

Under the Microscope

Paediatric Gastroenterology Research Team newsletter
Addenbrooke's Hospital, Cambridge University Hospitals NHS Trust

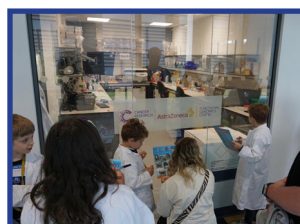
Issue 6

November 2023

HELLO!

Welcome to issue 6! We have a slightly different research story to tell you this time...

So what's new? We held our Patient and Family Science day in the summer. Our young people and their families had so much fun exploring all the different science activities. But the lab team, and your doctors and nurses got stuck in too! Here are some pictures from the day. We'll let you know about the next family day in future newsletters



We would like to say a big CONGRATULATIONS to Emily Li (who helps us with the BioResource study). She completed a 110km run in October, wow!

Our lab team continues to grow! Welcome to William, June and Ranney. And we hope that Emma enjoys her lab rotation with us as she begins her PhD.

And finally, our investigator meeting this year was held in the beautiful Madingley Hall. We had amazing contributions, lots of discussions and valuable suggestions from research groups across Europe and beyond. These all help to make a real difference and deliver some exciting research.

Beware - bad joke!!

What is Santa's favourite subject in school?

Chemis-tree!

Introducing...

Young Sparks!

We want to share simple (and fun!) science experiments for you to try at home!
(make sure you ask a grown-up first!)

Did you know you can dissolve an egg shell in vinegar?

1. Place an egg in a glass covered with vinegar for 24 hours.
2. Rinse under water and repeat. You may need to do this 2 or 3 times.
3. When your shell is dissolved, does your shell-less egg bounce? (It will break eventually at a certain height...so watch out!!)

Why not send us a photo of your 'Egg-xperiment'?
claire.glemas@nhs.net

You could look online to try to find out why the shell dissolved, too!

Newsletter reporter, Research Nurse Claire Glemas
Design and illustration, Jen Rose (Creative Patient Ltd)
Guest editor, Lily

Meet our team...

MARY

Hi, I'm Mary and I am a qualified Registered general nurse (RGN) and Registered Sick children's nurse (RSCN). I'm also an independent non-medical prescriber. I've undertaken my Degree in nursing (BSc) and I am now undertaking my Masters (MS) - there's always something new to learn about IBD!

Those of you who have met me in clinic will know that I think the biggest part of my job is to support you young people and your families, making sure you have enough information to be empowered patients who can care for yourselves once you've been diagnosed with IBD. I am happy to liaise with schools - if you are having difficulties at school and need a bit more support, you just need to let me know! I'll try to answer any question about living with IBD, but I might not always know the answer!

I encourage every young person to be involved in their care right from diagnosis to make sure that they can independently care for themselves when they are adults.

I always wanted to be a nurse - my original plan was to be an adult nurse, but I realised that being a children's



nurse is more fun because I also get to look after the adults (your parents)!

I grew up on the West Coast of Ireland and I have six sisters and two brothers. My favourite food is bacon spare ribs and cabbage, but I can only get bacon spare ribs in Ireland so I always have them as a treat when I go home. My favourite chocolate is Toblerone and my favourite drink is black coffee.

I really enjoy cooking, walking and gardening. Last year I started the Camino de Santiago (a REALLY long walk through Europe, ending in Spain) - I have recently walked a further 160 kilometres and I aim to finish this next year. Then it will be time to plan my next big adventure! I also love walking on the beach in my bare feet.

My biggest fear was Claire asking me to write this story about myself, but as lots of you will know, I enjoy a challenge and I believe that it is good to get over your fears!

EVA

"I go to zoos only to see the penguins and their clumsy walk!"

"I can't roll my eyes; it looks like I'm possessed."

"I once fell off a balcony running away from an evil cat. She caught me anyway!"



Hi, I'm Eva, a research assistant, and my job is to help other scientists understand more about inflammatory bowel disease! The superpower of our lab, wearing lab coats instead of capes, is turning intestinal biopsies into something called "organoids". It's like making mini-intestines in the lab. So, I'm like a plant mum, but for organoids! Just like you need good food and comfy clothes, organoids need special care. I make sure they have everything they need to grow big and strong, checking on them every day to see if they're happy or if they need some extra love. I keep record of all the important information about the samples too, so it's like keeping a diary for the organoids.

When I'm not in the lab, I love to bake, always being careful not to make things explode, unlike some funny experiments in the lab. I also enjoy hiking when it's warm and sunny and reading books when it's cold and rainy.

Our research...

This is where you can find out more about the studies we (or other teams!) are doing!

Did you know...it's not just humans who can have IBD?!

This is Jock.

He's a 32 stone male silverback gorilla, who lives at Bristol Zoo Gardens.



Calprotectin is a protein which is released into poo when there's inflammation in the digestive system

The method...

Collecting poo samples and testing them for calprotectin is pretty simple in humans. However Charlotte soon discovered collecting and testing gorilla poo samples is a bit more complicated!

The problem...

Gorilla poo can't be tested in the same labs as human poo

There wasn't any data on calprotectin levels in gorillas to compare Jock's results with

It was difficult to keep track of which poo belonged to which gorilla in their shared enclosure!

The solution...

The zoo bought a special machine that would allow them to measure calprotectin levels in the zoo

Charlotte decided to measure all the gorillas calprotectin levels to see if Jock's results were different to his friends!

The gorillas were trained to go into separate pens to eat, so the staff waited until they pooped in there!

(Charlotte soon realised that gorilla poo isn't much like human poo...)

Gorillas eat lots of leaves and branches so their poos are mostly fibre, and very little soft stuff for testing!

Zoo staff sieved the poos through a tea strainer! It took a big pile of poo to get enough soft stuff for testing!

The results...

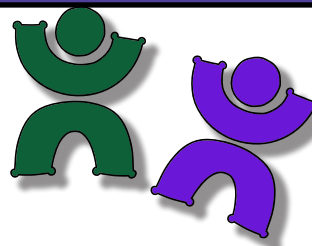
Jock's calprotectin result was around 75. Now, that isn't a very high result for a human, but it was more than double the results of Jock's gorilla friends. Charlotte decided this was enough evidence to warrant a colonoscopy to take biopsies at Jock's next health check (when he is given a general anaesthetic).

Other species of animal can have IBD too!

Can you do your own research to find out which?

Jock doesn't have a confirmed diagnosis yet, but we'll keep you updated with any news!

Time to play!



Scan here to see all our newsletters!

WORD FIT

challenge!

Tip: if answers have two words there are **no spaces** between the words in the puzzle

This brilliant puzzle, designed by our guest editor Lily, looks like a crossword, but it's not: there are no tricky clues to work out!

The objective is to work out where each word fits across and down the puzzle.

3 letter words:

IBD ☐

poo ☐

4 letter words:

Lily ☐

5 letter words:

bowel ☐

nurse ☐

tired ☐

6 letter words:

doctor ☐

strong ☐

tablet ☐

8 letter words:

gorillas ☐

steroids ☐

9 letter words:

blood test ☐

diarrhoea ☐

11 letter words:

antibiotics ☐

independent ☐

13 letter words:

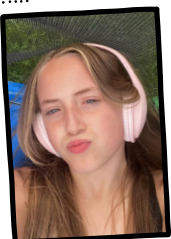
tummy troubles ☐

14 letter words:

large intestine ☐

And finally...

...a message from our guest editor!



Lily

Hello everyone, I'm Lily and I have just recently been diagnosed with IBD. Although I have it I don't let it stop me from playing sports and it shouldn't stop you either. I'm here to help and support young people like me who have just recently been diagnosed. So DON'T let this diagnosis stop you!!! You're amazing!

calling all young journalists!

Would you like to write, or draw, or share something for our newsletter? Or do you have ideas about what we could add? Maybe you would like to interview a member of staff? Or you have a 'Tip of the month' to share? We'd love to hear from you.

We'd also love to know what you enjoy about our newsletter, and what could be better (You can ask us to stop sending you our newsletters here too).

To get in touch, scan this QR code or

email: claire.glemas@nhs.net

