

## Welcome to *Monitor* Issue 62



**Nicky Gibbens**  
**Manager, Personal Dosimetry Services, UKHSA**

Hello, and welcome to Issue 62 of *Monitor*, the twice-yearly newsletter of the UK Health Security Agency's Personal Dosimetry Service (PDS).

Whether or not it is an age thing that affects us all, the last six months or so has simply flown by. That said, although continued progress with the COVID-19 pandemic means that we can all start to return to our workplaces and perhaps reach that "new normal" that people talk about, we still must remain vigilant as we move into autumn and winter and the anticipated flu season.

Perhaps you have heard of UKHSA's work on the recent Monkey Pox outbreak, or our continued work in supporting our NHS colleagues with COVID-19, or any of the myriad of health projects in which we are involved – from seasonal flu to TB – the work goes on and keeps us all busy.

Again, we have risen to the challenge in providing something in this newsletter of interest to all our customers, including: -

- Dr. Liz Ainsbury, who is the Senior Scientific Group Leader of our Cytogenetics team, discusses the Chromosomal Dosimetry Service and how it informs further developments in dosimetry science in the UK and overseas.
- Samantha Watson, Senior Radiation Protection Scientist at UKHSA/RCE, will give us a Science Outreach Update of our work in Oxfordshire and London, specifically focussing on STEM subjects.
- There is an update as to PDS's re-certification for ISO/IEC 17025, and our Approved Dosimetry Service status from the Ireland Environmental Protection Agency.
- We highlight a EURADOS training course in Portugal in which we, as PDS, were involved, sharing our experiences in dosimetry best practice.
- As 2022 winds down, there is a short overview of the remaining conferences and exhibitions that PDS should be attending for the rest of the year.

I trust that you find the articles in this issue of interest and, as usual, please let us know if, like other PDS customers, your organisation would be interested in submitting a small piece for publication in a future issue of *Monitor*.

## STOP PRESS – Good news from the Personal Dosimetry Service

### PDS Awarded ISO 17025 Certification (again)



PDS is pleased to announce that, for the second year in a row, we have been independently audited by UKAS (the UK Accreditation Service) and have again been awarded ISO 17025 certification for our laboratory service.

We in PDS knew that, as part of any UKAS accreditation, we could expect to be re-appraised by UKAS within the first year of our original certification in early 2022; consequently, we were somewhat prepared for our re-assessment and, as we have implemented ISO 17025 principles, procedures and processes in pretty much every part of our business, we were reasonably confident of the outcome. What this re-certification means for our customers is that being a certified laboratory, they can have confidence in our working to agreed standards in providing accurate and reliable results in our testing, calibration, sampling, and measurement services.

We shall continue to run regular internal audits of our lab processes, knowing full well that we can expect to be re-audited by UKAS on a regular basis.

Like the last time we were assessed, please let us know if you require a copy of our most recent ISO 17025 certificate.

### Ireland Environmental Protection Agency



We are also pleased to announce that PDS has just been awarded its certificate as an Approved Dosimetry Service in the Republic of Ireland, courtesy of their Environmental Protection Agency.

As with ISO 17025, this is an endorsement of the methods used by PDS in our dosimetry service for our customers there and meets the Republic's S.I. 30 (2019) standard. Our certification is valid until June 2027 and, again, a copy of our certificate is available to PDS customers upon request.

# Radiation, Chemical & Environmental Hazards Directorate (RCE)

## Science Outreach Update



**Samantha Watson BSc, MMedSci**  
**Senior Radiation Protection**  
**Scientist UKHSA**

The importance of STEM (Science, Technology, Engineering & Mathematics) outreach work — conveying science at an understandable level to most of the public, including young people, promoting the work of RCE, improving our reputation and building trust — is recognised as an essential part of our work. The RCE Outreach Network, in collaboration with the Health Protection Research Units (HPRUs), therefore continues to provide relevant, interesting, tailored outreach work and has represented RCE at several events in recent years.



The Oxford Science and Ideas Festival (IF Oxford) took place online in autumn 2020 with our network providing a set of videos and downloadable resources, with a team of scientists available in a virtual chat room. RCE then contributed to a self-guided interactive tour as part of the

Abingdon ATOM Science Festival in Spring 2021, and attended the in-person IF Oxford *Explorazone* over two days in October 2021.

In 2022 volunteers presented various activities on environmental hazards at New Scientist Live in Manchester, and on air quality at the ATOM Festival in Abingdon. There has also been some important work, both online and in-person, with local schools. Careers advice has been provided to schools in Didcot via one-to-one online mentoring sessions and at a careers event held at one of these schools. At this event, staff discussed the benefits of working in science and discussed both air quality and radiation hazards. Additionally, presentations have been made in schools to after-school science clubs, and as part of one particular primary school's science week.

Looking to the future, it is planned that more careers guidance will be provided to schools, including sessions aimed at encouraging girls and young women into STEM, and that RCE will attend two events at IF Oxford 2022, presenting activities related to protection against ionising radiation, UV radiation and air pollutants. Very excitingly, an open day at RCE Chilton, *Radiation Research Revealed* is being planned for November 2022, with interactive talks, hands-on activities and laboratory tours to showcase the work of the centre. Other opportunities are likely to arise and appropriate activities, adapted to meet the needs of the audience, will continue to be provided.



## Conferences & Exhibitions in 2022

UKHSA PDS will be exhibiting at or attending the following events for the remainder of 2022. As usual, if you see us or our stand then please grab us for a coffee and a chat.

**The 19th National Radon Forum, UK Health Security Agency, Chilton**  
**1st November 2022**

**British Nuclear Medicine Society Autumn Meeting 202, Swansea**  
**11th – 12th November 2022**

# The Chromosomal Dosimetry Service



**Dr. Liz Ainsbury**  
**Senior Scientific Group Leader,**  
**Cytogenetics UKHSA**

With the increasing use of ionising radiation in society, the chance of an accident or incident involving radiation is also on the rise. As part of the UKHSA's remit as a Category 1 emergency responder, the

Chromosomal Dosimetry Service team maintains preparedness to provide radiation dosimetry to support the triage of large numbers of potentially exposed individuals, to help reassure the worried well, and to ensure the most appropriate use of limited medical resources.

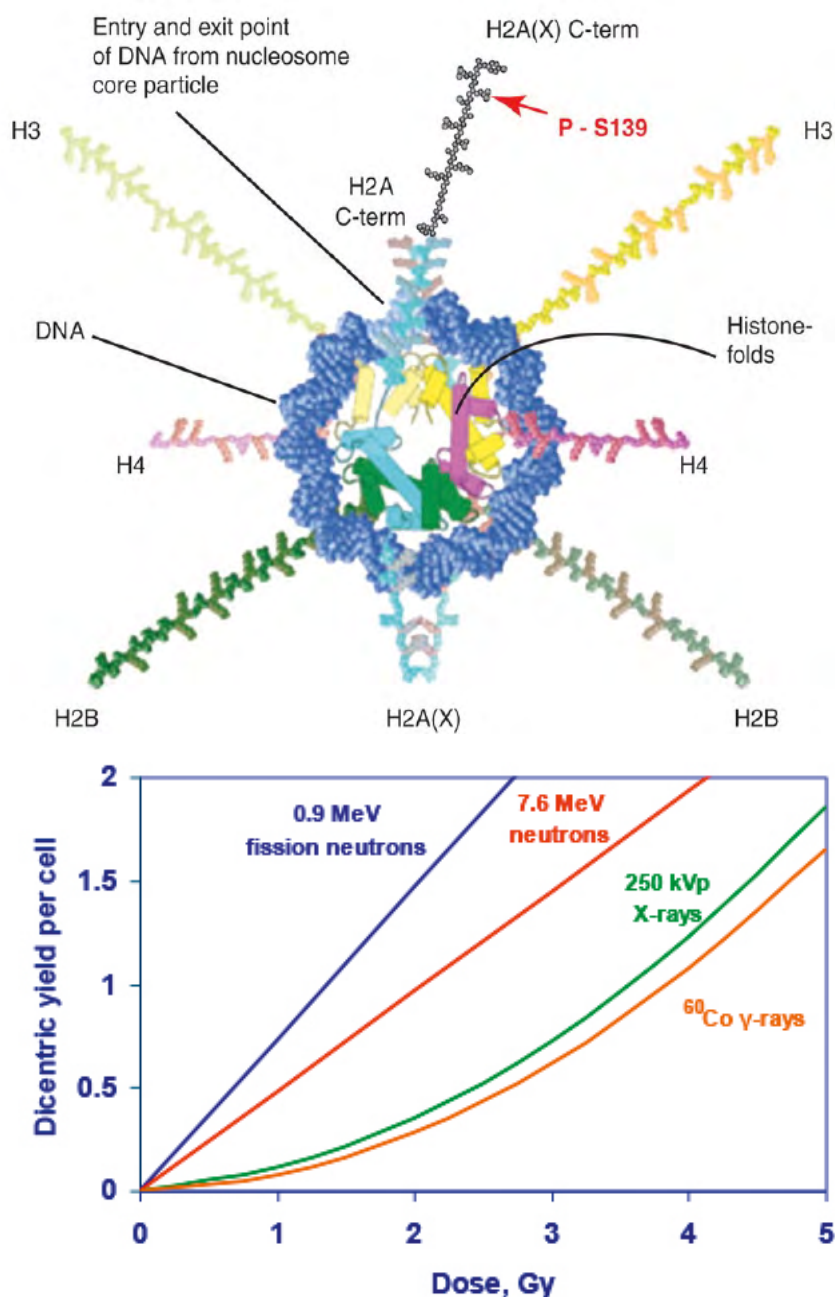
The Cytogenetics Team is an internationally-recognised group of subject matter experts, with over 60 years of experience in providing quality research, having published approximately 500 peer-reviewed journals and other publications to date. This informs and helps in planning the provision of dosimetry services in real-life incidents (for example, following Chernobyl) as well as exercises at national- and international levels; it also provides useful source material for wider research expertise in radiation effects. We work closely with colleagues from all over the world, including through the networks of RENEB (Running the European Network of Biological and Retrospective Physical Dosimetry) and EURADOS (the European Radiation Dosimetry Group), as well as with WHO (the World Health Organisation) and IAEA (the International Atomic Energy Agency).

The team provides the sole UK specialist chromosomal dosimetry service to evaluate doses received by people known or suspected to have been exposed to ionising radiation. The service is based on analysing chromosomal and other damage in blood cells to give an estimated dose, plus a level of uncertainty. Radiation exposure scenarios are often complex, so the tests are tailored to individual exposure circumstances with results analysed on a case-by-case basis. In recent years, 'fortuitous' dosimetry based on physical methods in materials that individuals happen to be carrying has also been developed and implemented.

With our methods, we can:

- Demonstrate false positives when an occupational dose recorded on a TLD badge was not really received by the wearer

- Confirm genuine overexposures and provide an additional estimate of dose independent of any physical or computational dosimetry method
- Give an indication of the whole or partial body nature of the exposure and the proportion of the body exposed, in support of individual treatment decisions
- Provide reassurance for those worried, but not exposed, which is especially important during a large-scale population- level event



In summary then, as a Category 1 responder, the UKHSA Cytogenetics Team maintains readiness to respond to small- or large-scale ionising radiation emergencies both in the UK and internationally, including through provision of biological dosimetry to estimate individual radiation doses for triage purposes.



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# PDS / EURADOS Training Course – Lisbon, Portugal

*3rd to 7th October 2022*

The European Radiation Dosimetry Group (ERDG) is an independent society of more than 70 scientific institutions with a focus on the dosimetry of ionising radiation. The remit of ERDG Working Group 2 is the harmonisation of individual monitoring in Europe, and this training course was part of that on-going work.

The course was entitled Radiation Protection Dosimetry and Accreditation of IMS: Secrets & Solutions (based on Radiation Protection 160) and was first held in 2012 in Krakow, Poland, which Nicky Gibbens, PDS Manager, attended as a student. This year, it was held at the Instituto Superior Tecnico (IST) at Campus Tecnológico e Nuclear in Bobadela, which is close to Lisbon in Portugal.

Nicky and colleague Phil Gilvin helped to organise the course along with Kinga Zmijewska (PDS Technical Operations Manager) who also joined the various sessions. It was great to see the course reach maximum attendance with 40 participants from Europe, spanning 17 different countries, plus nine from South Korea.

Lecturers from all over Europe brought their expertise in dosimetry to provide a course to cover all aspects of individual monitoring, featuring lectures on dosimetric quantities, uncertainty evaluation, quality assurance, calibration, type testing and more. Phil and Nicky lectured

on radiation detection, individual monitoring procedures, the new ICRU dose quantities and the ISO/IEC 17025 standard requirements for dosimetry services.

Initial feedback has been very positive, with attendees commenting favourably on the course content and format. Local organisers planned and supported the course excellently, even down to arranging the beautiful sunny weather!



**Nicky Gibbens and Phil Gilvin (both to the right) taking a break from lecturing.**

## Stay connected with the Personal Dosimetry Service (PDS)

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**Please note that old PHE e-mail addresses will continue to be used but will be migrated gradually into UKHSA over the coming months.**

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**A REMINDER THAT, IN KEEPING WITH ITS CONTINUED “GREEN AGENDA”, PDS NOW SENDS OUT PAPERLESS REPORTS ONLY AS A MATTER OF ROUTINE. THE AIM IS TO HELP PRESERVE OUR ENVIRONMENT BOTH THROUGH REDUCTION IN PAPER USE AND THE ASSOCIATED REDUCTION IN TRANSPORTATION. FOR THOSE CLIENTS STILL WISHING TO RECEIVE REPORTS IN PAPER FORM, A FLAT FEE OF £100 PER ANNUM APPLIES.**