

# THE ENDOCRINOLOGIST

THE MAGAZINE OF THE SOCIETY FOR ENDOCRINOLOGY

Enriching  
working  
practices:

**POSITIVE  
PARTNERSHIPS**

Special  
features

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When the  
world changed  
**LIFE IN LOCKDOWN**

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# A word from THE EDITOR...



Editor's log, lockdown week 723: the freezer is empty, there are no Ocado slots until 3027, an FFP3 mask is now permanently fixed to my face and my MS Teams has morphed into an AI world of its own...

OK, so I exaggerate, but it's Lockdown 2.0 at the time of writing. Intensive care units in the North West and North East of England in particular are beyond busy, and COVID is dominating the way we work and the way we live. Happily, as I write, Liverpool remain (almost) top of the Premier League, and Trump is out!

One thing that has helped us get through these extraordinary times has been team working. This issue looks at the positive impact of partnerships. On page 14, Pauline Whittingham writes on behalf of The Pituitary Foundation about the power of working with patient support groups. Meanwhile, on page 11, Henry Wilson discusses how working well with our administration teams is key to enhancing patient care: there is no point in having the best treatments available, if we can't get patients to see the right healthcare professional at the right time.

We can't compete with cat pictures on Twitter, but Rob Fowkes and colleagues share with us their work and what animal research can teach us about human diseases (page 8). Like everything else, training has moved online; on page 25, Louise Hunter relates how 'Team Endo' came together to support the early career Taster Webinars by Zoom. It was fun to be a part of this, and I felt inspired by endocrinology all over again.

The Society for Endocrinology is supporting our working together by means of the Future of Endocrinology working group (page 28). The first output, strategies for the second wave of COVID-19, has been published on the Society's website (find it at [www.endocrinology.org/clinical-practice/future-of-endocrinology-working-group](http://www.endocrinology.org/clinical-practice/future-of-endocrinology-working-group)), and there was also a session at SfE BES 2020 Online.

Sharing our stories is a way of connecting with each other. Some members have shared their experiences of the last few months (pages 20–23), and I'm sure their words will resonate. So, as we head into winter proper, let's keep connected virtually and support each other through the dark months ahead. These times will pass. Keep safe and go well Team Endo!

HELEN SIMPSON

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Managing Editor: **Jane Shepley**  
Sub-editor: **Caroline Brewster**  
Design: **Ian Atherton, Corbica Design**

**Society for Endocrinology**  
Starling House  
1600 Bristol Parkway North  
Bristol BS34 8YU, UK  
Tel: **01454 642200**  
Email: [members@endocrinology.org](mailto:members@endocrinology.org)  
Web: [www.endocrinology.org](http://www.endocrinology.org)  
Company Limited by Guarantee  
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**Become a contributor...** Contact the Editorial office at [endocrinologist@endocrinology.org](mailto:endocrinologist@endocrinology.org)

The Society welcomes news items, contributions, article suggestions and letters to the Editor. We would also like to hear your feedback on this issue of the magazine.

Deadline for news items for the SPRING 2021 issue: **6 January 2021.**

Front cover image ©Shutterstock



Happy holidays to all our readers



## SUPPORT FOR THE INEQUALITIES IN HEALTH ALLIANCE



A new coalition of almost 80 organisations, including your Society, has been launched to press

for urgent action to address health inequalities. The Inequalities in Health Alliance (IHA) is demanding a cross-Government strategy to reduce unfair and avoidable differences in health, both across the population and between different groups within society.

Find out more and read the letter to the Prime Minister at [www.endocrinology.org/news](http://www.endocrinology.org/news).



## COVID-19 FUNDS STILL AVAILABLE

The Bioscientifica Trust's COVID-19 response fund, which offers grants of up to £5,000/€5,000, will remain open for applications until **31 December 2020**. The response fund was launched to provide assistance to early career scientists and clinicians, for whom a small grant could help ease the negative impact of COVID-19. Find out more and apply at [www.bioscientificatrust.org](http://www.bioscientificatrust.org).

## JOIN THE BIOSCIENTIFICA TRUST BOARD

The Bioscientifica Trust is looking for an early career endocrinologist to join its governing Board for an initial 3-year term. Apply by **31 December 2020** for the opportunity to work with world-renowned endocrinologists whilst helping scientists and clinicians in biomedicine and the life sciences. You can find full details at [www.bioscientificatrust.org/news/seeks-early-career-endocrinologist-to-join-board-of-trustees](http://www.bioscientificatrust.org/news/seeks-early-career-endocrinologist-to-join-board-of-trustees).

## COVID-19 SECOND WAVE: RECOMMENDATIONS

For our patients' safety, we believe that it is paramount to continue providing specialty endocrine services during the current and future COVID-19 waves. The Future of Endocrinology working group has compiled COVID-19 second wave planning recommendations, so that they may be considered for local implementation. Find out more on page 28 and at [www.endocrinology.org/clinical-practice/future-of-endocrinology-working-group](http://www.endocrinology.org/clinical-practice/future-of-endocrinology-working-group).

## WELCOMING THE NEW EDITOR-IN-CHIEF

Professor Adrian Clark is the new Editor-in-Chief of *Endocrine Connections*, the official open access journal of your Society and the European Society of Endocrinology.

His 3-year term starts on 1 January 2021. He and the current Editor-in-Chief, Professor Josef Köhrle, will work jointly during January, to aid the transition.



Adrian Clark

## INTERESTED IN NEUROENDOCRINOLOGY?

The Society for Endocrinology is a partner organisation for the BNA2021 Festival of Neuroscience on 12–15 April 2021. This British Neuroscience Association online event includes our dedicated neuroendocrine symposium. Society members are eligible for reduced registration fees. Find out more at <https://meetings.bna.org.uk/bna2021>.

## CHANGES AT THE ENDOCRINOLOGIST

We welcome Jane Shepley, our new Managing Editor. Jane started her career as editorial assistant for *Journal of Endocrinology* in 2002, before moving into PR for your Society and Bioscientifica, then science communication at the British Heart Foundation. She has been a freelance writer/editor since 2013. Contact Jane via [endocrinologist@endocrinology.org](mailto:endocrinologist@endocrinology.org) with any ideas or comments about the magazine.

## HAVE YOUR SAY: 2021 DIABETES WORKFORCE AUDIT

The Diabetes Workforce Audit aims to find out where Britain's diabetes and endocrine consultants work, and the type of job plan they have. The survey closes on **31 January 2021**.

Consultants who are on the database will receive an individual link via email. To take part, or for more information, email [stellageorge@nhs.net](mailto:stellageorge@nhs.net).

## DIABETES INSIPIDUS PATIENT SAFETY CAMPAIGN



We are supporting The Pituitary Foundation's patient safety campaign for Diabetes Insipidus. Diabetes Insipidus is a rare disease and there have been tragic cases of inappropriate treatment and omission of DDAVP in hospitals. One part of this safety campaign is considering a name change. If you wish to support a name change you can sign the petition at: [www.change.org/p/healthcare-professionals-change-the-name-of-diabetes-insipidus-noneedtodidi](http://www.change.org/p/healthcare-professionals-change-the-name-of-diabetes-insipidus-noneedtodidi).



## SOCIETY CALENDAR

17 December 2020  
**SOCIETY ANNUAL GENERAL MEETING**

12–15 April 2021  
**BNA2021 FESTIVAL OF NEUROSCIENCE**

### ENDOCRINE ACADEMY:

26–28 April 2021  
**CLINICAL UPDATE**

26–27 April 2021  
**ENDOCRINE NURSE UPDATE**

8–10 November 2021  
**SfE BES 2021**

[www.endocrinology.org/events](http://www.endocrinology.org/events) for full details



## GRANT AND PRIZE DEADLINES

31 December 2020  
**BIOSCIENTIFICA TRUST COVID-19 RESPONSE FUND**

10 March 2021  
**TRAVEL GRANTS**

17 March 2021  
**SUMMER STUDENTSHIPS**

24 March 2021  
**PUBLIC ENGAGEMENT GRANTS**

7 April 2021  
**PRACTICAL SKILLS GRANTS**

5 May 2021  
**EARLY CAREER GRANTS**

5 May 2021  
**EQUIPMENT GRANTS**

5 May 2021  
**ENDOCRINE NURSE GRANTS**

26 May 2021  
**MEETING SUPPORT GRANTS**

[www.endocrinology.org/grants](http://www.endocrinology.org/grants) for full details of all Society grants and prizes



## SOCIETY FOR ENDOCRINOLOGY OFFICIAL JOURNALS

Society members have free access to the current content of *Journal of Endocrinology*, *Journal of Molecular Endocrinology*, *Endocrine-Related Cancer* and *Clinical Endocrinology* via the members' area on the Society home page, [www.endocrinology.org](http://www.endocrinology.org). *Endocrine Connections* and *Endocrinology, Diabetes & Metabolism Case Reports*, the Society-endorsed case reports publication, are open access and free to all.



### JOURNAL OF ENDOCRINOLOGY

#### FSH receptor in preantral follicles as early as the primary stage of development

Classical dogma in ovarian follicle development states that preantral follicle development is gonadotrophin-independent, in contrast to antral follicle development, where gonadotrophin hormones are essential. There is increasing evidence, primarily from *in vitro* rodent follicle culture models, suggesting that FSH may play a role in preantral follicle development.

Candelaria *et al.* provide evidence from dissected bovine preantral follicles and cortical strips to show the presence of the FSH receptor (FSHR) from as early as

primary follicles, showing signal pathway activation via MAPK.

This study adds to the mounting evidence that the FSHR is expressed in preantral follicles as early as the primary follicle stage of development. This may have important roles in preantral follicle development that are yet to be elucidated.

Read the full article in *Journal of Endocrinology* **247** 153–168

### JOURNAL OF MOLECULAR ENDOCRINOLOGY

#### Testosterone modulates endothelial function in hypertensive rats

Cardiovascular disease is a major cause of death worldwide. Testosterone is associated with development of hypertension, a risk factor for cardiovascular disease, due to the greater incidence in men and postmenopausal women. However, recent studies suggest that testosterone may have protective effects in some contexts.

Arapa-Diaz *et al.* assessed whether testosterone could affect endothelium-dependent coronary vascular reactivity in spontaneously hypertensive rats. Male rats were divided into four groups: sham, orchidectomised (ORX), ORX with replacement testosterone (ORX+T) or ORX with testosterone plus aromatase inhibitor (ORX+T+AI). Drug treatments were for 15 days.

Systolic and diastolic blood pressure increased over time in sham, ORX+T and ORX+T+AI groups but not in ORX alone, consistent with depletion of endogenous testosterone inhibiting development of hypertension. Aromatase inhibition did not have an independent effect, precluding a role for oestrogens. Using a modified Langendorff perfusion method, the authors assessed coronary vascular bed function. While coronary perfusion pressure was unchanged in all groups, testosterone treatment increased bradykinin-induced vasodilation in ORX rats.

Although testosterone did not reduce blood pressure, it modulated endothelial function and promoted relaxation in the coronary vascular bed. These results suggest that testosterone can have regional effects in the cardiovascular system under hypertensive conditions.

Read the full article in *Journal of Molecular Endocrinology* **65** 125–134

### ENDOCRINE-RELATED CANCER

#### High pro-neurotensin levels and increased colon cancer risk

Neurotensin (NT) is tridecapeptide hormone that is released in response to ingested fats. It plays an important role in the regulation of gastrointestinal physiology, where it promotes proliferation of the intestinal mucosa. NT also stimulates growth of several cancers via expression of NT receptor 1, but any potential link between NT and colon cancer risk has not been explored.

Li *et al.* utilised data from the Kentucky Colon Cancer Genetic Epidemiology Study, which contained 1040 colon cancer cases and 1750 population-based individuals, each with lifestyle and epidemiological data, pathology information and fasting blood samples. Of these, 223 cases and 223 controls were randomly selected and frequency-matched on age, gender and body mass index, using

the propensity score matching technique. Plasma levels of pro-NT, a stable NT precursor fragment, were measured by immunoassay in blinded samples.

On average, concentrations of pro-NT were significantly higher in cases than in controls. High concentrations of pro-NT were associated with an increased risk of colon cancer, independent of other known risk factors. Multivariate logistic regression modelling showed statistically significant risk associations for pro-NT with an OR estimate of 1.30 (95% CI=1.03–1.64;  $P=0.026$ ) for each increment of 175pmol/l. The authors suggest that circulating levels of pro-NT may have utility as a biomarker for colon cancer.

Read the full article in *Endocrine-Related Cancer* **27** 641–646

## ENDOCRINE HIGHLIGHTS

A summary of papers from around the endocrine community that have got you talking.



#### Increased ovarian stiffness on ageing depends on collagen and hyaluronan matrices

Tissue remodelling that occurs with age can result in fibrosis. This has been suggested to occur within the ovary, but has not been measured, and the mechanisms of change that occur in ovarian ageing remain largely unknown.

Amargant *et al.* utilised super resolution imaging via atomic force microscopy to determine and quantitate the changes that occur with age. Using ovaries from mice that were at their 'reproductive prime' (6–12 weeks of age) or 'ageing' (14–17 months old), age-related modulation in ovarian stiffness was determined. The increased stiffness observed with age was linked to changes in collagen and hyaluronic acid. These changes were also confirmed in human ovarian biopsies.

This suggests that ovarian stiffness is mediated by modulation of extracellular matrix proteins, with a potential impact on follicle development in the ageing ovary.

Read the full article in *Aging Cell* doi:10.1111/acel.13259

## CLINICAL ENDOCRINOLOGY

### Spontaneous pregnancies after childhood allogeneic haemopoietic stem cell transplant

Lai-ka Lee *et al.* describe spontaneous pregnancy outcomes in a cohort of 37 women who underwent stem cell transplantation for haematological malignancies in childhood. The subjects received alkylating agents (affecting ovarian function), total body irradiation (affecting ovarian and uterine function) and anthracyclines (affecting cardiac function).

There were seven spontaneous pregnancies and eight live births. Three women conceived on hormone replacement therapy. Patients conceived spontaneously

with evidence of primary ovarian insufficiency and low ovarian reserve (high follicle-stimulating hormone and low anti-Müllerian hormone), which serves as a reminder that these tests are not fertility tests. One patient developed cardiac failure during pregnancy related to previous anthracycline use.

This study demonstrates the complex issues around fertility in this patient cohort. Patients should have an opportunity to discuss fertility and any risks, and be advised to use contraception if they do not want a pregnancy.

Read the full article in *Clinical Endocrinology* **93** 466–472

## ENDOCRINOLOGY, DIABETES & METABOLISM CASE REPORTS

### Long term medical therapy for insulinoma

Warren *et al.* in Melbourne, Australia, report the fascinating case of a school teacher diagnosed with an insulinoma in 1992, when he was aged 38. Their report has many learning points, including the diagnostic difficulty presented by the condition: due to behavioural change caused by hypoglycaemia, the subject spent some time in an inpatient psychiatry unit before the correct diagnosis was reached.

In the early 1990s, despite repeated imaging, invasive localisation studies and two surgeries, the insulinoma could not be found. In 1993, the medical team commenced treatment with oral diazoxide, with subsequent marked improvement in the patient's symptom burden (he was able to return to work), and a manageable side effect profile (hirsutism and mild peripheral oedema).

In 2014, the insulinoma was finally localised with <sup>68</sup>Ga-NOTA-exendin-4 positron emission tomography/computed tomography scanning. However, after advice from the surgical team that definitive treatment would probably require total pancreatectomy, the patient opted to continue with medical treatment alone. Now, in 2020, he continues on diazoxide, and remains very well.

The authors comment that this provides a useful reflection on how investigation of insulinoma (especially the available imaging modalities) has changed in the past 30 years. To their knowledge, the use of diazoxide for a period as long as 27 years has not been reported previously. For those people with an insulinoma in whom surgery may not be possible, or may be declined, this case may well be of value to their medical team.

Read the full article in *Endocrinology, Diabetes & Metabolism Case Reports* doi:10.1530/EDM-20-0132

## ENDOCRINE CONNECTIONS

### Venous thromboembolism after surgery for adrenocortical carcinoma

Exceptionally rare, highly aggressive and difficult to identify, adrenocortical carcinoma (ACC) affects about one person in a million. Surgical resection of the adrenal is a frequent and effective treatment. Venous thromboembolism (VTE) is a serious, potentially fatal condition which can occur postoperatively. However, its frequency in patients with ACC is unclear.

Durmuşoğlu *et al.* conducted a retrospective study at Radboud University (Nijmegen, The Netherlands) using patient data registered between 2003 and 2018. The cohort included a range of ACC types, including non-functional tumours, overt hypercortisolism, cortisol- and androgen-producing and

subclinical hyper-cortisolism. Data from 34 patients revealed that 8 experienced VTE within 6 months of surgery; all of these were pulmonary embolisms, with no overt signs of deep vein thrombosis of the leg.

This work shows that VTE occurs in 23.5% of postoperative ACC patients, demonstrating a high incidence. Previously, it had been projected to have a low risk of approximately 2–3%. The study highlights the need to consider postoperative VTE in this patient group, and calls for more work to better inform clinicians regarding the optimal duration of thromboprophylaxis for ACC patients.

Read the full article in *Endocrine Connections* **9** 874–881

### Neanderthal origin of genetic risk factor for severe COVID-19

Just because COVID-19 has made us all miserable doesn't mean we shouldn't marvel at some of the science it has generated. The symptoms of COVID-19 range widely in both severity and incidence. Moreover, our understanding of the risk factors is continually developing.

Despite the intensity of work taking place, there remains no overall consensus over the genetic risk factors at play. An initial study in *New England Journal of Medicine* identified chromosome 3 (3p21.31) as a locus for susceptibility to COVID-19. Zeberg and Pääbo have now extended this genetic trail to suggest that carrying a genetic Neanderthal background may play a role in determining the severity of COVID-19 symptoms experienced. They took the earlier finding and examined Neanderthal DNA for the occurrence of this 'COVID-19 locus'. They showed that the Neanderthals carried the same mutations in the highlighted region. Although many non-Africans have Neanderthal DNA, the existence of the 3p21.31 locus is variable. Presently, 50% of people in South Asia and 16% of those in Europe are carriers of these regions.

This study doesn't suggest that those carrying Neanderthal DNA will have increased susceptibility, but we can use this to speculate as to its place in the pecking order of risk factors.

Read the full article in *Nature* doi:10.1038/s41586-020-2818-3



Neanderthal (front) and modern human (rear) skulls. ©Shutterstock

# ENDOCRINOLOGY AND IMMUNOLOGY: THE BENEFITS OF CROSS-TALK

WRITTEN BY DOUGLAS GIBSON AND CALUM BAIN



Sex-based differences in immune responses contribute to variations in the incidence of inflammatory disorders, including a greater susceptibility to autoimmune disorders in women and a greater susceptibility to infectious diseases in males.<sup>1</sup> Certain differences are present throughout life, while others are only apparent after puberty, suggesting both genes and hormones contribute to different immune responses between the sexes.

## BROUGHT TOGETHER BY SEX BALANCE

Despite the known importance of these interactions, relatively little cross-fostering of ideas has occurred between the fields of endocrinology and immunology. A major step change came in 2014, when National Institutes of Health Director Francis Collins announced changes to funding policy that required sex balance in cell and animal studies.<sup>2</sup> This meant that many researchers were now required to use both 'simple males' and 'complicated females' when dissecting biological mechanism.

This approach was not new to endocrinologists, but considering sex as a biological variable is still often overlooked in the field of immunology, with fewer than 10% of articles reporting the sex of the animal or human subjects analysed.<sup>3</sup> Nevertheless, recent observations in macrophage immunology have highlighted a key role for sex in controlling their behaviour.

## SEXUAL DIMORPHISM IN MACROPHAGE IMMUNOLOGY

One such observation was that the rate of replenishment of macrophages in the peritoneal cavity differed between male and female mice. The ontogeny of tissue macrophages has attracted a lot of attention in recent years, following the revelation that macrophages in some organs can persist for much of adult life through self-renewal, without the need for replenishment by monocytes in blood. However, while it was known that

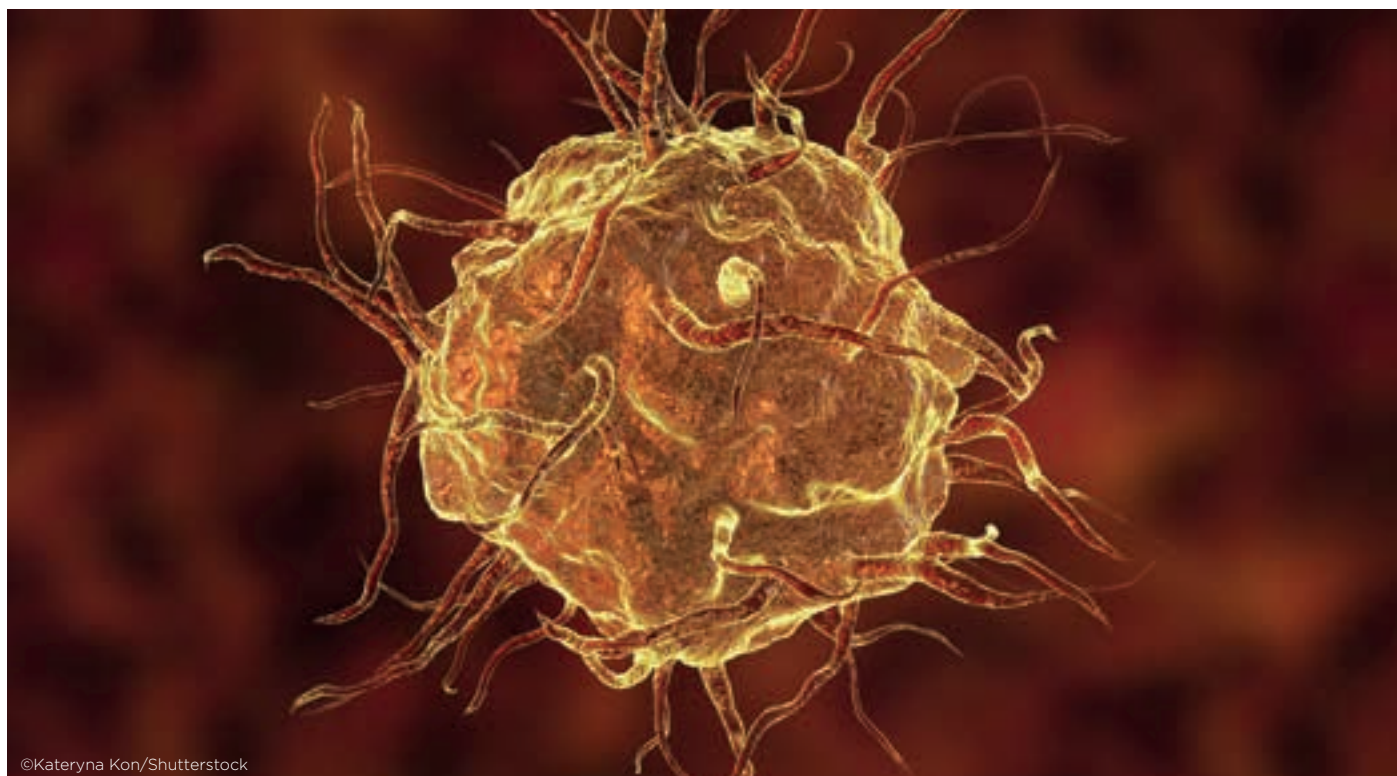
the relative contribution of self-renewal versus replenishment by monocytes is very much tissue-dependent, if and how sex may influence these processes had never been addressed directly.

When macrophage immunologists Calum Bain and Steve Jenkins were investigating these processes in the peritoneal cavity, they found that the rate of replenishment was much slower in females than in males. Importantly, this difference only became apparent after puberty.<sup>4</sup> They thought this phenomenon was something to do with ovarian function, probably oestrogens, so sought our advice as endocrinologists on how they could test this.

At this point, we were also struggling to interpret our data characterising the macrophage compartment of the uterus using a macrophage reporter mouse. Thankfully, consulting with macrophage experts such as Calum and Steve quickly helped us to better understand our data, assess expression of some key surface markers and move our paper forward to publication later that year.<sup>5</sup> Figuring out the sex dimorphism in peritoneal macrophage turnover proved to be less straightforward.

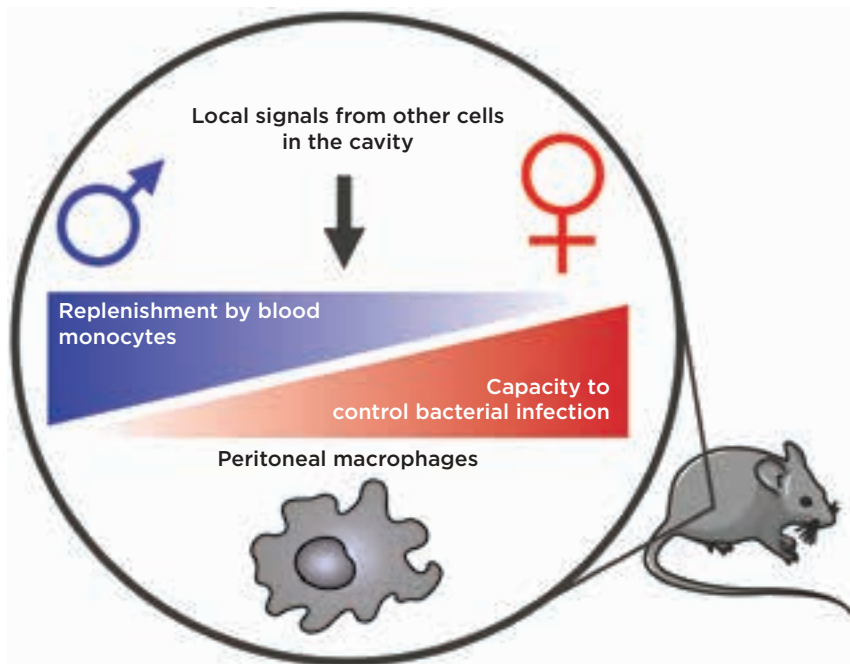
## ACCOUNTING FOR THE OESTROUS CYCLE

Typically, males are often used in animal model selection, due to concerns about confounding contributions from variations in females across the



©Kateryna Kon/Shutterstock





The behaviour of macrophages in the peritoneal cavity is influenced by the sex of the organism. ©Servier Medical Art

oestrous cycle. Limiting variables is an essential approach to defining physiological mechanisms, but accounting for the oestrous cycle is not a trivial task. Depending on your experimental model, this can also be a resource-intensive way to show not very much. Unfortunately, we found that this was the case for peritoneal macrophage turnover. However, reassuringly, this was consistent with previous meta-analysis that showed, for most applications, female mice tested throughout their hormone cycles display no more variability than males.<sup>6</sup>

*‘Consulting with macrophage experts such as Calum and Steve quickly helped us to better understand our data, and move our paper forward to publication.’*

We next turned to the ovary itself, taking a standard approach to ovariectomise and then administer replacement oestradiol to the mice. However, we added two further arms that were important to consider from an immunological perspective. First, given the inflammatory nature of surgery, we performed a sham ovariectomy procedure to account for the effect of surgical intervention in the peritoneal cavity. Secondly, we also performed unilateral ovariectomy, i.e. removed only one ovary, to account for the possibility that changes in peritoneal macrophage turnover could be due to migration to the ovary. This didn’t make sense from an endocrinological perspective, as we knew that hypothalamic-pituitary-gonadal feedback would compensate for the loss of ovarian function, but if the ovary was functioning as a ‘sink’ for peritoneal macrophages, we would expect to see a graded effect between loss of one or two ovaries.

When initial experiments showed that complete ovariectomy increased macrophage turnover, we were excited, but when it turned out that exogenous oestradiol could not rescue this effect we were surprised. We were also surprised to find that both sham-operated mice and unilateral ovariectomy showed increased peritoneal macrophage turnover – although this was not as pronounced as that induced by complete ovariectomy. These experiments told us two very important things: that surgery itself changed peritoneal macrophage turnover and that ovarian factors other than oestradiol drove the dimorphic replenishment kinetics.

### MORE QUESTIONS THAN ANSWERS

Unfortunately, we were not in a position to investigate the myriad ovarian factors that could be involved: progesterone? testosterone? inhibin? As is often the case, the new data generated more questions than we could reasonably answer.

The project moved on to using transcriptional profiling to define functional differences in male versus female peritoneal macrophages. Together, we found that sexually dimorphic differences in peritoneal macrophages contribute to differences in the ability to protect against pneumococcal peritonitis between the sexes. This may account for the known dimorphism in women, who are less likely to get peritonitis and less likely to suffer adverse outcomes following surgery than

males. The work was published in June 2020, some 4+ years since the first ‘simple’ experiments were planned.<sup>7</sup>

### LOOKING TO THE FUTURE

An understanding of how hormones, genetics and development can impact on inflammatory processes is required to investigate mechanisms of sexually dimorphic phenomena. An acute example of this is the ongoing SARS-CoV-2 pandemic, with sex affecting the severity of clinical outcomes for COVID-19 patients. Thus, bringing expertise in endocrinology and immunology together is of critical importance to moving both fields forward and for uncovering clinically important mechanisms.

In our studies, we learned that sex is important, but it’s also complicated. Working together moved our research forward in new directions. It was a long road but, along the way, the research supported training of students and led to new publications and grants. Apart from anything else, it was pretty good fun!

As they say, ‘If you want to go fast, go alone. If you want to go far, go together.’

### DOUGLAS GIBSON AND CALUM BAIN

Centre for Inflammation Research, University of Edinburgh

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# ENDOCRINE DISORDERS WITH 'CAT-TITUDE'

WRITTEN BY NAOMI WEEKES BELGRAVE, RIATA L MARINELLY  
AND ROBERT C FOWKES



Arguably, the greatest technological advance of the late 20th century was the internet. It was initially seen by many as an invention to connect humans across the globe almost instantaneously. We now know that the greatest use of the internet is to share millions of videos of *Felis catus* – the domestic cat – doing all sorts of ridiculous things.

The relationship between cats and their co-habiting humans (does anyone truly 'own' a cat?) dates back thousands of years, with evidence suggesting the Greeks and Romans introduced cats to households. But, beyond this historical partnership between cats and humans, what have cats *really* done for us endocrinologists?

Well, quite a lot. From an endocrine perspective, it probably comes as little surprise that dogs genuinely 'love' their favourite humans (showing a 57% increase in basal oxytocin levels when they see us), whereas cats feign mild tolerance (with a 12% oxytocin rise in response to their humans). But, despite their apparent disdain for us, cats provide us with excellent opportunities to try to understand disease mechanisms in several common endocrinopathies.

## FELINE THYROID DISEASE

For example, almost one in ten older cats (>9 years old) develops hyperthyroidism: so common, it's practically a geriatric lifestyle choice. Feline hyperthyroidism presents similarly to toxic nodular goitre in humans, and multiple factors (age, diet, breed, etc.) are thought to contribute to disease prevalence.

*'Domestic cats, due to sharing human living environments, and having undergone similar lifestyle changes, may perform an intriguing role as a sentinel species, warning us of other risk factors in the development of endocrine disease.'*

Our recent retrospective analysis of over 4500 cats identified that breeds with colour point mutations in the tyrosinase gene (e.g. Burmese, Tonkinese, Siamese) are protected against hyperthyroidism.<sup>1</sup> The hypothesis is that, with less tyrosine being utilised to contribute to pigmentation, more is available for thyroid hormone synthesis (which subsequently reduces 'pressure' on the thyroid gland).

Exposure to endocrine-disrupting chemicals (EDCs), such as polychlorinated and polybrominated bi/diphenyls (PCBs and PBDEs), has also been implicated in the aetiology of feline hyperthyroidism.<sup>2</sup> So, domestic cats, due to sharing human living environments, and having undergone similar lifestyle changes, may perform an intriguing role as a sentinel species, warning us of other risk factors in the development of endocrine disease.

## TYPE 2 DIABETES AND ACROMEGALY

As with humans, the incidence of spontaneous type 2 diabetes mellitus (T2DM) has increased substantially over the past few decades. Research into predisposing factors in cats reveals familiar causes, such as polymorphisms in candidate genes (e.g. *MC4R*), obesity, age and inactivity. But, strikingly, within this growing population of diabetic cats, over 25% of affected animals appear to present with T2DM secondary to acromegaly (or hypersomatotrophism (HST), in veterinary terms).<sup>3</sup>

Often, these cats present as difficult to control diabetics, but cats with acromegaly also share several clinical signs that are similar to disease symptoms in humans, such as increased paw size, and craniofacial and teeth abnormalities. Upon computed tomography or magnetic resonance imaging, cats with acromegaly typically display an enlarged pituitary mass, often protruding into the sella turcica. Through pioneering neurosurgery, the Royal Veterinary College team lead initially by Patrick Kenny, and now Joe Fenn, has compiled the largest cohort of feline acromegalic patients treated by hypophysectomy. This surgical approach has resulted in diabetic remission in over 70% of patients, leading to discontinuation of insulin administration within 9 days.<sup>4</sup>

Our subsequent histopathology and molecular analyses of these tumours revealed hallmark characteristics, such as loss of reticulin structure, enhanced immunoreactivity for growth hormone, and enhanced expression



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of somatostatin receptor subtypes (SSTR 1, 2 and 5).<sup>5</sup> The expression of SSTRs, as well as the D2R dopamine receptor, mean that these cats can potentially be treated with pasireotide<sup>6</sup> or cabergoline,<sup>7</sup> although larger cohort studies are required to confirm the effectiveness of these medical therapies.

*'At a time when more authentic animal models of diseases are sought, spontaneously occurring endocrinopathies in companion animals presents a currently untapped source of knowledge.'*

#### PATHOPHYSIOLOGY OF FELINE ACROMEGALY

Compared with the wealth of literature describing acromegaly in humans, much more needs to be understood about the disorder in cats before we can determine whether they are a valuable spontaneous model of the disease.

The association between organohalogenated EDCs and hyperthyroidism in cats has also been implicated in feline acromegaly. Analyses of plasma samples from cats with acromegaly has found levels of some PCB/PBDE compounds to be elevated, compared with healthy control animals.<sup>8</sup> Our preliminary *in vitro* studies have shown that proliferation of GH3 somatotroph cells is stimulated by various 'cocktails' of PCBs/PBDEs, providing a potential mechanism by which these growth hormone-secreting tumours may arise.<sup>9</sup>

At the molecular level, in another small cohort study, we have found single nucleotide polymorphisms within the *AIP* gene in cats with acromegaly.

These are not present in healthy controls,<sup>10</sup> and provide an intriguing candidate to pursue.

From the clinical management perspective, moving to a tumour resection approach, rather than hypophysectomy, to treat these pituitary tumours in cats would be an advantage. Currently, these hypopituitary patients are supplemented with glucocorticoids, thyroxine and desmopressin post-operatively, but perhaps having also made these animals oxytocin-deficient may contribute to social and behavioural problems as they recover?

At a time when more authentic animal models of diseases are sought, spontaneously occurring endocrinopathies in companion animals presents a currently untapped source of knowledge. It has been said that 'living with cats is a lesson in consent' – as long as they allow us to, there is much to learn from our furry feline friends.

NAOMI WEEKES BELGRAVE, RIATA L MARINELLI AND ROBERT C FOWKES

Final Year Vet Students and Associate Dean, Reader in Comparative Endocrinology, Royal Veterinary College, London

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## FOLLOW YOUR NETWORKS ON TWITTER

Each of our eight Endocrine Networks now has its own Twitter account, run by the Convenors. Follow them to share news, events and resources, and to keep up to date with your Network colleagues.

The Endocrine Networks are a platform for collaboration between basic and clinical researchers, clinical endocrinologists and endocrine nurses.

Go to the Members' Area to select and update your preferred Networks.

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# WE NEED TO TALK ABOUT ADMIN...

WRITTEN BY HENRY WILSON



Administration: not an obvious first date conversation, perhaps. But, despite the bad press, administration really matters. We certainly know when admin isn't working – when referrals get lost, urgent patients are missed or when you just can't run your clinic.

It's interesting how much patients really care about it. They notice when administration does not work, when communication is poor, actions are not followed up, or chaotic processes are allowed to develop. The NHS may provide life-saving treatment but, as a patient, if you get given the wrong appointment date, are unable to get hold of the hospital over the phone or your clinic letter goes missing, it can be the source of incredible frustration, anxiety or upset, and understandably so.

Given that approximately one in seven NHS staff works in administration,<sup>1</sup> there appears to be remarkably little discourse on the subject. An internet search yields few results. One notable exception was a King's Fund study into the impact of NHS administration on patient experience, and they themselves note the paucity of research in this area.<sup>2</sup>

Administrative excellence in the NHS relies on recruiting and developing the right staff, having enough resources and ensuring there are great operational processes and systems for a seamless patient journey. But administration in the NHS is fiendishly complicated, beset by complex rules, and pressured by national targets and crises like COVID-19 causing unmanageable peaks and troughs of administrative work.

*'The NHS may provide life-saving treatment but, as a patient, if you get given the wrong appointment date, it can be the source of incredible frustration, and understandably so.'*

As with many other parts of the system, administration has also been the target for cuts and cost improvement. Roles have changed due to technology; work has been centralised. For many, pay has not kept pace with the cost of living. The dismantling of traditional working arrangements, such as the consultant and medical secretary, has also had a significant impact. It is not surprising that NHS administration struggles.

And when administration goes wrong, it can have a detrimental impact on the relationship between administrative and clinical staff. There is the temptation to create blame, build barriers and reinforce notions of 'us' and 'them'. But the main loser in taking this approach is ultimately the patient. The complex interdependencies at every step of the patient journey mean that deficiency in one area cannot be adequately compensated for elsewhere. The whole system needs to work. As one journal put it, 'clinical and administrative staff of hospitals are like two parts of a train track.'<sup>3</sup>

Unfortunately, our ability to invest more in administration is limited. In fact, successive governments have pledged to 'slash NHS bureaucracy' and administration costs. So, we can't and shouldn't be going back to the days of everyone having their own dedicated secretarial support. Therefore, NHS organisations need to redouble their efforts to engender a strong, functional

*'As we enter the next challenging period of COVID, we need to value the contribution of our administrative staff more than ever.'*

partnership between administrative and clinical staff through the following practical and achievable interventions.

## 1. Emphasise the value of an equal partnership with administrators

The first step is to recognise everyone's contribution. Every individual is an important link in the chain of patient care, where the contribution of each professional group is valued, and understanding and integration between groups is proactively developed.<sup>4</sup>

## 2. Reinforce the joint objective of providing the best care and experience to patients

A critical success factor in the partnership is embedding the core value(s) of the organisation.<sup>5</sup> Take time to come together as a team, to remind everyone of the common mission, to get on the same page. In our busy and highly pressurised world, it often feels like we don't have time to invest in this. But it will pay dividends, with less time spent fixing things that go wrong, fewer needless hours of rework, and a decrease in investigating complaints and resolving grievances that can arise from a lack of partnership working.

## 3. Get to know each other

Too often, administration and clinical teams only come together when things go wrong. Ensure you create time to convene, get to know each other and understand the challenges and opportunities everyone is facing. These are the foundations of healthy relationships.<sup>6</sup>

## 4. Recognise admin staff as a professional group

Unlike other professional groups in the NHS, there is often a lack of cohesive identity for administrative staff. Implementing structured education, training, development and continuing professional development for admin staff can go a long way to redress this, and to help our admin staff feel more equal in the partnership.

As we enter the next challenging period of COVID, we need to value the contribution of our administrative staff more than ever. Teams need to work more effectively together, to be more agile to respond to an ever-changing situation, to be patient-focused, to ensure we prioritise the most clinically urgent patients, keep people safe and deliver care in the right place.

**HENRY WILSON**

Head of Transformation, University College London Hospitals

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## COLLABORATING WITH INDUSTRY TO IMPROVE PATIENT CARE

Manjinder Bains, Ipsen's Medical Director for the UK and Ireland, has been at the company for 18 months. Since 2007, he has worked within the pharmaceutical industry across a variety of roles and companies, having previously worked within the NHS for over 8 years.

### TELL US ABOUT YOUR ROLE AT IPSEN

I oversee and provide strategic medical leadership to the organisation and to our entire medical department. This includes the medical information team, medical science liaisons, medical advisors and our clinical operations team. The local medical function is responsible for medical governance, generating real world evidence to support the use of our medicines. They also gather insights from healthcare professionals, and provide them with scientific exchange and medical education. The clinical operations team's focus is on designing, planning and running clinical trials on existing or new medicines.

Externally, we work with almost every stakeholder that has an interest in healthcare. These include pharmacists, nurses, doctors, patient associations and charities, through to academics, professional societies and regulatory bodies like the Association of the British Pharmaceutical Industry, NICE and the Medicines and Healthcare Products Regulatory Agency. We also liaise with local MPs all the way up to the Minister for Health. We form long-lasting partnerships with our customers and the medical community to find ways to help the NHS and patients.

### HOW DO YOU COLLABORATE WITH OTHER ENDOCRINE PROFESSIONALS?

Collaboration with endocrine professionals is critical to our strategy and focus. There are no two groups of stakeholders more aligned to the goal of improving the lives of people with endocrine conditions.

As a biopharmaceutical company, collaboration with specialist clinicians makes up most of our day-to-day work. We require their insight and knowledge regarding gaps in the treatment paradigm. We work with them to initiate new clinical trials and truly understand the patient journey. And they work with us to help progress the latest scientific advancements or improve overall patient care. Through Joint Working with the NHS, we can pool skills, experience and resources with trusts for the mutual development and implementation of patient-centred projects, and share a commitment to successful delivery.

Our endocrine focus at Ipsen is predominantly on neuroendocrine cancers and acromegaly. When working with academics or societies, our joint goal is always to improve care and outcomes for patients with endocrine diseases. This can be achieved through a range of collaborative efforts, such as clinical trials, disease awareness or medical education.

*'Collaboration with endocrine professionals is critical to our strategy and focus. There are no two groups of stakeholders more aligned to the goal of improving the lives of people with endocrine conditions.'*



Through sponsorship of congresses, symposium presentations and attendance at meetings, we can educate the wider endocrine community about the specific focus areas that we have so much history working in, while also developing our own knowledge. We also have a patient affairs function at Ipsen that works collaboratively with patient associations and charities. This ensures the patient voice is represented in all decisions made within the business, and identifies areas of unmet need within the patient community that we could seek to support.

### WHAT ARE THE ADVANTAGES OF THESE RELATIONSHIPS?

Each stakeholder has a unique set of skills and opportunities. Working in silos, we would all eventually hit the limits of what we can achieve. As a company, we work with clinicians and societies across the UK and Ireland. One of the great benefits we can bring to these individual relationships is an insight from across the country.

We believe that, by sharing our resources and knowledge, we can enable the greatest reach of best practice. When we work in collaboration, bringing all people, organisations and companies with the same goal together, we can work with greater efficiency and speed to achieve our shared goal of improving patient care.

### HOW WOULD YOU LIKE THESE RELATIONSHIPS TO DEVELOP?

I believe we have seen a positive change over the past several years in these relationships. There has been greater transparency between industry and all





our partners, which has led to more honest and collaborative relationships. I would love to see these collaborations continue based on our shared and aligned goals of getting the best outcomes for patients.

We at Ipsen really do live the ethos of working with patients for patients and, as the wider community sees the authenticity in the way we work, I believe these relationships will continue to go from strength to strength.

*'When we work in collaboration, bringing all people, organisations and companies with the same goal together, we can work with greater efficiency and speed to achieve our shared goal of improving patient care.'*

#### WHY DO YOU ENJOY WORKING AT IPSEN?

Ipsen has 90 years of heritage as a family-owned biopharmaceutical company and has been working with the endocrine community in the UK for 19 years. In my 18 months here, I have been consistently astounded by the passion, talent and commitment of the people within the organisation. What I enjoy most is seeing the dedication of Ipsen staff, in collaboration with the wider community, to continuing to improve patient treatment and care.

The areas we specifically focus on in endocrinology are both classified as uncommon or rare, and patients who live with neuroendocrine cancer or acromegaly often live with their disease for a long time. Over the past 19 years, Ipsen has worked collaboratively with physicians, nurses and the patients themselves to identify areas of improvement. Some examples of this, of which I am particularly proud, include developing treatment options that keep patients out of hospital, improving our medicine delivery system through co-creation with patients and nurses, creation of patient friendly materials and support resources, hosting annual nurse education events and improving awareness of these conditions.

#### CAN YOU TELL US A LITTLE ABOUT WHAT YOU ARE WORKING ON NOW?

Every year, we offer educational programmes for endocrine healthcare professionals and clinical nurse specialists across the UK and Ireland. Like most things, this year we have had to adapt what would traditionally be face-to-face events to the virtual world, so that is a big priority for our team right now. Ipsen is a supporter of the Society for Endocrinology. This year, we had a satellite symposium at the SfE BES Online conference in November.

We are continually engaging with the acromegaly patient community through workshops to understand the unmet needs in the patient journey, and how Ipsen can develop materials and services to help patients. Additionally, our clinical team is always working on bringing new innovative

medicines to market and generating more evidence to support clinicians and patients in the use of our currently available licensed medicines. And, finally, we have been working with our global colleagues to support the charity campaigns for the recent Acromegaly Awareness Day (1 November) and World NET Cancer Day (10 November).

#### HOW HAS THE COVID-19 PANDEMIC AFFECTED YOUR WORK?

It has been a time of immense challenge for staff, but has also demonstrated the immense agility and resilience within Ipsen. When the pandemic moved the UK into lockdown in March, our primary concern and focus were ensuring that all patients who were receiving Ipsen medicines continued to have access to their treatments. Once we were confident our supply chain and manufacturing colleagues could all continue to work in a safe and secure environment, we looked at how we could support the wider NHS. We offered all staff the opportunity to volunteer in the fight against the pandemic, with extra allowances for specialist staff, such as doctors and nurses, to return to the front lines.

We recognised early on that, to support our staff (900 employees across the UK and Ireland), we were going to have to be flexible and focus on listening, as there would not be a 'one size fits all' way of working in this 'new world'. We focused on our staff's well-being, with a range of digital resources from yoga and reiki to an online well-being hub, a network of Mental Health and Well-being Ambassadors, and our Employee Assistance Programme to ensure our employees not only have ongoing support from their line manager, but also other avenues, should they need them.

*'Our meetings with customers and healthcare professionals have also changed from being face-to-face to virtual, which has meant we have had to adapt to making these interactions more efficient and impactful during such a busy time.'*

Home-working has become the norm for our teams, and we have become more agile in how we have internal meetings using virtual platforms. I personally have loved the opportunity to meet my colleagues' children, pets and family when they join our video calls. Our meetings with customers and healthcare professionals have also changed from being face-to-face to virtual, which has meant we have had to adapt to making these interactions more efficient and impactful during such a busy time.

Our main concern throughout is to keep patients who receive Ipsen medicine at the front of our minds, and to support the wider healthcare community during one of the most challenging situations we have lived through. We have been able to do this by keeping patients out of hospital through our unique service offerings, focus and persistent determination from the team. Overall, I can confidently say, our focus and priorities have not changed. If anything, the pandemic reinforced our vision and values.

The Society for Endocrinology's Corporate Liaison Committee fosters partnerships and collaborations between the Society and industry for mutually beneficial projects, which further patient care and education. If you would like to be involved with this Committee, contact [corporateliaison@endocrinology.org](mailto:corporateliaison@endocrinology.org).

# WORKING IN PARTNERSHIP FOR PATIENT BENEFIT

## A NURSE'S PERSPECTIVE

WRITTEN BY PAULINE WHITTINGHAM



Both the NHS Constitution<sup>1</sup> and NHS England's 2014 *Five Year Forward View*<sup>2</sup> prioritised partnership working, not only between care providers, but also through developing partnerships with individual patients and with patient groups. The latter were cited as a route through which to enhance service development. The Nursing and Midwifery Council's Code of Conduct<sup>3</sup> also behoves all nurses to work in partnership with people to help ensure effective care delivery.

### THE PITUITARY FOUNDATION

As long ago as 1994, a partnership between the Society for Endocrinology, senior endocrinologists (notably John Wass and Stafford Lightman) and motivated patients emerged and created The Pituitary Foundation. Initially intended to support those diagnosed with diabetes insipidus, the need for support for the whole of pituitary disease very soon became clear.

Our first office was provided by the Society for Endocrinology at their building in Bristol, highlighting the commitment and drive for a patient-led, medically supported organisation to succeed. Although we have now grown within our own offices, still based in Bristol, we rely heavily on the continuance of valuable partnerships through our medical committee and network of healthcare professionals. They are a source of expertise in answering the ever-increasing, complex questions asked of us by patients all over the world.

Patients were supported to launch local groups and so develop peer support in regional areas. Continued partnership with endocrinologists led

to many of these groups having 'their' endocrinologist as a speaker at their meetings. This allowed the sharing of information and experience not normally given in a clinic setting. Through this, a better understanding of each party developed and localised service improvement could take place. The Pituitary Foundation now has over 35 local support groups across the UK, with thousands of people accessing support locally each year.

By working with The Pituitary Foundation, patients have access to information based on current best practice and evidence, presented in easily understood formats and supported by a range of helpline services.

The ready availability of this information outside clinic hours, and particularly now online via our website, allows patients to be knowledgeable when attending clinic and participating in their shared decision-making discussions around their care.

### THE NEED FOR PARTNERSHIPS

As a former NHS endocrine clinical nurse specialist, I remember the days before The Pituitary Foundation. Patients would attend the investigation unit I worked at for post-pituitary surgery testing, with little or no knowledge of why they were there or what was to happen. Follow-up plans were fluid and appointments often rearranged. This meant patients not receiving diagnosis for several months after initial testing.

There were also safety issues: patients did not understand the emergency steroid cover needed for intercurrent illness. Many were admitted to local hospitals with adrenal crisis in the period between surgical discharge and pituitary function testing.

Being able to refer patients to The Pituitary Foundation for advice and support proved invaluable, as I developed the role of the endocrine clinical nurse specialist. Having patients better informed regarding their potential diagnosis, and possible investigations, meant my time with them could be used in a more focused way. I could get to understand their individual needs and check their understanding of the information, rather than starting from scratch, and so develop individual partnerships.

### PARTNERSHIPS BETWEEN PATIENTS

With the advent of the local support group in 1996, I found my patients became just that – a group. So many reported how good it was to meet other people in similar situations, as they had felt alone for a long time.

This still holds true today. Although many more centres now have an endocrine nurse, patients continue to value peer support, in a setting where they can feel safe and have their day-to-day difficulties recognised and fully understood by others who have similar lived experiences. Many patients now also connect online with each other through the charity's social media channels.

### THE BREADTH OF OUR WORK

The work done by The Pituitary Foundation would not be possible without our partnership with the Society for Endocrinology, senior endocrinologists, nurses and endocrine teams throughout the country.

A Pituitary Foundation patient meeting. ©The Pituitary Foundation





Our patient publications are reviewed by our medical committee, ensuring the information they contain is pertinent and current, and we rely on those connections to help deliver our national conference for patients.

Our dedicated helplines are receiving more calls, emails and texts than ever, with a record 2730 enquiries in 2019.

As a patient-focused organisation, we regularly hear from our members about the challenges they face in receiving quality healthcare. We have collaborated on several projects to hear the patient voice (e.g. Cushing's disease and diabetes insipidus), with survey/questionnaire feedback results passed to the Society for Endocrinology and the NHS England Clinical

Reference Group for Specialised Endocrinology, to help inform and drive change where possible for patient benefit.

We highlight significant safety concerns, such as deaths from diabetes insipidus. We also have an annual campaign during the month of October to raise awareness of pituitary disease. These awareness months/campaigns are targeted at GPs/hospitals and the general public.

It is without doubt that this partnership between The Pituitary Foundation, as a patient group, and medical professionals has had a positive impact on the lives of many thousands of patients over the years. Collaborations and partnerships like this should be at the heart of all multi-disciplinary ways of working, to help ensure effective care delivery for patients.

*'The work done by The Pituitary Foundation would not be possible without our partnership with the Society for Endocrinology, senior endocrinologists, nurses and endocrine teams throughout the country.'*

PAULINE WHITTINGHAM

Endocrine Specialist Nurse, The Pituitary Foundation

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If you'd like to find out more about The Pituitary Foundation's services, please visit [www.pituitary.org.uk](http://www.pituitary.org.uk) or find us on Twitter @Pituitary\_org.

## COMMUNITY ENGAGEMENT AND PARTNERSHIPS IN MATERNITY SERVICES RESEARCH

WRITTEN BY MARY ADAMS AND COLLEAGUES

Engagement is not a one-way transmission of knowledge from experts to the public, and new programmes of work provide an opportunity for new beginnings. Partnerships imply the collaborative setting of priorities, as well as the dissemination of completed research to all partners. These partnerships are fostered with established or new communities over time. The different sorts of community and community interests have to be considered and accommodated, if engagement strategies are to be successful.

Recent innovations in community engagement in maternity services in England offer important lessons, and we look here at examples from our National Institute for Health Research (NIHR)-funded research. Maternity care is, inevitably, a matter of public interest, and the quality of care touches most families, often more than once. For over 50 years, some feminist and family interest groups have insisted that professional experts cannot ignore lay expertise and user experience.<sup>1</sup>

The NIHR has recommended patient and public involvement and engagement for over a decade<sup>2,3</sup> through their *National Standards for Public Involvement*.<sup>4</sup> New methodologies highlighting user experience are essential

tools from which researchers and services can learn ([www.invo.org.uk/resource-centre](http://www.invo.org.uk/resource-centre)). Acting on directives requires sensitivity to the histories and cultural concerns of different communities, and to how partnerships can be developed and sustained.

There are ethical questions to ask during the planning of partnership working, about how to manage hierarchies of power and status, how to build trust and mutual regard and, ultimately, whose views have legitimacy. This also includes questioning the language used about the people with whom we work. For example, we engage with women (not patients): women who find services hard to access (rather than women who are 'hard

to reach') and women living in areas of social disadvantage with social complexity (rather than 'vulnerable women').

### THE DISCERN PROJECT

The DISCERN Project<sup>5</sup> is examining how we can improve the disclosure and discussion of harm that has happened during maternity care with women and families. The project involves women and families throughout the project design and research cycle. This involvement ranges from agreement on the need for the research, through the co-design of the research objectives, data collection and analysis, to impact and dissemination activities.

Our community of service users comprises women and families affected by serious incidents in NHS maternity care, and the charities and associations that support some of these 'experts by experience'. The families are engaged in study management, project advice and the interpretation of findings.

The partnership working with DISCERN is distinctive, in that it involves accommodating the many polarised views of service users on a very sensitive issue.<sup>6</sup> However, the importance of the topic to service users, as well as to clinical staff and managers, has been clear from the outset.

### PROJECT20

Project20 ([www.project20.uk](http://www.project20.uk)) is an NIHR-funded doctoral research project. It explores how specialist models of maternity affect the outcomes and experiences of women with social risk factors. The most disadvantaged in society, who are often the target population for specialist interventions, find it hardest to access and engage with services.<sup>7</sup>

To overcome this barrier, we relied on existing relationships that have been built between women and healthcare professionals. Discussions about the research were informal, flexible in location and time, and remunerated – being sensitive to the often-complex lives and limited finances of this group. Women's insights strengthened the ethics process and informed the recruitment strategy, data collection and analysis, to reveal findings that are useful to policymakers and those designing services.

### MATERNITY AND PERINATAL MENTAL HEALTH

NIHR Applied Research Collaboration (ARC) South London ([www.arc-sl.nihr.ac.uk](http://www.arc-sl.nihr.ac.uk)) is a research organisation that brings together researchers, health and social care practitioners and local people to improve health and social care in the area. In our NIHR-funded research programme on maternity and perinatal mental health, we are developing a positive working relationship with service users and local communities throughout the entire programme of work. We are considering how we can address poorer outcomes for women and babies living in areas of social disadvantage, as well as those from black, Asian and minority ethnic groups in south east London.

We are investigating the reasons for poorer outcomes for these women and families, and how changes in maternity and perinatal mental healthcare can help to address them. Recognising that maternal mental health is essential for the well-being of women, parental relationships and early infant development, one particular area of investigation concerns ways of improving the care and outcomes for women with mental illness.

We will involve women, communities and relevant organisations from the beginning of our work.<sup>8</sup> We have a dedicated, funded, service user researcher as the patient and public involvement and engagement lead (Mary Newburn). She advises and leads on building relationships between the researchers and community leaders, activists, maternity voices partnerships, charities and Healthwatch, amongst others.

Several processes and structures are being used to support the work, including online, flexible and informal, remunerated engagement events, which are advertised using social media to known contacts and networks, and held at times chosen to avoid when parents are most needed by their children.<sup>9</sup>

We have also developed Patient and Public Involvement and Engagement Strategy and Advisory Group meetings, which have been scheduled to take forward good working practices, to offer training and support for researchers and patient and public involvement and engagement partners, and to provide project advice to researchers. Communication is facilitated through social media accounts and email.

### IN CONCLUSION

We highlight the importance of partnership work, as well as the need for researchers and service improvement teams to take account of the expertise, time and development of the relationships required to establish and sustain this work. Interactions which aid crossing the boundaries between researchers and populations of interest are not always easy, but provide vital learning experiences. Furthermore, they facilitate research dissemination to the populations which it effects in creative and accessible ways.<sup>10</sup> Future plans include moving towards participatory research, and mentors in patient and public involvement and engagement for researchers.

### ACKNOWLEDGEMENTS

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**MARY ADAMS, MARY NEWBURN, HANNAH RAYMENT-JONES, ABIGAIL EASTER, CRISTINA FERNANDEZ TURIEZO, SERGIO A SILVERIO, JULIE HARTLEY AND JANE SANDALL**  
Department of Women and Children's Health, School of Life Course Sciences, and Section of Women's Mental Health, Institute of Psychiatry, Psychology and Neuroscience, King's College London

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# EDUCATING AND ENGAGING PATIENTS: ENDOCRINE NURSES



Lisa Shepherd is an Endocrinology Advanced Nurse Practitioner at University Hospitals Birmingham NHS Foundation Trust and an NIHR Clinical Doctoral Research Fellow at the University of Birmingham. In our interview, she highlights the important role endocrine nurses have in patient care and education.

## WHAT INSPIRED YOU TO BECOME AN ENDOCRINE NURSE?

I fell into endocrinology nursing by chance. This seemed to be the path for most nurses in endocrinology at that time, as there were so few of us, and fewer who had prior experience in the area. I had been 6 months in post, working as a diabetes research nurse, when one of the consultants successfully obtained some funding for an endocrine specialist nurse post. He asked if I would be interested in establishing the post and, as they say, the rest is history.

## WHAT ARE YOU MOST PROUD OF IN YOUR CAREER, SO FAR?

I have been involved in so many great projects with others, including the Society for Endocrinology. It is really difficult to pin down one specific thing, as one initiative has snowballed into others. I guess developing the endocrine nursing service at Heart of England NHS Foundation Trust, co-authoring the Society's *Competency Framework for Adult Endocrine Nursing*, collaborating with nurses internationally to establish the Federation of International Nurses in Endocrinology (FINE) and being awarded my NIHR fellowship are high on the list.

## HOW DO YOU CURRENTLY WORK WITH PATIENTS?

I am based in outpatients, but my work covers inpatients and the community as well, and includes patients with all endocrine disorders.

## HOW DO YOU INTERACT WITH OTHER HEALTHCARE PROFESSIONALS?

In endocrinology, we work with very many other specialties to meet the needs of the patient. Collaboration with other healthcare professionals

(HCPs) is key. In an average week, I work with pathology, radiology, ophthalmology, surgeons, pharmacy, homecare, respiratory, oncology, cardiology, emergency medicine, plus more I have probably missed. Other aspects include teaching HCPs at university, as well as junior doctors and nurses.

## WHAT DO YOU USE TO HELP WITH PATIENT EDUCATION?

I use multiple resources in various formats (such as written, verbal, PowerPoint and practical demonstration) for patient education. Using more than one format reinforces what has been discussed. The key is to individualise it to patients' needs; what works for one may not be appropriate for another. Some patients like group education, whilst others do not find this method helpful. Regularity and repetition of education is important. Also, I don't assume that the patient knows something, even if they have seen it previously. They may not have been told properly, may not have absorbed the information or may have forgotten. I also signpost them to other resources and support groups.

## HOW MUCH DO YOU INTERACT WITH PATIENT SUPPORT GROUPS?

I interact with support groups a lot and see it as an important part of my role. This ranges from my work as a Trustee for the Addison's Disease Self-Help Group to presenting and providing emergency hydrocortisone injection training for people at support group conferences and meetings, to supporting patients setting up their own peer-support group. Also, support groups and patients are now involved in patient and public engagement, with involvement in establishing or redesigning services and being part of the research process, from design to dissemination.

## WHY ARE ENDOCRINE NURSES IMPORTANT FOR PATIENT EDUCATION?

A major part of a nurse's role is to provide education to patients. We can give them information in a comprehensible way. Informing and educating patients leads to them being empowered to manage their condition. Over time, they become the experts, and we can learn ways of managing their condition from them. Nurses are well placed to educate and are contactable when advice, guidance or reinforcement is required.

## WHAT WOULD HELP ENDOCRINE NURSES BETTER CARE FOR PATIENTS?

In the current climate of virtual appointments and clinics, better IT! Seriously, collaboration between all multidisciplinary team members in striving for improved patient outcomes is key. Sharing of knowledge and good support networks between endocrine specialist nurses is essential. We learn a lot from one another. Often we can find that protocols, patient information leaflets, nurse-led clinic information, etc., are already out there and can be shared. Why reinvent the wheel?

It's wonderful that endocrine nursing continues to grow and that we are seeing an increase in numbers of nurses (although we are still a small specialty compared with others). Utilising the Society's *Competency Framework for Adult Endocrine Nursing* aids standardisation and benchmarks practice, while highlighting development needs, which can improve patient care.

Learn more about the Society's *Competency Framework for Adult Endocrine Nursing* and other opportunities for endocrine nurses at [www.endocrinology.org/careers/training-and-resources](http://www.endocrinology.org/careers/training-and-resources).



# HORMONES

## THE INSIDE STORY

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Eleanor Raffan  
Jose L Areta  
Domingo Tortones  
Jamie Thackrar

Debra Skene  
Anne White  
Stafford Lightman  
Vanessa Hennessy  
Willard Foxton

Zaki Hassan-Smith  
Tim Spector  
Catharine Collins  
Melissa Kelley  
Michelle Bellingham

Paul Fowler  
Douglas Small  
Richard Holt  
Amanda Hudson

# PUBLIC OUTREACH IN A COVID WORLD

WRITTEN BY HEATHER LAMPARD AND CHANNA JAYASENA



It was March and, packed into boxes, were thousands of circadian clock medallions, hundreds of pencils, and stacks of card games. I had just booked a rental car when an email with 'cancelled' in its subject heading landed in my inbox. In the time it took to open it, the world of public engagement found itself shut down and zapped into some kind of non-existence – that's how it felt anyway.

The reality was that what it means to deliver public engagement changed overnight. We, like many other public engagement professionals, had to adapt or face hibernation until ... who knows when?

## AN ALTERED REALITY

Every year, the Society's Public Engagement Committee attends science festivals across the UK, recruiting members to deliver exciting, hands-on activities for school children and families. Our aim is to spark curiosity about the human body and the role hormones play in our everyday lives, through fun experiments and meeting experts.

On 9 March, we were preparing to represent our sector at the largest science festival in the public engagement calendar, with a stand booked at the Big Bang Fair in Birmingham. Across 3 days, we were ready to engage thousands of people with an enthusiastic and dedicated team of members. But, alas, COVID said 'no' and we soon found our outreach calendar stripped bare. Where once we valued the importance of 'hands on' when engaging the public, we were now limited to interacting solely through a screen. But what did this mean for us?

## EMBRACING A DIGITAL APPROACH

We already have an impressive digital presence when it comes to public engagement, thanks to a monumental effort from our members. Our 'You and Your Hormones' website ([www.yourhormones.info](http://www.yourhormones.info)) receives thousands of unique hits a day. It often outranks Wikipedia in search results, with a plethora of endocrine information written by experts. It's a project we are all hugely proud of. In this new COVID world, we feel that now is the

time to transform its offering, bringing it even closer to the public's attention.

Since the end of 2019, we have been working behind the scenes, producing our very first podcast series called 'Hormones: The Inside Story'. Although this project was already in our engagement plans, it now felt fortuitous to expand our digital collection with more personal stories, expert insights and myth-busting facts from our members.

In an age of information, our podcast series brings audiences the truth behind headlines, challenges preconceptions, and sparks conversations around our hormone-driven health. With a collection of inspiring speakers, each episode helps us connect science to stories in the media, aiding our listeners in distinguishing fact from fiction.

This type of public engagement satisfies the thirst for digital consumption, and provides the public with a trusted source of information in an online world that is burdened with misinformation about hormones.

## MAXIMISING MEANINGFUL INTERACTION

With digital consumption on overload during the pandemic, we wanted to expand our engagement methods and facilitate a more meaningful interaction with recipients. The Public Engagement Committee pooled their creative ideas to develop a pilot project, a first of its kind for the Society.

The virtual outreach project for schools has been born of the hugely successful schools' outreach workshop, which takes place every year at the Society for Endocrinology BES conference. The Committee wanted to bring the magic of these events directly into the classroom, and our recent, rapid familiarisation with virtual technology has made this almost effortless. Our new, pilot project digitally invites expert members into classrooms, where they can share stories of their STEM (science, technology, engineering and maths) career journey, as well as fascinating insights into the endocrine system.

This (safe) form of engagement broadens career awareness and provides students with a unique opportunity to meet real scientists. They, as role models, have the potential to ignite an interest in science and possibly inspire the next generation of endocrinologists!

We are finding our feet in this new, digital era, with the support of our members. We may have had to adapt and reprioritise our objectives, but one thing is for sure... Whatever we face, we have an important voice in the public engagement landscape, and the public want to listen.

School students taking part in a patient simulation experiment at the Schools Outreach Workshop during SfE BES 2019.



## HEATHER LAMPARD

Careers and Engagement Officer, Society for Endocrinology

## CHANNA JAYASENA

Chair, Public Engagement Committee

Would you like to get more involved with the Society's outreach activities? Visit [www.endocrinology.org/outreach](http://www.endocrinology.org/outreach) for ideas and opportunities, or email [media@endocrinology.org](mailto:media@endocrinology.org) to find out about becoming a Media Ambassador.

# COVID-19, LOCKDOWN AND RESEARCH: A BASIC SCIENTIST IN ENDOCRINOLOGY

WRITTEN BY UCHE AGWUEGBO



No one could have ever anticipated the impact COVID-19 would have on our normal daily lives. Being told the country was going into 'lockdown' back in March 2020 meant that all my experimental research had to be placed on hold, during the most fundamental time of my postgraduate research as a second year PhD student.

Initially, I was excited that I would get to work from home for what I initially thought would be 2 weeks. After all, it was a well-deserved break from non-stop work since Christmas 2019.

However, I quickly realised the inconvenience and the effect it was going to have on my research. I relied heavily on being in a laboratory setting to generate data for upcoming paper submissions and progression of my thesis, and so I was left feeling incredibly anxious. I was faced with trying to reanalyse, interpret and draw conclusions from incomplete data based on pre-existing literature.

On the other hand, I utilised my down time to develop my critical analysis, data interpretation and writing skills by reading literature. It allowed me to develop my reading skills and broaden my knowledge within my field of research, which is something that can be difficult to factor into your average daily schedule when working in a laboratory setting. As a result, I coauthored a recently published review article.

I was also faced with some personal challenges during lockdown. I was regularly tasked with having to entertain and occupy my son who, at the time, was a preschooler. This was while trying to complete deadlines and progress my thesis.

My supervisor was very supportive and reassuring. However, at times, I felt immense pressure and guilt that I was just not 'doing enough'. I often found myself 'sneaking' days off from doing any research-related work in order to 'breathe' a little and clear my mind from the difficulties of maintaining a good work-life balance at home.

I soon began to realise how important it was to be able to socialise with other academics daily and exercise scientific jargon. Towards the end of lockdown, I began to lose my work ethic and momentum, I was growing bored and unmotivated and needed a change of scenery. I was longing to get back to some form of normality.

*'I utilised my down time to develop my critical analysis, data interpretation and writing skills by reading literature.'*

News of the possibility of university campuses reopening and slowly returning to normal was music to my ears. The thrill of having a real purpose to waking up in the morning and getting dressed rekindled my

enthusiasm towards research and returning to the lab. But, even though I was eager for my son to return to preschool and engage with his friends one last time before heading off to primary school, I was understandably anxious about the growing threat of COVID-19, and how things would be different and possibly never return to normal.

Being back in the lab has been a massive relief. I was able to resume experiments quickly, as I was well trained in various techniques prior to lockdown. Learning new techniques was challenging, as social distancing guidelines meant that assistance from colleagues was restricted. However, this only encouraged me to develop my independence as a researcher and to use every resource available to learn unfamiliar techniques.

*'I soon began to realise how important it was to be able to socialise with other academics daily and exercise scientific jargon.'*

The new social distancing rules and extensive cleaning that are in place have not massively affected my experience in the lab. As researchers, we are used to working alongside others yet alone, utilising techniques that require aseptic practice. It has been nice to see colleagues after all these months, even if at a distance. Being able to clarify concerns and questions immediately has been a great relief, very satisfying and one of the small things I took for granted prior to lockdown.

Overall, lockdown has taught me to appreciate and be prepared for unprecedented changes that may present everyday challenges towards my research. It has given me the ability to adapt to the current circumstances and to develop many skills needed after I complete my PhD.

With the anticipation of second lockdown fast approaching as I write, I understand that, in the long term, I may not complete all my research thesis objectives as hoped, but I am grateful for all the support universities have offered in providing free extension for researchers impacted by COVID-19. I am confident that I will still produce a great thesis and look forward to contributing to the growing body of outstanding literature in endocrinology.

**UCHE AGWUEGBO**

3rd year PhD student, Department of Women and Children's Health, King's College London



# A DISTRICT GENERAL HOSPITAL, COVID AND TRAINING: A JUNIOR DOCTOR'S PERSPECTIVE

WRITTEN BY VENKATRAM SUBRAMANIAN



My quote to summarise myself would be 'a product of India, manufactured in the UAE, exported to India and then refurbished to be distributed to the UK'. I completed my medical training in India and came to the UK in 2012. I had to take the long route, via an additional degree, followed by a period of nomadism, to finally land that coveted 'Training Number' in 2018.

From making decisions about which vein to put the cannula in, to deciding which patient needs admission or which patient is dying – what's the difference? Some people affectionately call the first Wednesday of August, when newly qualified doctors traditionally start work, 'Black Wednesday'. At any other stage in training, it might be something you look forward to, if you have been in a fairly difficult placement in the months before. But that year, I was dreading the first step into the big bad world of medicine as a Registrar. Some I asked said it was the most hated job of all (although maybe I shouldn't have asked surgeons). The year 2018 definitely brought about a change in my life, in terms of job profile and overall career. Gone were the fun days of clerking and doing cannulas. Here we go, 'med reg' life! What a contrast!

*'Gone were the preparations to attend the Endocrine Update and the Specialty Certificate Exam. Hello, instead, COVID Medical Registrar Rota.'*

But I survived that first year, and around came August again, with its usual apprehensions about a new placement. Rotas? Clinics? On-call commitments? When can I take annual leave? Can I take annual leave? Teaching and learning opportunities? Educational supervisor/clinical supervisor? All usual questions for a trainee to ask.

But of course, now, 12 months later, when I look back, I see a year which was completely different to my expectations. I got a few clinics here and there, but now it's the year 2020. Hello Mr COVID. Welcome to the UK. Gone were the preparations to attend the Endocrine Update and the Specialty Certificate Exam. Hello, instead, COVID Medical Registrar Rota.

In hindsight, our hospital had planned extensively prior to the lockdown period and went to extreme lengths to fix staffing gaps and even recruit extra hands to support the busy on-call take. We actually had a pleasant experience in the face of adversity, with food being delivered on a regular basis to the Acute Medical Unit on night shifts from a friendly restaurant patron nearby.

There were wood-fired pizzas and ice creams for the hard-working medical teams and Intensive Care Unit comrades. Goodie bags were prepared by the local schools with hand creams to soothe the hands that had been scarred and dried from excessive hand washing and gelling. The hospital had a plain glass corridor which, while normally quite dull and featureless, now boasted caricatures and wishes from children aged 2–10, many with words of positivity (a few spelling errors here and there, to ensure we kept smiling and got on with life). It was a community throwing its support at the hospital that served its populace.

And I did, thankfully, get some specialty training. My fantastic consultants ensured that, despite all the catastrophes that ensued, with people falling ill at the drop of a hat, I still had the opportunity to attend the few clinic options available (e.g. the diabetes foot clinic).

I also witnessed, first-hand, what campaigners have been clamouring for a while – the importance of good diabetes care in the community – as our cohort really struggled with COVID and its effects. These resulted not just from the actual disease, but also from the fear of contracting it. I particularly remember a case of a young woman being admitted with acute pulmonary oedema following a week of chest pain, which turned out to be a late presentation of a STEMI (ST-elevation myocardial infarction). She had type 2 diabetes, and hadn't had a review for some time due to her work commitments and clinic cancellations due to COVID. Her HbA1c? A remarkable 131mmol/mol.

I also had exposure to the managerial aspects of running a hospital, given that both my department's lead consultants had managerial roles. I had the chance to get involved in rota management, and helming the ward during the absences of consultants drafted to the COVID warzone.

*'My fantastic consultants ensured that, despite all the catastrophes that ensued, I still had the opportunity to attend the few clinic options available.'*

So, have I learnt much from the past year? Yes. Did it influence me as a clinician? Absolutely. To summarise, I had a 50/50 experience. I enjoyed the few bits of endocrinology that I did manage to pick up in the initial and end stages. I did obtain the proficiency I was expecting to obtain in the field of diabetes. But, more importantly, I had the true district general hospital experience – working with a family on my ward, with a team of fantastic clinicians and human beings. Oh, and I got a COVID survivor memento, as well, at the end of it. Don't think I had a similar experience anywhere else.

**VENKATRAM SUBRAMANIAN**  
Specialty Trainee (St5), Diabetes and Endocrinology,  
Health Education England North West Deanery

## A PhD STUDENT IN THE TIME OF COVID

WRITTEN BY CAITLIN THORNTON



Normally, I only throw away all of my flasks of cells once a year, and it means one thing ... Christmas! This time, as with everything that came over the next few months, was different. Cells were frozen, incubators emptied, all machines, except fridges and freezers, turned off.

On the final day, a group of PhD students from our institute lumbered home with a desktop under one arm and a keyboard under the other, talking about our next steps during the impending lockdown. A few weeks working from home might end up being quite productive. Maybe I could learn R programming. I'll definitely write the introduction to my thesis. Think of all that time to read.

12 weeks later, when we finally returned to labs, I had a single violin plot that I refused to change from the default green and pink colour scheme, so that everyone would know I made it in R (it could easily have been done in PRISM). Thesis paragraphs had been written and deleted, holes in my research identified and ways to plug these holes planned. Productivity had come in peaks and troughs. The main barometer of time became the Thursday NHS clap.

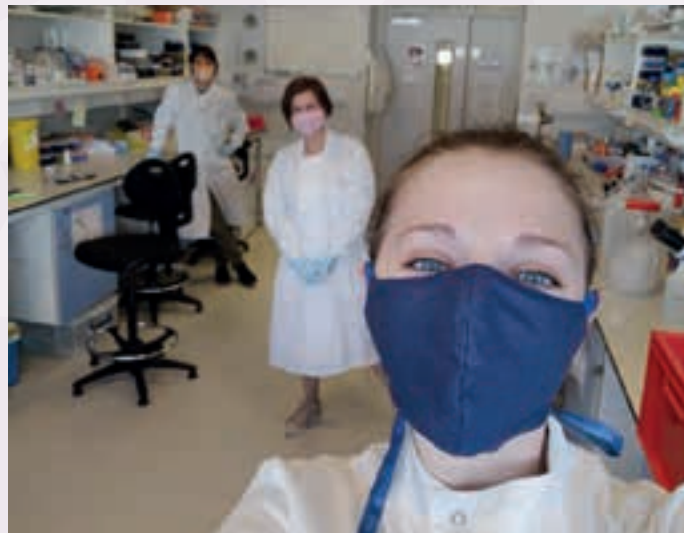
*'I tried to make the most of what became available during the lockdown, and scientists around the world really delivered on this front.'*

I would consider myself fortunate during the lockdown for many reasons, including not having children to take care of and educate or having shielding family members to keep safe. I am in awe of any scientists with these responsibilities who managed to send a single work-related email. But I tried to make the most of what became available during the lockdown, and scientists around the world really delivered on this front.

Twitter directed me to a great bioinformatics course, running every day, by Simon Cockell at the University of Newcastle. This 'lockdown learning' course took us from the most basic bioinformatics through to full RNAseq analysis of a COVID-related dataset. After failing to find time for months before lockdown, I took the cBioPortal official online classes to maximise use of data from the Cancer Genome Atlas, despite having been using the site for over 2 years.

*'The newest and most relevant research is now abundantly more accessible; this is great for all researchers and I hope it remains this way.'*

A positive outcome of the pandemic for me was that big conferences, like the American Association for Cancer Research (AACR) in San Diego, USA,



Caitlin with colleagues. @Caitlin Thornton

moved to a virtual platform. Some of these conferences are prohibitively expensive for scientists who are not presenting, but now I sat at my desk with a cup of tea for two evenings, watching presentations on endocrine cancers. Lunchtime seminars turned into Zoom online seminars and the Society for Endocrinology's 'Lab in your living room' series meant we could hear endocrine research from institutes all over the UK. Even international institutes advertised their own seminars on Twitter for all to attend; you could watch presentations from world class institutes simply by finding a link online. The newest and most relevant research is now abundantly more accessible; this is great for all researchers and I hope it remains this way.

*'We are missing our clinical PhD researchers ... many are still on redeployment and have not yet returned to labs.'*

On returning to the lab, I and other PhD students in our institute were mainly just happy to be out of the house. We followed the new rules carefully, putting our new lab coats into bags, never more than two people per bay, booking all equipment before we used it. It took a few weeks adjustment but the 'new normal' became routine. We are missing our clinical PhD researchers. They make up around half of our institute and many are still on redeployment and have not yet returned to labs.

Thankfully, many funding bodies have been incredibly understanding about offering funding extensions to PhD students adversely affected by time away from the lab. While we catch up on delayed experiments, we don't know when future lockdowns may come or what they will mean for researchers. In the meantime, I'll keep culturing my cells.

CAITLIN THORNTON

3rd year PhD student, Institute of Metabolism and Systems Research, University of Birmingham



## WORKING TO A NEW RECIPE: A RESEARCH TECHNICIAN IN LOCKDOWN

WRITTEN BY SILKE HEISING



As I write this, the next series of 'The Great British Bake Off' is about to start. It seems like ages since the last one. It tends to hyperactivate the baking aficionados at our institute, all of whom try their hands at the week's technical challenge and share the outcome with everybody.

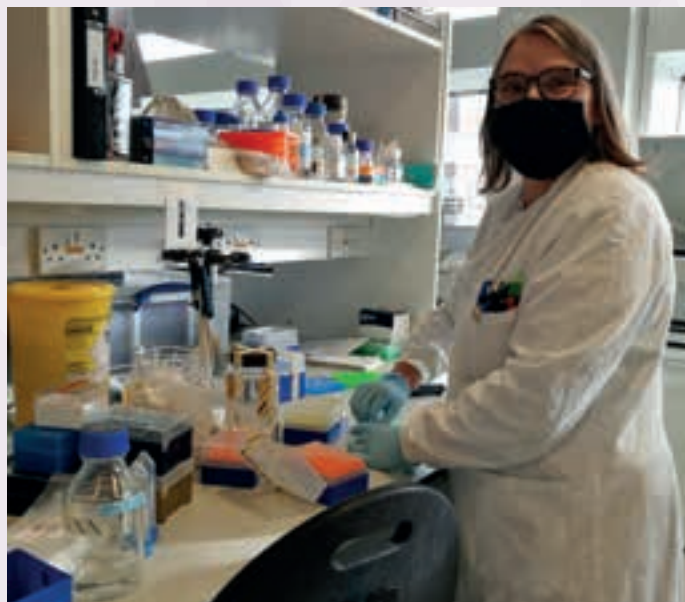
Like all other research-based workplaces, the Institute of Metabolism and Systems Research has a scientific and social heart: the write-up room. Here, the boundaries between friend and colleague become blurred, and there is always someone to share new ideas with. The hustle and bustle were at times intense – sometimes too noisy to really concentrate on the task at hand! That all changed, of course, with COVID-19 and the start of lockdown. Time slowed and my job changed a lot.

While usually working on metabolism of the coenzyme NAD<sup>+</sup> as a research technician, I spent most of my time looking after my lab's mice and performing experiments in the lab. Like many others, from March 2020, I had time to work on other tasks.

*'Probably like everybody else, these Zoom meetings stopped us from getting lost in translation, scientifically and personally.'*

I used this as an opportunity. I learned about the theory behind high-resolution respirometry, and really got to grips with the intricacies of the biochemistry behind it and how the equipment used to measure it works.

Silke at work. ©Caitlyn Berry



I shared this new found knowledge by giving a presentation in one of our many Zoom lab meetings.

Probably like everybody else, these Zoom meetings stopped us from getting lost in translation, scientifically and personally. Zoom meetings also allowed us to collaborate closely with the director of the animal facility and her deputy, to work out how best to write a new animal licence for Home Office approval. Subsequently, I spent many a week writing to bring together our experimental plans with the recommendations in the licence. I have to say, I was glad when I could finally hand it over to 'The Boss' to take it to the Animal Welfare Ethical Review Body.

*'I could then go into the very empty and quite surreal animal facility, kitted out with all of the PPE available, to get on with the job.'*

At the beginning of June, with the university still in restricted operations, a principal investigator was faced with the challenge of how to harvest tissue from mice that had been kept for months for a thyroid cancer study. She arranged for permission to be given to do the work, and even labelled the tubes for us. I could then go into the very empty and quite surreal animal facility to collect the tissue with an animal technician, kitted out with all of the PPE available, to get on with the job. It felt surreal at first, like a science fiction movie, but then we all got used to it.

Gradual reopening of the campus found us keeping 'the length of a tiger' in mind, as a measure of 2m distance from our health and safety training. With unusually clean lab coats and disinfectant at the ready, we were all really pleased to see each other and to be back in the lab for some practical work.

As we had been right in the middle of moving floors before lockdown, there were of course many instances where instruments, chemicals and pipettes magically disappeared and reappeared in a different room. As I order consumables for several research groups, gauging demand, and keeping on top of stocks and receipt of deliveries, proved much more time consuming and challenging than usual. With new booking systems in place and shift patterns to take into account, communication and patience are key as we start back with reduced numbers and lab capacity.

These are of course all 'small fish' compared with the work our clinical colleagues were doing on the NHS frontline, but I hope we played our part to keep the show on the road for the future. By working together, we continued to do exciting science and managed to get a surprising amount of experimental work done.

Nevertheless, I look forward to the day when we will bake again, to share cakes in the write-up room.

### SILKE HEISING

Molecular Metabolism Research Group, Institute of Metabolism and Systems Research, College of Medical and Dental Sciences, University of Birmingham





# Your Society **NEEDS YOU**

Are you an enthusiastic member of the Society who wants to inspire the next generation and raise awareness about endocrinology, be that with your colleagues or within your institution as a whole? Then you could help the Society today by becoming one of our Endocrine Ambassadors.

We are looking to recruit Ambassadors from across the Society's membership so whether you are a student, early on in your career or in a senior position you can contribute to the sector and actively build on your professional development with the support of the Society.

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"Being a Society for Endocrinology Ambassador is great, especially when I encourage undergraduate members to join who then go on to win a Summer Studentship. The research experience gained can inspire them on to study towards a PhD in the future, which is absolutely fantastic to see."

**Craig Beall, Endocrine Ambassador,  
University of Exeter**



To find out more and apply today visit  
[www.endocrinology.org/  
membership/endocrine-ambassadors/](http://www.endocrinology.org/membership/endocrine-ambassadors/)

# TASTER WEBINARS ENGAGE ENDOCRINOLOGISTS OF THE FUTURE

WRITTEN BY LOUISE HUNTER



**“** Very practical and helpful tips! Also very well adapted to virtual space. **”**  
Endocrinology webinar delegate

Making positive plans has been a welcome distraction from the anxiety and uncertainty of 2020. One of the Early Career Steering Group activities in recent months has been planning the Taster Webinars. These are a COVID-safe substitute for the annual Taster Days run jointly by the Society for Endocrinology, the Young Diabetologists and Endocrinologists Forum (YDEF) and the Association of British Clinical Diabetologists since 2017.

## THE IMPORTANCE OF TASTER DAYS

As a predominantly outpatient clinical specialty, we can find it hard to share the richness of our field with medical students and junior trainees. Unless they can find time to join us in clinic, doctors undertaking foundation or internal medicine training could be forgiven for thinking that endocrinology and diabetes consists of inpatient general medicine, requesting urine and serum osmolalities, and advising on variable-rate insulin infusions.

The Taster Days were started to try and dispel these myths, whilst also providing inspiration and information for those trainees who were perhaps already curious.

## A NEW LOOK EVENT

We knew that the necessity of moving the event online would lead to new challenges and new opportunities. We couldn't offer the same networking time and patient interaction provided by the in-person events, but we could reach a much larger audience, and engage speakers from a wider geographical area. We opted for two short, evening webinars, with talks combining career advice and practical tips relevant to junior trainees.

***‘Moving the event online would lead to new challenges and new opportunities. We couldn't offer the same networking time and patient interaction, but we could reach a much larger audience, and engage speakers from a wider area.’***

It was with some trepidation that we waited to see how many people would log on to our first, endocrinology-themed webinar in mid-October. Wonderfully, over 140 joined us to listen to Helen Simpson (London), Claire Higham (Manchester) and Carla Moran (Dublin) talk about their career paths and why they love their jobs. Shazia Hussain (Clinical Committee trainee representative) did a fantastic job of hosting the session and chairing the subsequent Q&A discussion.



Speakers at the webinars (clockwise from top left): Claire Higham, Amy Shlomowitz, Tahseen Chowdhury, Helen Simpson, and Abd Tahrani. ©Louise Hunter

Just 2 days later, the diabetes and metabolism-themed event was a similar success. It featured Tahseen Chowdhury (London), Amy Shlomowitz (London) and Abd Tahrani (Birmingham), and was hosted and chaired by YDEF committee member Tim Robbins.

## TAKING AN OVERVIEW

The common themes that emerged from independently prepared talks were a reminder of why our specialty is so enjoyable to those who practise it. Solving problems with the application of physiology, providing truly person-centred care, and the excitement provided by new technology and research were clearly evident. I like to think that our speakers conveyed this enjoyment to the attendees. At the time of writing, we're in the process of collating delegate feedback, and also taking the opportunity to send out useful links. The webinars were recorded, and will be made available for online viewing.

It's imperative that we attract and retain enthusiastic, motivated trainees, to ensure the future health of our specialty. Now is a tough time to be a clinician, especially one in the early stages of training, who has had to experience things that none of us were prepared for. Having caring, interested, inspirational colleagues can be very valuable support.

We're keen to hear from readers who might either have ideas for future events, or have good practice points to share; for example, how do you ensure junior colleagues can join you in clinic? Contact us at [earlycareer@endocrinology.org](mailto:earlycareer@endocrinology.org).

We thank all our speakers who gave up their evenings, everyone who publicised the events, and the Society for Endocrinology team, especially Heather Lampard, our brilliant Careers and Engagement Officer.

## LOUISE HUNTER

Chair, Early Career Steering Group  
NIHR Clinical Lecturer, University of Manchester and Manchester University NHS Foundation Trust





# Connecting during COVID-19 THE SfE BES ONLINE COMMUNITY

“I really enjoyed the opportunity to catch up virtually with fellow speakers, contributors and chatter over social media. Whilst it was nothing like meeting in real life, I felt reconnected with my endocrinology friends. Mirjam Christ-Crain’s CET Visiting Professor Lecture on vasopressin-related disorders was an amazing example of a clinician using clinical studies to answer important clinical questions, to directly improve patient care. I really liked to be able to watch on catch up. I really, really hope to see you all in Edinburgh 2021. There is dancing to be done!

**Helen Simpson**



Our 39th annual Society for Endocrinology BES conference was scheduled to be held in Harrogate on 16-18 November but as the COVID-19 pandemic progressed, it became clear that it was unsafe and not practical to hold the meeting in person, even though November was several months away. In fact, the conference centre in Harrogate remains a Nightingale Hospital and we were actually in the midst of lockdown 2.0 during the conference.



Whilst we were unable to meet in person, the Society for Endocrinology team felt that it was more important than ever to connect our endocrine community, and worked hard to bring you the very best from the SfE BES programme in a new free-to-members virtual meeting. Our digital meeting programme was designed to feature the most exciting content including the inaugural Presidential Lecture from Professor Robert Lefkowitz, the Medal and Prize Lectures, the ‘What is New?’ session, a special COVID-19 and Endocrinology session. We also had invaluable content from our sponsors and updates within each Endocrine Network community.

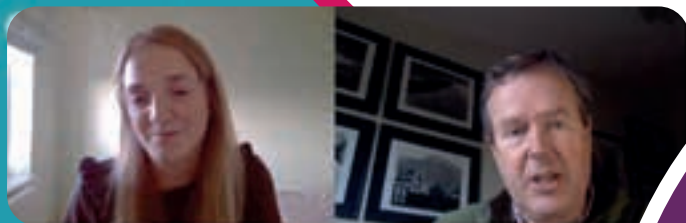
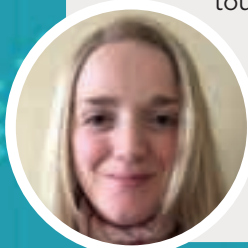
The digital world of conferences was all new to the SfE BES team, and a huge learning curve. We extend our apologies to delegates that experienced technical issues in accessing the live content and thank you for your patience, understanding and support of SfE BES. We hope this didn’t detract from the informative and outstanding endocrinology presented during the week. You can now catch up with all the sessions on demand in the Members’ Area until November 2021.

A huge thank you to all our speakers, chairs and exhibitors who were so flexible and helpful as we navigated our way through the teething difficulties.

We hope to see you all, in person, at SfE BES 2021, for the very best clinical and scientific endocrine research, and to connect in our ‘new normal’.

“It was great being able to watch on demand, meaning that I could be in and out of meetings but still watch the entire meeting. Running the Reproductive Endocrinology and Biology Network session was good, with lots of interesting discussion and the live interactive element added a personal touch. However, I did miss meeting up with colleagues and friends to catch up and network in person. Also, I didn’t like not being able to see anyone on the platform, so even when watching live you felt you were watching alone.

**Kim Jonas**



**1,715**  
registered  
delegates



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**1.5 million**  
estimated Twitter reach  
for #SfEBESOnline

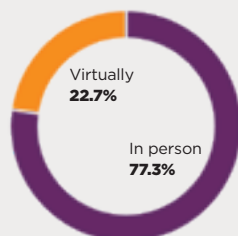
Over **350**  
tweets used  
#SfEBESOnline

## QUICK TWITTER POLL

What do you miss the most  
about going to conferences in  
person?



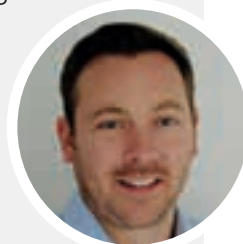
Do you prefer attending  
conferences in person or  
virtually?



## TOP 10 ATTENDED SESSIONS

- Welcome and What is new? session
- International Medal Lecture with David Mangelsdorf
- Endocrine Network session: Metabolic and Obesity
- Clinical Endocrinology Trust Lecture
- Endocrine Network session: Adrenal and Cardiovascular
- Starling Medal Lecture
- Dale Medal Lecture
- Future of Endocrinology post-COVID-19
- Presidential lecture
- Endocrine Network session: Bone and Calcium

“My highlight of the meeting was the opportunity for inclusion that a virtual meeting afforded. There were several things happening during the course of the week that ordinarily would have meant not attending, or at least missing out on sessions or full days. Being able to catch up at different times and not miss out was really great. Also, for me personally, to not have to leave a young family at home but still get to participate in SfE BES was a real benefit. **Douglas Gibson**”



“I enjoyed the superb plenary sessions but especially enjoyed those from David Mangelsdorf and Daniel Drucker. There was a common theme of factors (FGF21, GLP-1) working in unexpected ways, on unexpected targets, which I thought was very cool. Frances Ashcroft's Dale Medal Lecture was inspirational in many ways, not only from my early career female researcher perspective. And it's a bit biased but I enjoyed seeing my PhD supervisor, David Ray, present our work during his Medal Lecture – that was nice!

I didn't like not being able to go to Betty's tearooms in between talks, all I managed was a hospital coffee and mince pie one afternoon.

**Louise Hunter**



**SAVE  
THE DATE**

Society for Endocrinology BES 2021  
Edinburgh, UK, 8-10 November

[www.endocrinology.org/events/sfe-bes-conference/sfe-bes-2021](http://www.endocrinology.org/events/sfe-bes-conference/sfe-bes-2021)



## Defining THE FUTURE OF ENDOCRINOLOGY

Whilst the COVID-19 pandemic has taken a terrible toll, we now have the opportunity to really examine how endocrine services might be configured if we were to start 'afresh' and design anew.

In July, the Society set up a new working group to consider 'The Future of Endocrinology', co-chaired by John Newell-Price (Sheffield) and Kristien Boelaert (Birmingham). The remit is wide-ranging, with multiple partners, and includes attention to innovative models of care, remote working, patient pathways, teaching and training, research and innovation, and sharing of best practice.

There have been three streams to this work, as outlined here.

### 1. COVID SECOND WAVE

COVID-19 is now having a variable impact on specialty services across the country, depending on local COVID-19 numbers, staff redeployment to general medicine, staff sickness, and the need for individuals to shield or quarantine/self-isolate. We have produced a series of recommendations to enable departments to tailor their working to their regional scenario. We see it as paramount that we continue providing specialty endocrine services in future waves for our patients' safety. The key recommendations are:

- Endocrine departmental capacity should be left at a minimum of 25% – higher wherever possible.
- Clearly defined roles for specific team members, including nurses, shielding colleagues and registrars.
- Maintaining speciality training for endocrine trainees.
- Integrating working between primary, secondary and tertiary care as much as possible with shared systems.
- Ensuring the primary, secondary and tertiary care centres within a region understand referral routes for patients.
- Identifying patients for whom virtual consultations are appropriate long term.
- Reviewing phlebotomy services, MDTs, work load priorities and using available resources.

**Learn more about  
the working group and  
read the full COVID-19  
recommendations at:**

**[www.endocrinology.org/clinical-practice/future-of-endocrinology-working-group](http://www.endocrinology.org/clinical-practice/future-of-endocrinology-working-group)**



## 2. RESOURCES AND TOOLS

Sharing valuable experiences is crucial. To facilitate this, we are collating people's experiences and creating online ways to disseminate and share good ideas and good practice. Materials are to be used as templates or for inspiration, or simply to see what others have done in their particular settings to accommodate new realities. Information is being curated from the following sources:

- existing Society for Endocrinology resources
- existing external online resources
- parallel workstreams
- Society for Endocrinology Peer Review findings
- Getting it Right First Time report
- documented examples of innovative working (provided by endocrinologists)
- Society for Endocrinology-approved patient support groups
- shared pathways and protocols.

## 3. PATHWAYS AND NETWORKS

The aim of this work is to produce a framework for a seamless patient journey, placing the patient at the centre. The framework follows the principles of right care, right time, right place.

Different ways of working will be explored including:

- delivering face-to-face, virtual clinics, patient portals, primary care interfaces, patient-initiated follow up, use of digital platforms
- working with primary care to discuss how we can streamline referral process and optimise advice and guidance processes
- driving down boundaries between primary, secondary and tertiary care
- putting patients at the centre, with a focus on improved communication, safety, access to information, and patient-held records
- developing ways of sharing information amongst the endocrine community
- ensuring equity of care for all, for example for patients with rare conditions.

### CORE WORKING GROUP MEMBERS

**John Newell-Price**

Consultant (Sheffield) (co-Chair)

**Kristien Boelaert**

Consultant (Birmingham) (co-Chair)

**Kate Laycock** ST5 Registrar (London)

**Afroze Abbas** Consultant (Leeds)

**Antonia Brooke** Consultant (Exeter)

**Ashwin Joshi** Consultant  
(Sunderland)

**Christine May** Consultant (Oxford)

**Douglas Robertson** Consultant  
(mid-Cheshire)

**Helen Simpson** Consultant (London)

**Helena Gleeson** Consultant  
(Birmingham)

**Maralyn Druce** Consultant (London)

**Shazia Hussain** SpR (London)

**Sherwin Criseno** Advanced Nurse  
Practitioner (Birmingham)

### ADDITIONAL MEMBERS

(NON-SOCIETY FOR ENDOCRINOLOGY)

**Helen Parretti** Academic GP

(Birmingham), representing  
the Royal College of General  
Practitioners

**Clare Hambling** GP (Norfolk)

**Philip Newland-Jones** Consultant  
Pharmacist for Diabetes  
and Endocrinology  
(Southampton)

A great number of our members are contributing their time and expertise to this work, which will be put out for consultation shortly. Please put forward your views and help us redefine clinical endocrinology services for better, sustainable patient care. Contact us at [clinical@endocrinology.org](mailto:clinical@endocrinology.org).



# GERALD LINCOLN 1945–2020

## A MAN FOR ALL SEASONS

AN APPRECIATION BY STEVE HILLIER



Gerald Lincoln. ©Queen Mary University of London\*

Gerald Lincoln's untimely passing on 15 July 2020 hit everyone hard. Not just his immediate family, but the extensive community of friends and colleagues, at home and abroad, who had the privilege to know him. An iconic, Peter Pan-like figure, he always carried an air of youthful enthusiasm and optimism about him that inspired everyone in his orbit. He was living proof that 'The research worker remains a student all his(her) life'.<sup>1</sup>

I unwittingly encountered Gerald for the first time in 1970 when, as a Master's student at Leeds University, charged with leading a journal club session, I chanced upon a 'Letter to *Nature*' titled 'Effects of sexual activity on beard growth in man'. Irresistible, not only for its content, but also because it was signed *ANON*.<sup>2</sup> The anonymous author turned out to be none other than Gerald A Lincoln. The rest, as they say, is history. And it was a highly successful journal club.

To Gerald, scientific research was always an adventure. When he joined the MRC Reproductive Biology Unit at Edinburgh University in 1974, as a founder Principal Investigator, he had already logged multiple field trips to the Inner Hebridean Isle of Rhum, where he fastidiously documented every aspect of the annual red deer rut. Such trips formed the basis of serial publications on the photoperiodic control of mammalian reproduction – including 28 in *Journal of Endocrinology* – and he rapidly established himself as an international authority on the endocrinology of seasonal breeding. He received many awards for his achievements, including the Society for Endocrinology Medal in 1989, and election to Fellowship of the Royal Society of Edinburgh in 1993. The University recognised his contributions by appointing him to a Personal Chair of Biological Timing in 2007. All this was on top of a successful battle with leukaemia, taking 5 years from diagnosis to remission in 1985.

Melatonin was the 'in hormone' when I arrived at Edinburgh, in 1985. And it was Gerald's work on the role of melatonin in photoperiodism that

provided much of the evidence base for the MRC Unit's rock-star faculty to dose themselves with melatonin – the 'hormone of darkness' – to help control their fractured sleep-wakefulness patterns as they jetted around the world.

Although much of his published work involved deer and sheep – famously red deer and Soay rams – it always seemed to me that Gerald's true interests were birds and bugs. The idyllic lifestyle he and his wife Caroline created at Puddledub in rural Fife, complete with Soay sheep flock, allowed him to indulge in these passions liberally. He bred birds as varied as sand martins and swans, and reared every type of insect imaginable. The sand martin cliff project dominated, but he rarely went anywhere without a moth trap.

After retirement, a shared interest in the roles of sex hormones in reproduction kept us in touch, and he remained as thoughtful and excitable as ever when it came to discussing science. In summer 2019, over a glass of wine, and after another successful open day at Puddledub Nature Reserve, Gerald asked me, 'Well Steve. Are you done yet?' (As in, have you any more papers to publish?) 'I am. This is probably my last.' (Sadly, it was...) He handed me a copy of 'A brief history of circannual time', which is a tour de force on innate circannual timing, which he had just published as a review in *Journal of Neuroendocrinology*.<sup>3</sup> I insisted that I was not yet done and, as evidence, supplied him with the PDF of an article that equated oestrus in mammals with ecdysis in insects. The commentary he emailed back to me a few days later provides a measure of the man:

'The remarkable parallel roles of ecdysone in insects and gonadal steroids in vertebrates are fascinating. I thought of your paper a few days ago – first thing in the morning in Pitmedden Forest above Auchtermuchty! I had my moth trap out overnight in a lovely sheltered spot in the woods, overlooking a marsh that had once been open water supplying the village. Sitting beside the moth trap was an elephant hawkmoth. It had clearly been flying for weeks – almost every scale worn away – hardly able to move – the end of a complex life cycle. Five moults of the exoskeleton as the animal increased a hundred-fold in size as a larva, then a nomadic wandering phase before the final moult had revealed the outer surface of the imago. Hidden from view within the astounding transformation that is the final metamorphosis – growth of the gonads and pheromone glands and the activation of a genetic programme for sexual behaviour. Yes, it's that wonderful ecdysone!'

Gerald was caring and compassionate, and a brilliant scientist. He was also a fantastic communicator. His guiding principle was that man is a seasonal animal with a cyclical biology. The discoveries made in plants, insects and many animal models direct our understanding of all aspects of seasonality. His memoir, written literally days before he died, concludes, 'Back home in Fife, my lifecycle has run a full circle, from learning to love nature in my teens, to a career in science and medicine, and then to retirement back to my passion.' He had massive impact, and his influence will live on.

### STEVE HILLIER

Professor Stephen G Hillier is a past Chairman of the Society for Endocrinology (1996–2000) and former Editor-in-Chief of *Journal of Endocrinology* (2000–2004). He is currently Emeritus Professor of Reproductive Endocrinology at the University of Edinburgh.

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