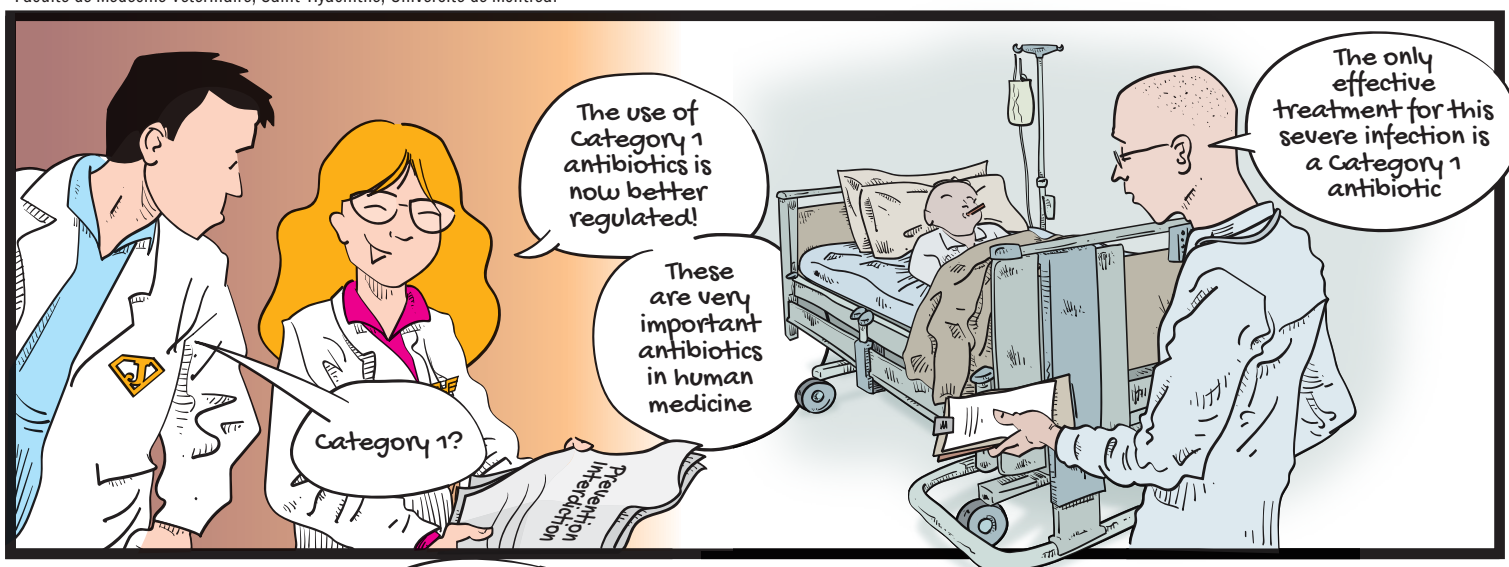
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AT THE FMV *, FEBRUARY 25th 2019



*Faculté de Médecine Vétérinaire, Saint-Hyacinthe, Université de Montréal



* See episode 6

** Mastitis is an inflammation of the mammary gland

EPISODE 12

AT FMV*, IN A NOT SO DISTANT FUTURE



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