

Norfolk and Norwich University Hospitals NHS Foundation Trust

Interim Chairman Mr Tom Spink Chief Executive Mr Sam Higginson

# EPA SPECIALTY DOCTOR IN MEDICAL MICROBIOLOGY AT NORFOLK AND NORWICH UNIVERSITY HOSPITAL NHS FOUNDATION TRUST



# **DEPARTMENT OF MICROBIOLOGY**

# NORFOLK AND NORWICH UNIVERSITY HOSPITALS NHS FOUNDATION TRUST

March 2023

# NORFOLK AND NORWICH UNIVERSITY HOSPITALS NHS FOUNDATION TRUST

#### SPECIALTY DOCTOR IN MEDICAL MICROBIOLOGY

This is a new post to support the consultants in this busy microbiology laboratory with an active clinical liaison and infection control workload.

The principle duties of the post holder will be to support the above in the day-to-day reporting of results, and the provision of clinical advice on bacteriology, infection control and anti microbial prescribing.

A candidate who is unable for personal reasons to undertake the duties of a wholetime will receive equal consideration. If such a candidate is appointed the job content will be modified as appropriate in consultation with other colleagues and local management.

We welcome all applications irrespective of age, disability, gender, sexual orientation, race or religion. Additionally, people with disabilities will be offered an interview providing they meet the minimum criteria for the post. The Trust operates job share and flexible working.

#### QUALIFICATIONS AND EXPERIENCE

It is expected that the appointee(s) will be a fully GMC registered medical practitioner who will

- have four years' postgraduate training, two of which must have been in a relevant specialty.
- Exercise an intermediate level of clinical responsibility as delegated by the consultant in charge, always under consultant cover and supervision

This post is not a training post, and as such is not recognized for training, but it is proposed to provide an educational opportunity equivalent to a recognized training post.

#### **DUTIES OF THE POST**

The appointment is to the Trust on behalf of Eastern Pathology Alliance, not to specific hospitals. The post will be based at Queen Elizabeth hospital, Kings Lynn and may be required periodically to cover any of the acute hospitals within the network i.e. Norfolk and Norwich Hospital, Queen Elizabeth hospital or James Paget hospital.

The appointee will be expected to be involved in implementing the Trust's Clinical Governance programme. This includes active participation in clinical audit, quality,

clinical guidelines/pathways, professional development, appraisal and risk management.

The post holder will provide, in support of and under supervision of consultant and other colleagues, clinical advice on medical microbiology to clinical staff in hospitals and in the community, and within the area served by the laboratory and consultants in communicable disease control, environmental health and others. This will include participation in surveillance, hospital infection control and public health microbiology and participation in out of hours cover.

Other duties to include:-

- Regular daily liaison with the laboratory technical staff through the laboratory manager
- Reporting of laboratory results, authorizing and providing medical interpretation as appropriate
- Liaison with clinicians on microbiological matters, visiting wards as necessary
- Independent ward rounds
- Provision, together with consultant colleagues, of professional supervision of junior medical staff
- Participation in laboratory and clinical audits, and also in those internal audit activities required to help to maintain laboratory accreditation
- Collaboration with regional epidemiologists and central reference and epidemiological facilities in reporting and investigation of infection
- Any other reasonable duties or activities consistent with the post as required by the laboratory lead doctor
- Participation in out of hours cover, including weekends and Bank Holidays, under supervision of the duty consultant microbiologist/virologist and in rotation with the SpRs

The Department takes a Team approach to service delivery. Clinical liaison is a prominent part of the service and there are regular ward rounds with the Intensive Care Unit team, the Neonatal Intensive Care team, the paediatric team, Medicine for the Elderly and the Haematologists and Oncologists. There are also multidisciplinary *C. difficile* ward rounds and regular multidisciplinary antimicrobial rounds on surgical, MFE, vascular and orthopaedic wards. Additional visits are regularly requested by clinical colleagues.

There are OPAT services in place for cellulitis, UTI and orthopaedic infections, and plans to extend this service to other clinical areas.

Appointees will be expected to engage in external quality assurance, continuing medical education, professional development, departmental audit and to support the clinical governance developments in both the Department and the Directorate. Time and facilities are available for these activities. Appraisal is fully implemented in the Trust and the post holder will be required to participate.

#### The NNUHT Department of Medical Microbiology

The NNUHFT Department of Microbiology is a large and busy department which is continuing to expand to accommodate the increasing microbiological needs of the modern NHS. It provides a county-wide diagnostic microbiology service as part of the Eastern Pathology Alliance (EPA), as described below.

The Department provides a comprehensive infection prevention and service encompassing diagnostic and clinical microbiology, infection prevention and control, health protection and health promotion. It has full CPA accreditation in both Microbiology and Virology. As of 2013, the Department has incorporated all the Trust and Community microbiology laboratory workload previously processed by James Paget Hospital and Queen Elizabeth Hospital with our own workload to form a single laboratory at NNUHFT. This work is performed on behalf of the EPA.

There are strong and developing links with the University of East Anglia. The Department receives SIFT funding to contribute to undergraduate teaching at the medical school and is currently supporting the clinical training of three clinical academic fellows. The Department is collaborating with the University to support research at the University of East Anglia and has close working links with the Chairs of Translational Microbiology (Professors David Livermore and John Wain), and Public Health.

The Department is in newly refurbished laboratories on the Norwich Research Park, 0.5 miles from the main Norfolk & Norwich University Hospital site.

It is expected that this new proximity to the University, as well as to other major microbiological institutions at the Norwich Research Park, will promote and enhance opportunities for collaboration and research across the specialty.

The laboratories are open from 8am – 9pm Monday-Friday and 9am – 5pm on Saturday and Sunday. Outside these hours, the Departmental technical service is provided by an on call Biomedical Scientist. Medical staff from Bacteriology and Virology populate a rota for on-call clinical advice which operates from 5pm - 9am Monday to Friday and 5pm Friday to 9am Monday at weekends. In addition, clinicians attend the laboratory on Saturday and Sunday to deal with routine workload. There are separate specialist clinical on-call rotas for Bacteriology and Virology, and it is expected that recruitment into this post will allow a Bacteriology on-call rota of 1:4 weeknights and 1:4 weekends with prospective cover. The Bacteriology section offers a comprehensive diagnostic service, including basic parasitology and mycology investigations.

## Equipment includes:

- BacT alert 3D x 6 continuous monitoring blood culture system
- Vitek MS x 2
- Vitek Excel x 3
- 3X UF 5000 Sysmex urine microscopy platforms.
- WASP plater
- Automated staining.
- Cepheid PCR machine.
- Enteric Bio PCR machine.
- TB services provided by BD MGIT.
- Gemini (Strtec)

Currently, the Department is in the process of expanding automation in the bacteriology laboratory through a Managed Service Contract to cope with the clinical workload generated by the formation of EPA.

The Virology Department is a member of the UK Clinical Virology Network and is a recognized Specialist Virology Centre which provides virology and serology services to EPA and other Trusts including several outside the Eastern region. The in-house molecular repertoire is expanding steadily.

Equipment includes:

- Hologic Panther System
- Abbott Architect
- 3 x QIA Symphony SP/AS
- Mini Vidas
- VIDAS 30
- Alegria Analyzer
- Genius System
- ABI 7500 FAST
- Thermal Cycler
- MTHigh plex processor
- 5x ROTORGENE
- Vela Sentosa for NGS (Only place in the UK offering this service as far as we are aware)
- EliTech inGenius.
- Altona Altostar
- Qiagen NeuMoDx
- Chemagic 360
- High-Plex AusDiagnostics x 3
- BioRad CFX RT-PCR x2

Specialty Doctor Template Version September 2019

- Janus Liquid Handler
- QiaStat DX x2
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Consultants from the Department regularly contribute to multidisciplinary Norfolk HIV Network meetings (clinicians from three acute NHS Trusts) during which all aspect of care for HIV-1 and HIV-2 infected are discussed. A consultant virologist provides advice on diagnosis, antivirals and virus resistance. In addition to this a consultant virologist participates in multidisciplinary Clinics for HIV/Hepatitis co-infected and Clinics for Viral Hepatitis held at the Department of Hepatology.

The Department has a laboratory safety committee and local quality lead who report to the laboratory medicine directorate and /or EPA on safety and quality issues. The Department also participates in local, divisional and EPA Clinical Governance activities.

The current Microbiology computer system is Telepath. Most tests are requested and reported electronically in the Trust and primary care via the ICE system. Trust systems are accessible from the laboratory.

The NNUHFT Infection prevention and Prevention and Control Dept. is sited at the main hospital site.

# 4.2 Workload

The annual workload for Bacteriology and Virology is approximately 900,00 specimens

Approximately 47% of the workload came from General Practice.

# 4.3 Staffing

Medical Microbiology Consultants

# **Bacteriology:**

- Dr Reham Soliman (part-time 0.9 WTE); Consultant Microbiologist.
- Dr Ngozi Elumogo WTE, Consultant Microbiologist, Clinical Chief of Service for the EPA network.
- Dr Catherine Tremlett (part-time 0.9 WTE); Consultant Microbiologist and Infection Control Doctor.

- Dr Eleni Tsiouli WTE Consultant Microbiologist.
- Vacant Post WTE, Consultant Microbiologist, Lecturer/UEA Theme Lead for Microbiology (advertised)
- Dr Harish Reddy WTE Consultant Microbiologist (based at JPUH).
- Dr Davis Nwaka WTE Consultant Microbiologist (based at JPUH) and the Service Director of the EPA Medical Microbiology department.
- Vacant post WTE Consultant Microbiologist (based at QEH).
- Dr Devan Vaghela WTE locum Consultant Microbiologist (based at QEH).

## <u>Virology</u>

- Dr Samir Dervisevic WTE Consultant Virologist and Virology Clinical Lead.
- Dr Dulmini Kumarasinghe WTE Locum Consultant Virologist.

## **Trust Specialty Doctors Bacteriology:**

- Dr Kishan Arulampalam
- Dr Olubukola Oluyombo

# **Registrars:**

- Dr Mohammed Elnour
- Dr Anastasia Kolyva
- Dr Stuart Taylor
- Dr Brian McCann (Virology)
- ACF Microbiology to start in August 2023

# Clinical Scientists

• Dr Lindsay Coupland

# **Biomedical Scientists**

EPA Microbiology Network Manager	1
BMS Band 8a	2
BMS Band 7	7
BMS Band 5	9
BMS Band 6	13
ASSOCIATE PRACTITIONER	3

Mr. Reenesh Prakash

MLA BAND 3	17
MLA BAND 2	13

#### **Clerical Staff**

IT Manager BAND 5	1
A&C BAND 4	1
A&C BAND 2	3
HoD PA and Consultant sec BAND 4	1

#### 4.4 Health Protection

The Department provides support to the Norfolk, Suffolk and Cambridgeshire Health Protection Unit. This includes attendance at committee meetings and support for outbreak investigation and management as required.

## 4.5 The NNUH Laboratory Medicine Directorate

The Laboratory Medicine Directorate consists of Haematology, Clinical Chemistry, Microbiology, Immunology and Andrology at NNUHFT. Currently all departments, with the exception of Microbiology, are based at the NNUHFT. Microbiology is based at the Norwich Research Park.

The current Director of Laboratory Medicine is Dr Ngozi Elumogo, Consultant Microbiologist, and the EPA Network Service Operations Manager is Nigel Roberts. The Laboratory Medicine Management Committee, which includes Heads of Department and Laboratory Managers, meets bi-monthly.

The Directorate is a member the Division of Clinical Suport Services, the Chief of Division is Dr Richard Goodwin.

The post holder will have office accommodation within the laboratory, together with the use of a personal computer, and telephone extension. All PCs are linked to the Trust network providing e-mail and internet access.

#### THE EASTERN PATHOLOGY ALLIANCE

The EPA provides networked diagnostic services in Microbiology, Haematology, Clinical Chemistry and Blood Transfusion to NNUHFT, JPUH, QEH and GPs and Community Services which belong to the Norfolk and Waveney ICB served by these three Trusts. All diagnostic microbiology work for EPA is performed at NNUHFT, but JPUH and QEH retain some haematology and chemistry laboratory services on site. Each of the three Acute Trusts retains local clinical microbiologists

for service delivery. The consultants based at JPUH are employed by NNUHFT on behalf of JPUH. The current Clinical Director for EPA is Dr Ngozi Elumogo, Consultant Microbiologist at NNUHFT.

# **APPENDIX 1**

# A JOB PLAN

A formal job plan will be agreed between the appointee and their Clinical Director, on behalf of the Medical Director, as soon as possible after the commencement date of the appointee. This will be signed by the Chief Executive and will be effective from the commencement date of the appointment.

The Job Plan will be reviewed annually, following the Appraisal Meeting. The Job Plan will be a prospective agreement that sets out the doctors' duties, responsibilities and objectives for the coming year. It should cover all aspects of a doctor's professional practice including clinical work, teaching, research, education and managerial responsibilities. It should provide a clear schedule of commitments, both internal and external. In addition, it should include personal objectives, including details of their link to wider service objectives and details of the support required by the doctor to fulfil the job plan and the objectives.

Issues raised through the appraisal process will be raised with and reviewed by the Clinical and Medical Directors as required.

# Provisional assessment of Programmed Activities in Job Plan:

For a whole-time contract:

The balance between Direct Clinical care Activities and Supporting Programmed Activities will be agreed with the candidate as part of the initial job planning process.

The standard full time job plan will consist of 10 programmed activities. The Trust will allocate 1.0 SPAs for appraisals, CPD, mandatory training, job planning etc. Permission from your Clinical Director/Medical Director must be sought for participation in external NHS activities and once agreed these should be recorded in your job plan.

# B PROVISIONAL TIMETABLE

The following provides an outline of the expected clinical activity and clinically related activity components of the job plan which occur at regular times in the week. Agreement should be reached between the appointee and their Clinical Director with

regard to the scheduling of all other activities, including the Supporting Professional Activities. Upon appointment the consultant with be given a specific "work programme" detailing the initial allocation of direct clinical care activities and supporting activities.

Day	Time	Location	Work	NHS Activity Code	Number of PAs
Monday	9am-1pm	Laboratory	Laboratory and report authorization. Clinical liaison	DCC	1
	1pm-5pm	Laboratory	SPA	SPA	1
Tuesday	9am-1pm	Laboratory/ Hospital	Laboratory and report authorization. ICU and clinical ward rounds	DCC	1
	1pm-3pm	Laboratory	Laboratory and report authorization. Clinical liaison	DCC	0.5
	3pm-5pm	Laboratory	SPA	SPA	0.5
Wednesday	9am-1pm	Laboratory	ward rounds	DCC	1
	1pm-5pm	Laboratory/ Hospital	Laboratory and report authorization. Clinical liaison. Ward rounds	DCC	1
Thursday	9am-1pm	Laboratory	Laboratory and report authorization.	DCC	1
	1pm-5pm		Off-duty		
Friday	9am-1pm	Laboratory	Laboratory and report authorization. Clinical liaison	DCC	1
	1pm-5pm	Laboratory	ITU Ward Round, Clinical Enquiries or Lab and Report Authorisation	DCC	1
Saturday 1:4	10:00- 15:30	Laboratory/ Home/	Clinical advice and cover /Infection Control/ Antimicrobial/Emergency	DCC	
			/Out-break Management		
Sunday 1:4	10:00- 15.30	Laboratory/ Home/	Clinical advice and cover /Infection Control/ Antimicrobial/Emergency and Out-break Management	DCC	
Additional agreed activity					
Predictable on-call work					0.6 average
Unpredictable emergency on-call work					0.4 average
TOTAL PAS		•		•	10

On call - Currently consultants, specialty doctor and junior doctors attend the NNUH laboratory on Saturday morning, and on Sunday if required, but consultants provide telephone cover only for the JPUH/QEH. Future working patterns will be reviewed as

part of the combined on-call rota and some weekend attendance can be expected to be part of this. On-call is Band A

Total DCC PAs = 8.5 including on-call Total SPA PAs = 1.5

#### This timetable is indicative; the definitive timetable will be agreed by the Trust and the appointee and subject to regular review APPENDIX 2

PERSON SPECIFICATION: Specialty Doctor

**SPECIALTY: Microbiology** 

JOB REQUIRMENTS	ESSENTIAL	DESIRABLE
Physical Requirements		
Qualifications	MB ChB or equivalent. Full GMC Registration with licence to practice Further experience to FY2 level	Further qualification such as: - MRCP - MSc - MD - PhD. - DipHIC "Teaching the Teachers" or equivalent
Aptitudes	Good written and verbal communication skills. Able to work under pressure Capable of working in a multi-disciplinary team and balancing clinical management and other duties. Enthusiasm for service development and teaching.	Prepared to work in shared office space. Management skills.
Experience	Have completed at least 4 years' full-time post graduate training (or its equivalent gained on a part-time or flexible basis) at least two of which will be in a relevant specialty or equivalent experience and competencies	Experience in research or published papers in area of special interest.
Interests	Commitment to develop an appropriate special interest	Understanding of principles of R&D
Circumstances	Flexible outlook on working hours. Must live within a 15-mile radius of the base Trust or 30 minutes travelling time. Full Driving License.	
Fitness To Practice	Applicant's knowledge is up to date and fit to practice safely	
Health	Meets professional health requirements (in line with GMC standards in <i>Good</i> <i>Medical Practice</i> )	
Communications and Language Skills	Ability to communicate effectively with clinical colleagues, colleagues in pathology and support staff Good knowledge of, and ability to use, spoken and written English Ability to present effectively to an audience, using a variety of methods, and	Good presentation skills.

It is essential that all Trust employees will adhere to, and follow good infection control practices, as detailed in the Trust's Infection Control Manual and other related policies and guidelines

# CONTACTS FOR FURTHER INFORMATION

Candidates requiring further information are invited to contact the following:

#### **Dr Davis Nwaka**

Clinical Lead for Microbiology and Virology Services (Head of Department) Microbiology Department Norfolk and Norwich University Hospital NHS Trust NRP Innovation Centre Norwich Research Park Colney Norwich NR4 7GJ Email: <u>davis.nwaka@nnuh.nhs.uk</u> , <u>davis.Nwaka@jpuh.nhs.uk</u> Tel: 01493452452

# Dr Ngozi Elumogo

Consultant Microbiologist and EPA Chief of Service/Clinical Director Norfolk and Norwich University Hospital NHS Trust NRP Innovation Centre Norwich Research Park Colney Norwich NR4 7GJ Email: <u>ngozi.elumogo@nnuh.nhs.uk</u> Tel: 01603 288581

# About the Trust

The Norfolk & Norwich University Hospital NHS Foundation Trust (NNUH) is one of the busiest teaching trusts in England. We serve over 900,000 people across Norfolk, North Suffolk and surrounding areas for specialist services. In 2016/17 our 7,500 members of staff delivered 816,000 outpatient appointments, 90,000 day cases and 90,000 inpatient admissions from our two hospitals.

- The Norfolk and Norwich University Hospital is located on the Norwich Research Park and serves the population of Norfolk and Norfolk Suffolk and further afield for specialist services. It opened in 2001 and is a 1,200 bed teaching hospital with state-of-the-art facilities. We provide a wide range of secondary and tertiary services, including Accident and Emergency. The trust will be commemorating 250 years of a hospital in Norwich in 2021.
- Cromer and District Hospital is located in Cromer on the North Norfolk coast and serves the North Norfolk population. It was redeveloped in 2012 to replace the 1930s-founded hospital. We provide a wide range of consultantled outpatient services, day case operations and a Minor Injuries Unit (MIU). The trust is commemorating 150 years of a hospital in Cromer in 2017/18.

Our vision is to 'provide every patient with the care we want for those we love the most', **Our PRIDE values support our vision and guide the behaviour of everything we do.** 

- **People-focused**: We look after the needs of our patients, carers and colleagues, to provide a safe and caring experience for all.
- **Respect:** We act with care, compassion and kindness and value others' diverse needs.
- **Integrity:** We take an honest, open and ethical approach to everything we do.
- **Dedication:** We work as one team and support each other to maintain the highest professional standards.
- Excellence: We continuously learn and improve to achieve the best outcomes for our patients and our hospital

Our strategy, agreed in 2016, is based on four key objectives:

- We will be a provider of high quality healthcare to our local population
- We will be the centre for complex and specialist medicine for Norfolk and the Anglia region
- We will be a recognised centre for excellence in research, education and innovation
- We will be a leader in the redesign and delivery of health and social care services in Norfolk.

Our clinical services are structured across four divisions offering a wide range of careers to new staff of all disciplines. Our four divisions are Medicine, Surgery, Women's and Children's, and Clinical Support Services. We always strive to hit the highest standard in each of these areas, including pioneering treatments and the best career development for employees. In addition, the Trust provides a full range of more specialist services such as Oncology and Radiotherapy, Neonatology, Orthopaedics, Plastic Surgery, Ophthalmology, Rheumatology, Paediatric Medicine and Surgery.

- Medicine is comprised of Cardiology; Respiratory Medicine; Stroke; Nephrology; Gastroenterology; Allergy; Older People's Medicine; Endocrinology; Neurology; Rheumatology; Emergency and Acute Medicine; Oncology, Palliative Medicine and Haematology.
- Surgery consists of General and Thoracic Surgery; Dermatology; Urology; Head and Neck; Ophthalmology; Orthopaedics; Plastic Surgery; Anaesthetics, Critical Care, Pain Management, Sterile Services, Theatres and the Day Procedure Unit.
- Women's and Children's Services consists of Obstetrics; Gynaecology; Paediatric Medicine; Paediatric Surgery and Neonatology.
- Clinical Support is comprised of Nuclear Medicine; Cellular Pathology; Laboratory Medicine; Therapeutic and Support Services; Radiology; Pharmacy; and Health Records.

We want to recruit people who are looking for new challenges and opportunities, share our values and want to be part of our vision to provide every patient with the care we want for those we love the most.

# The Faculty of Medicine and Health Sciences (FMH)

The Faculty of Medicine and Health Sciences is led by the Pro-Vice-Chancellor of Medicine and Health Sciences, ProfessorCharles Ffrench Constant, working closely with the Heads of School, and the Associate Deans who share responsibility for the areas of Research; Enterprise and Engagement; Learning and Teaching; Admissions; and Postgraduate Research. These senior academics,

together with the Senior Faculty Manager, the Faculty Human Resources Manager, and the Faculty Finance Manager, form the Faculty Executive. Teaching is organised through the Faculty's two Schools of study, comprising Health Sciences and Norwich Medical School, assisted by a Centre for Inter-professional Practice.

#### The School of Health Sciences

On 1st August 2014, the Schools of Nursing Sciences and Rehabilitation Sciences at the University of East Anglia (UEA) came together to create a new School of Health Sciences. The School's purpose is to resolve health challenges through the advancement of knowledge and interdisciplinary working. This innovative development has built on the strong reputation of the two Schools and creates an outstanding learning environment for students; fostering cutting edge research and offering opportunities for real innovation in enterprise development.

The School of Health Sciences encompasses a family of interrelated disciplines; midwifery, all fields of nursing, operating department practice, paramedic science, physiotherapy, occupational therapy and speech and language therapy. Research is focused on developing solutions to future global health challenges, which may arise as a consequence of our life style choices (e.g. obesity, diabetes); living longer with long term conditions and the need for systems, services and training models to adapt to different health care needs in the future.

The school has a clear vision and strategy to be a leading international academic force, improving the quality of healthcare through research and education. The School's academic structure is designed to secure the delivery of this strategy. Staff belong to one of three health challenge units which drive innovation in research, teaching and learning in three theme areas: reforming health systems; promoting family and community health and living well with long term conditions. The groups foster a collaborative ethos and serve as an academic 'home' community for those with related interests from a variety of professional backgrounds.

There are currently have over 1300 undergraduate, pre-registration students and around 1200 post registration and postgraduate students taking a variety of modules and courses, including the flagship NIHR Masters in Clinical Research. The success of the School is reflected by the popularity of its programmes and a number of measures of esteem. The School is ranked 5th for nursing and midwifery and 7th for health professions in the Guardian University Guide (2015) and has recently climbed four places to 8th place for nursing in the Complete University Guide (2015).

# The Norwich Medical School

The Norwich Medical School was established at UEA in 2001 and has over 200 members of academic, research and support staff – and a large number of active NHS secondees and honorary appointees – from a wide range of disciplines (including medical specialties, biological sciences and a range of social and statistical disciplines, including health economics, clinical psychology,

epidemiology and medical statistics). The School has grown with a current entry each year of 168 students. Its first students graduated in 2007 and since then the School has been in the top 10 of all medical schools on the National Student Survey on three occasions, the Prescribing Skills Assessment pass rate is over 97%; the Situational Judgement Test is among the top scores nationally and the Preparedness to Practice and Core Skills Acquisition are consistently top 5. In 2014, 2015 and 2016 the school was shown to have produced some of the best prepared Foundation doctors, demonstrated through national data provided by the GMC following their annual survey of all doctors in training.

The Schools' research focus is on developing translational research themes that answer important health questions, from an understanding of the basic mechanisms and genetics of disease through to clinical trials and from there to incorporation into clinical guidelines and evaluation within the broader health care community.

The Medical School has a vision to build a clinical and translational research programme of international standing based on the existing strengths of the Medical School, UEA, The Norfolk and Norwich University Hospital and the Norwich Research Park. The presence of three BBSRC research institutes on the Norwich Research Park (Institute of Food Research, John Innes Centre, The Earlham Institute (formerly the Genome Analysis Centre or TGAC) provides unique opportunities not available to other comparable medical schools and in 2018 the Quadram Institute opened its doors. Preventive medicine is a major goal for 21st century medicine. The role of diet in the prevention of a wide spectrum of disease will be a particular focus of research within the Medical School. Incorporated with this will be parallel strategies to understand the epidemiology and health economic impact of the conditions studied.

Areas of research within the Medical School include:

- Cancer Studies
- Clinical Science and Trials
- Dementia
- Epidemiology
- Gastroenterology and Gut Biology
- Health Economics
- Health Services Research
- Medical Microbiology
- Musculoskeletal Science
- Nutrition
- Psychological Sciences

Norwich Medical School is housed on East (main) campus in the Norwich Medical School Building, and on West Campus in the new £20m Bob Champion Research and Education Building, which opened in late 2014, adjacent to the Norfolk and

Norwich University Hospital, providing outstanding facilities for staff and supporting clinically orientated research.



#### Norwich Research Park

The Norwich Research Park is a partnership between the NNUH, UEA and four independent world-renowned research institutes, namely the John Innes Centre, Quadram Institute Bioscience and The Genome Analysis Centre (all strategically funded by the Biotechnology and Biological Sciences Research Council (BBSRC) and The Sainsbury Laboratory to the Gatsby Charitable Foundation. The BBSRC is itself a partner as is the John Innes Foundation.

The Norwich Research Park is home to around 30 science and IT based businesses. With over 11,000 people including 2,700 scientists and an annual research spend of over £100 million; the Norwich Research Park is Europe's leading centre for research in food, health and the environment.

The main strength of Norwich Research Park is the concentration of world-leading scientists coupled with the capability for multidisciplinary research. The vision of the Norwich Research Park partners and local government stakeholders is to develop a thriving science and innovation business park over the next decade by supporting spin-out and start-up companies and through attracting inward investment from large corporate organisations involved in science and technology. Norwich Research Park aims to deliver solutions to the global challenges of healthy ageing, food and energy security, sustainability and environmental change.

It is an international centre of excellence in life and environmental sciences research with world-class expertise in the research and development pipeline from genomics and data analytics, global geochemical cycles and crop biology, through to food, health and human nutrition.

Our science transcends conventional boundaries by forging interdisciplinary links, thereby driving innovation, enterprise and promoting economic growth, and particularly underpinning a new bioeconomy.

#### Quadram Institute

The Quadram Institute is the name of the new centre for food and health research to be located at the heart of the Norwich Research Park, one of Europe's largest single-site concentrations of research in food, health and environmental sciences. The new £81.6m facility to house the Quadram Institute opened in 2018.



The new world leading centre for food and health research will bring together the Institute of Food Research, the NNUH's regional gastrointestinal endoscopy facility and aspects of the UEA's Norwich Medical School and the Faculty of Science.

Due to population expansion combined with people living longer and the need to screen a broader age range for diagnostic and potential preventative reasons the NNUH will be doubling its capacity for bowel screening.

The dedicated unit and world leading research facilities will be located in the Quadram Institute. The Quadram Institute's mission will be to develop solutions to worldwide challenges in human health, food and disease. The concept for the institute is to enable a step-change in food and health science research by providing new insights and accelerating innovation that will deliver new foods and treatments as well as proactive health and lifestyle interventions, for the benefit of society and the bio-economy.

Its creation underlines the collaboration of the four founding partners and reflects its strategy to work across four research themes: the gut and the microbiome (the gut flora); healthy ageing; food innovation; and food safety. These research themes will link closely to the world-class plant and crop research at the John Innes Centre and bioinformatics at The Genome Analysis Centre, both also located at the Norwich Research Park, creating a powerful plant-food-health pathway to deliver clinically-validated strategies to improve human nutrition, health and wellbeing. The Quadram Institute will work closely with the food industry, healthcare and allied sectors to transfer its scientific knowledge into practice.

#### Norwich Radiology Academy

The Trust is home to the Norwich Radiology Academy, run on behalf of the Department of Health and Royal College of Radiologists. The academy, one of only three in the country, is also located on the Norwich Research Park in the Trust's Cotman Centre and provides a ground breaking approach to radiology training in the UK.

#### **Education and Training**

The Trust has an outstanding reputation for providing a good quality education and excellent clinical experience for trainees. The large catchment population provides a wealth of clinical material. Most departments have well-developed in-house teaching programmes and there are many examples of locally developed skills courses including Basic Surgical Skills, MRCS training and Minor Surgical Skills courses as well as more specialised courses such as for the FRCS (Orth). There is an established system of educational supervision and assessment for Foundation Programme and Core Training.

The Trust has one of the best-equipped Postgraduate Centres in the country. There is an excellent lecture theatre and library as well as seminar rooms and clinical skills laboratories within the Centre which is currently situated within the Hospital and in the new Bob Champion Research and Education Building.

There are opportunities for trainees to do an MSc in Health Sciences with the University of East Anglia. A diploma in clinical skills is being developed in collaboration with the University, aimed at the Core Training grade. There is an excellent local GP VTS scheme and this, and good quality educational programmes in NANIME, provide strong links with local GPs. For all these reasons Norwich is able to attract good quality candidates to fill training posts and eliminate many of the problems of recruiting into shortage specialties.

# **General Conditions of Appointment**

The Trust requires the successful candidate to have and maintain full registration with the General Medical Council, NHS Indemnity and private cover if appropriate. The appointee is advised to maintain membership of a Medical Defence Organisation for professional duties not included within the NHS Indemnity Scheme.