



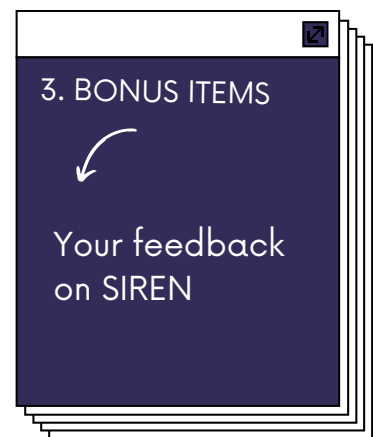
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SIREN PARTICIPANT NEWSLETTER

31 AUGUST 2023

Dear SIREN Participants,

Welcome to this special issue of the SIREN newsletter. We are delighted to share with you that the **SIREN study will be relaunching in September 2023**, and this edition will provide everything you need to know about participating in SIREN 2.0.





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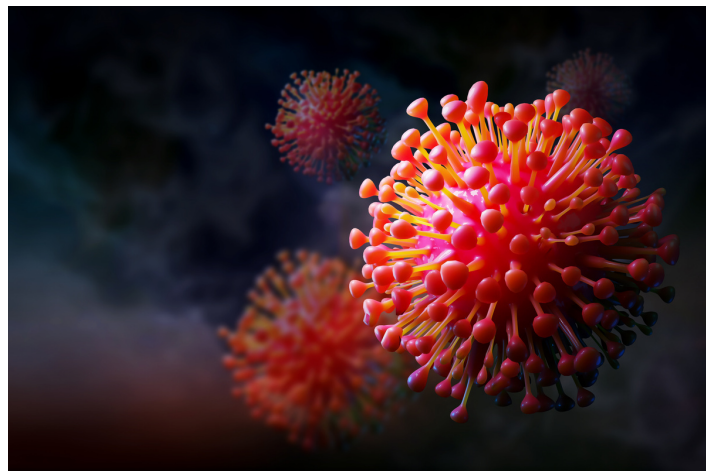
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1. Announcements

SIREN 2.0

The SIREN study is now entering its third year, and has contributed an immense amount to our understanding on the immune response to COVID-19, as well as the protection offered by vaccines against respiratory pathogens. With data gathered from our dedicated cohort of engaged healthcare workers, SIREN has directly contributed to national public health guidance for COVID-19.

We are delighted to have secured funding to continue SIREN activity for the winter period 2023/24 and below will outline the key changes to the study going forwards.





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What is SIREN 2.0?

SIREN 2.0 will continue to play a core role in surveillance of COVID-19 across the UK, including the detection of emerging new variants. In SIREN 2.0 we will also look at other important respiratory viruses. Alongside academic collaborators, both established and new, we are excited to expand the remit of SIREN this year.

Active testing will include fortnightly PCR testing for COVID-19, influenza and RSV (respiratory syncytial virus) and serology testing every 2 months. This will run from **September 2023 to March 2024** and we aim to recruit 5,000 participants from our existing SIREN cohort. If you are registered at an eligible site that is delivering testing, you will be contacted soon. Alongside this, our existing postal PCR pathway (set up following the winter pressures sub-study) will continue until March 2024.

For participants that are not currently involved in active testing or registered at sites eligible for SIREN 2.0, there will be a number of other opportunities to join new sub-studies in SIREN. These will be highlighted in future newsletters, so please keep an eye out.



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Why is it important?

To date SIREN has also helped answer many questions about SARS-CoV-2 infection and COVID-19 vaccination. With the reduction in national testing, **SIREN plays an essential role in COVID-19 surveillance in the UK.** This is especially relevant with the recent emergence of new variants.

Alongside COVID-19, the impact of other circulating respiratory pathogens has become an important public health consideration in the UK and globally. With the challenges currently faced by staff in the NHS, a better understanding of the impact of seasonal illness will help us explore the impact they have on the NHS over this winter period. Thanks to our cohort of motivated and engaged participants, we can continue address key questions on circulating respiratory pathogens for this winter and beyond.



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Aims of SIREN 2.0

1. SURVEILLANCE OF RESPIRATORY PATHOGENS

Testing for 3 respiratory pathogens will be offered to participants at eligible sites. These are:

COVID-19
Influenza A and B (flu)
RSV (respiratory syncytial virus)

2. VACCINE EFFECTIVENESS AND PROTECTION AGAINST COVID-19 AND INFLUENZA INFECTION

SIREN will continue to answer important questions related to the effectiveness of vaccination and the protection afforded by COVID-19 infection and vaccination. In SIREN 2.0 this will be expanded to include influenza.



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3. SEROEPIDEMIOLOGY

Seroepidemiology is the use of data to provide an estimate of immunity to an infection at a population level, and is an essential component of SIREN. Thanks to the many blood samples collected over the course of the study stored in our biobank, we are able to address important questions on other pathogens that may affect healthcare workers.

4. HEALTHCARE WORKER HEALTH

Our fortnightly questionnaire and a new follow up questionnaire will include questions on your health as a healthcare worker. This data is essential to collect so we can understand how to better support the NHS workforce as winter approaches.



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Our SIREN 2.0 partners

As part of SIREN 2.0 we have expanded our network of scientific partners and are delighted to announce collaborations with the **Wellcome Sanger Institute** in Cambridge, a world leader in genomic sequencing and metagenomics. They will sequence samples for COVID-19, Influenza and RSV and are planning on using shotgun metagenomics to investigate other pathogens including parainfluenza, human metapneumovirus and adenovirus, other causes of respiratory infection.

With the increasing interest in Influenza, we have also set up a collaboration with the **World Influenza Centre (WIC)** in London. The WIC is one of six centres in the world responsible for analysing influenza viruses circulating in the human population, overseen by the World Health Organisation (WHO). We plan to share influenza viruses detected as part of SIREN 2.0, which may be used to design influenza vaccines for future seasons.

Find out more about our partners below:



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The Wellcome Sanger Institute



The Respiratory Virus and Microbiome Initiative (RVI) at the Wellcome Sanger Institute (Sanger) aims to develop low cost and high-throughput metagenomic sequencing methods for respiratory viruses and to study the biology and evolution of respiratory viruses and the respiratory microbiome.

Sanger already sequence the genome of any SARS-CoV-2 positive samples from SIREN participants, over the coming months, the RVI team will be working closely with the SIREN study team to begin sequence more respiratory viruses including influenza, RSV, etc present in any SIREN2.0 samples. This sequencing data will then be combined with other data generated by SIREN collaborators to yield further insights into viral transmission, biology and immunity.

The RVI will also use the left-over material from the nose/throat swabs to study the upper respiratory tract microbiome (the microbes that inhabit the nose and throat), including investigating how viral infections impact the microbes that inhabit the nose and throat.

"The samples provided by the SIREN participants are a unique opportunity to study respiratory virus infections in healthcare workers. We are excited to be working with the SIREN study team to maximise the yield of science that can be done using the samples taken from the SIREN participants."

Dr Ewan Harrison, Head of the RVI at Sanger



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The World Influenza Centre, Francis Crick Institute



The Worldwide Influenza Centre based at the Francis Crick Institute is one of six WHO collaborating Centres for influenza that are part of the Global influenza surveillance and response system (GISRS). The WHO CCs provide data and help WHO decide what viruses to include in the flu vaccine every year. We receive viruses from over 90 countries each year and not only do we characterise these to inform WHO, but also we identify influenza viruses that may be suitable to be included in the flu vaccine every year and prepare isolates of these that go on to be used in vaccine manufacture worldwide.

"We are very pleased to be working with SIREN and are excited to analyse influenza viruses collected during the study including hopefully putting some of these forward as candidates to be included in the vaccine." as candidates to be included in the vaccine."

Dr Ruth Harvey, Assistant Director of World Influenza Centre



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UKHSA Porton Down



Within UKHSA Porton Down is the Emerging Pathogen Serology group, with specialist expertise in high-throughput serology built during COVID. Over 1.3 million antibody tests have been run since the inception of the laboratory back in March 2020, allowing us to understand the immunology of SARS-CoV-2. The UKHSA Porton laboratory is still performing thousands of SARS-CoV-2 antibody tests for SIREN, UKHSA serosurveillance, and multitudes of research projects and trials, with these skills now being applied to set up and develop new assays for other respiratory infections such as Influenza and RSV on a large scale, as ways to determine the immune responses to these other pathogens.

In addition, UKHSA Porton has recently incorporated the SIREN serum biobank into its operation, with ~500,000 serum samples from ~45,000 SIREN now held by the group and many more samples to be added over the coming months as part of SIREN 2.0 launch. This biobank means that all samples are centrally stored, allowing coordination of samples for additional antibody testing or research with collaborating groups.

"The SIREN study has given us a unique opportunity to understand SARS-CoV-2 immunology. Utilising the existing samples in the biobank, new samples through SIREN 2.0, and the development of new high-throughput assays that we will undoubtedly be able to further our understanding of other pathogens such as Influenza and RSV."

***Dr Ash Otter, Principal Investigator of the
Emerging Pathogen Serology Group***



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The future of SIREN

There is still a huge amount of research being conducted based on the samples and data you have provided. Importantly, we continue to work with partners to conduct analysis and are regularly approached by academic partners to set up new research themes within SIREN. We are delighted to have retained an engaged cohort in SIREN and will be inviting you to sub-studies in the future.

What do we want you to do now?

If your site has opted to continue in SIREN, please keep an eye on your emails for information about rejoining SIREN 2.0.

In the meantime please lookout for further communications from the SIREN team as we have a range of engagement activities planned over the next few months, including our newsletter, video interview series, dissemination of new publications and research, and exciting plans for future events.



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SIREN Study Portal

The SIREN Portal is our dedicated website where we will keep you updated about your participation in SIREN 2.0. On the website you can find a copy of our latest study newsletter, ways of managing your communication preferences and contact details with the study team.



SIREN

SARS-CoV2 Immunity & Reinfection Evaluation

SIREN in 2023/24

Latest news

Get in touch

Managing your preferences

Welcome to the SIREN Study Portal

This website is for SIREN participants and aims to keep you updated about your participation in the study.

The purpose of this study is to understand whether prior infection with SARS-CoV-2 (the virus that causes COVID-19) protects against future infection with the same virus. The study has received approval from the NHS Health Research Authority Berkshire Research Ethics Committee and is funded by the National Institute of Health Research and UK Health Security Agency.

You can access the SIREN study portal [here](#).



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2. Spotlights

SIREN Participant Involvement Panel

The SIREN Participant Involvement Panel (PIP) was established during the first year of SIREN and led by the British Society for Immunology, to provide an open space for discussions and honest feedback to develop research aims and outputs as well as contribute towards engagement activities and delivery methods.

The PIP is made up of participants from across the four UK nations, with a range of ages, genders, ethnicities and healthcare worker professions represented and guides the SIREN researchers. The PIP ensures for the SIREN study that diverse voices are heard and can influence the study.



The SIREN Participant Involvement Panel (PIP) have provided feedback and guidance to SIREN researchers on:

- Research priorities and study protocol changes, including emerging sub-studies
- Operational elements of study delivery, including cohort retention
- The wider implications of SIREN research



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We will be recruiting a new PIP panel for SIREN 2.0 shortly. Further information on the application process and what's involved will be provided in due course. Please keep an eye out as we want to hear from you!

Thank you to all our past PIP members who have shared their experiences and perspectives to shape the study: your commitment to the PIP is greatly appreciated.





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3. Bonus items

A) Your feedback on SIREN

SIREN is shaped by your feedback. We have loved hearing your experiences of being part of the SIREN community:

"Being part of the SIREN research study has been my way of assisting the scientists understand Covid19 and hopefully find a cure in the future, I feel very honoured to have been able to take part. ."

Sharon Over, Sheffield Teaching Hospital

"I was very excited to be a part of this study. I felt I was able to "do my bit" for research in the current peri and post pandemic period. Thank you for the opportunity."

**Judy van Selm,
St.George's, Epsom and
St.Helier NHS trust**

"It has been a valuable research study to be part of for me personally to feel I was doing what I could to keep my patients, colleagues and my household safe by having regular accurate PCR testing. It was also great for our organisation to be part of this national study."

**Julia Ennis, Sheffield Children's
NHS Trust**



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"It's so important to gain this information from the SIREN Study so we can help protect the general population and the NHS, from the effects of this devastating virus. I feel so proud that we have been at the forefront of this research."

**Sarah Bullock, Royal Devon
University Healthcare
NHSFT**

"The Siren Study has been very insightful and informative, I'm happy to have played a small part in providing swabs and blood samples. In the early days of the pandemic I was happy to volunteer so that I could do just a little bit which may help others. The Research Team at BCHFT have been great and we have built up a good relationship especially as I am not an easy person to get any blood from, but their patience and friendly attitude was much appreciated!"

**Lorraine Priest, Black
Country Healthcare NHS
Foundation Trust**

"As a team we felt a deep sense of satisfaction from our contributions to the SIREN study and a sense of personal growth from the findings shared with us on a regular basis."

**Ruth Penn, Buckinghamshire
Healthcare NHS Trust**



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Please continue to share your reflections and experiences of being part of SIREN using [this link](#).

