

# Manchester Cicada charity Lockdown Letter



We have the pleasure to report the recent 100th birthday of Edna Clayton, one of the oldest people to get a Cochlear Implant and a member of CICADA for many years.

During their long marriage together, she and her husband were very keen on dogs and

showed them in many competitions.

Up until recently she has been an active member of the club and you would be forgiven for thinking she likes boats! However that's not the only place she has visited with us.



As well as the canal boat trip on the left and the Gondola boat on lake Windemere right she has been with us on many occasions for meals and here below is at the Ring O'Bells in Daresbury.



On the Liverpool - Leeds Canal near Preston





On the Gondola pleasure cruiser at Windemere

We wish her all the best from everyone at Cicada



### News from the Implant team

After many years of dedicated service in the Implant team at Manchester Royal infirmary, Debora Mawman has recently retired. She has helped Cicada on many occasions and we wish her all the best in her retirement.

# **Covid-19 Testing news**

#### by David Zarley

### Scientists Are Developing A Coronavirus Breathalyzer Test

Multiple teams are working on coronavirus breathalyzers to detect SARs-CoV-2 quickly, cheaply, and as simply as breathing. International efforts are underway, from the U.S. to Israel to Finland, to create a coronavirus breathalyzer that could speed testing as science and society struggle to regain control from SARS-Cov-2. accuracy. A coronavirus breathalyzer holds obvious appeal: it can be wielded by just about anyone, requires no chemical reagents or expensive machines, and could be deployed easily in any number of environments, from airports to concerts.

Teams at Ohio State and Northeastern are in varying stages of coronavirus

The notion is poetic: using our breath the very vector by which the virus is most effectively spread — to detect and, hopefully, contain it.



breathalyzer development, with both hoping to get emergency-use authorization from the FDA a special exemption during public health emergencies

The models are still in the prototype phase, but the developers are optimistic.

"It's a lot more efficient," Nora Grotenfelt, chief doctor at Helsinki's Laakso Health Station, told NBC News in July. "It's almost real-time, the results. It's a lot cheaper, and it's a lot more convenient."

#### The Race for a Coronavirus Breathalyzer

The ability to test for COVID-19 rapidly, regularly, and cheaply is necessary to begin reopening society in earnest, experts generally agree — even if that speed comes at the sacrifice of some

that allows for new medical devices to be used without the usual rigors of official approval.

"Breath analysis is not really a technique that is used widely in the medical field yet, so it is considered early-stage work," Perena Gouma, the principal investigator of the Ohio State team, told Ohio State News.

Gouma's group began running clinical trials at the Ohio State Wexner Medical Center and COVID-19 testing sites around Columbus, WIRED reports. The Buckeye breathalyzer is a continuation of work Gouma did at the University of Texas at Arlington, where she built a breathalyzer to detect another, far more common respiratory foe: influenza.

Rather than testing for the virus's genetic material (like the slow, expensive PCR tests that dominate current US testing), the coronavirus breathalyzer uses ceramic sensors to detect nitric oxide and volatile organic compounds — compounds which become gases easily — in the breath. Gouma believes these can serve as biomarkers for COVID-19.

(She's a bit cagey about what these biomarkers are specifically, and the work's not published yet.)

While the innards are idiosyncratic, a coronavirus breathalyzer works a lot like any other kind: subjects blow into a disposable mouthpiece, and the device offers a result quickly — within 15 seconds, Gouma has told various outlets.

A coronavirus breathalyzer can be wielded by just about anyone and deployed anywhere, from airports to concerts.

Meanwhile, on the East Coast, a team at Northeastern, led by electrical and computer engineering professor Nian Sun, is working on a coronavirus breathalyzer of their own.

The Northeastern device utilizes electrochemical sensors that are pied with tiny holes that exactly match the shape of SARS-CoV-2's spike protein, the virus's weapon of choice. When the virus passes over the sensors, its spike protein fits into the mold, allowing it to be detected. LED lights — green, yellow, and red — then tell users if they are negative, need further testing (or another breath) or have tested positive.

Using these specific molds to catch the

virus makes their coronavirus breathalyzer highly accurate, Sun told News@Northeastern, with detection rates comparable to PCR testing in his lab. As with Gouma's — and all the others still coming — more testing will need to be done on the way to an emergency use authorization.

"This is technology that can dramatically change the landscape of COVID-19 testing because it is easily two orders of magnitude faster than the best technology nowadays," Sun told News@Northeastern. "In reopening businesses, schools, universities essentially, it is life-saving technology."

#### A Breath Away

Making sure the device is accurate enough, however, could be challenging. Our breath contains many more compounds than just those associated with COVID-19, and such a noisy medium will require special care to analyze effectively.

Regarding the Ohio State design, Raed Dweik, chair of the Cleveland Clinic Respiratory Institute, said that compounds coming from our bodies and even the environment could potentially cloud results."When patients come to me (after) driving on the highway, I can detect diesel exhaust on their breath."

But Dweik has studied breath-based diagnosis for other diseases, and is cautiously optimistic about the potential of a coronavirus breathalyzer.

"The potential is huge, but breath testing, or any test, has to be done accurately."

Lead Image by Ruby Wallau / Northeastern University

Article from an online magazine 'reethink'

## Amazon charity support

In these troubled times it is nice to see major organisations helping out charities which are being severely affected by the Coronavirus pandemic.

Our charity as well as many others has been affected, most notably our not being able to organise and run events for our members to get out and about and meet others which is our main activity of each year. We were not able to hold our AGM because the outbreak had just begun and it was decided that it was too much of a risk.

During the lockdown however we are still incurring expenses for things like the printing and distribution of Resound and these Lockdown letters so the EC has been looking at ways in which we can raise money.

In common with a lot of people all over the country I have been doing as much shopping online as I can for the convenience (and to avoid the queues!) and use Amazon on a regular basis. If you do use Amazon, then using this smile feature will be the same as using the normal Amazon shopping procedure with the added bonus of Amazon paying us a small percentage of whatever your order is valued at. It does not cost you anything extra and all the goods that are available to others on Amazon are still available at the same discounted prices.

Because of this after investigating it we have decided to register our charity with Amazon.

To explain how the system works it might be an idea to see what is involved.

#### What is AmazonSmile?

AmazonSmile is a simple and automatic way for you to support a charity of your choice every time you shop, at no cost to you. AmazonSmile is available at <u>smile.amazon.co.uk</u> on your web browser and can be activated in the Amazon Shopping App for iOS and



Android phones. When you shop AmazonSmile, you'll find the exact same low prices, vast selection and convenient shopping experience as amazon.co.uk, with the added

bonus that AmazonSmile will donate a portion of the purchase price to your selected charity.

#### How do I shop at AmazonSmile?

To shop at AmazonSmile simply go to **smile.amazon.co.uk** on your web browser or

activate AmazonSmile on your Amazon Shopping app on your iOS or Android phone (found under 'settings' on your app).

On your browser, you may also want to add a bookmark to smile.amazon.co.uk to make it even easier to return and start your shopping at AmazonSmile. When you're using the app, always check for the "AmazonSmile" logo

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to ensure you're activated for AmazonSmile.

#### ... And Finally to our very own medal winner!



Congratulations Lynn on all you have and are still doing to raise money for deserving charities, I must say your idea of relaxing looks extremely healthy ;) and for those that don't use Facebook here is the response from one of the charities that Lynn has been running for.

"Hi Lynn, from all of us here at Maggie's we would like to say a HUGE THANK YOU for taking part in our Run 50 miles challenge we hope you are having an amazing time with the challenge and the group! We are so excited to send out the medals to everyone who took on the challenge and smashed their fundraising target of £150".

**Contact details for articles:** I would love to hear from anyone with an example of a service, good or bad, or an amusing incident in a queue (there are lots of queues these days)

**Cicada**: email: secretary@manchestercicada.org.uk - Text: 07533 217730 or postal address:107 Manchester Road, Hyde Cheshire, SK14 2BX

**CICADA support Links**: http://www.manchestercicada.org.uk/help-support/ Any contacts you help me with will be added to our website and publicised on our facebook page: **Manchester Cicada club**. If you want to join just put in a request. **Manchester Auditory Implant Centre**:Repairs and Battery Supply **Tel:** for all repairs. 0161 276 8079

Email: auditory.implant@mft.nhs.uk for cochlear implants and BAHA