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Prepared by Mrs Teresa Morris
Imaging Facilities Co-ordinator
Aberdeen Biomedical Imaging Centre

Approved by Professor Alison D Murray
Roland Sutton Chair of Radiology
and Dr Gordon D Waiter
Acting Director of ABIC
Aberdeen Biomedical Imaging Centre
INTRODUCTION

The Aberdeen Biomedical Imaging Centre is the overarching structure to facilitate communication and synergy across the many scientists and clinicians working in imaging research at the University of Aberdeen. This multidisciplinary group of imaging researchers includes radiologists, medical physicists, computer scientists, biologists, bioengineers, chemists and radiographers, supported by administrative and secretarial staff, who are key members of the team.

2018 continued to see development in the structure within the School of Medicine, Medical Sciences and Nutrition, as the Institute of Medical Sciences realigned its programmes, these are: Infection and Immunity, Molecular Medicine, Systems Physiology and Translational Neuroscience. All staff in ABIC are now line managed within either the Institute of Medical Sciences or Institute of Education for Medical and Dental Sciences depending on whether the staff roles are research or education focused. The bulk of ABIC research staff are within Translational Neuroscience, although ABIC research crosses programme, school and institutional boundaries.

Staff compliment in 2018 remained relatively static for most of the year, however there were a number of people who departed towards the end of 2018. Dr Tanja Gagliardi left NHS Grampian in November 2018, although she retains honorary senior lecturer status with the University. Dr Alim Yucel-Finn, Specialist Registrar in Radiology and SCREDS lecturer left in August to undertake a Fellowship in Cambridge in cardiac imaging. There was a reduction in staff supporting the STRADL project in Aberdeen, commensurate with completion of recruitment. Dr Tina Habota, the project manager returned to Australia for personal reasons and Ms Elizabeth Hannaford, research assistant in psychology, leaving to undertake a postgraduate degree in clinical psychology in Glasgow. The Project Manager post was not re-filled as the testing in Aberdeen ceased in February 2018 and is now concentrated in Dundee, with the grant ending in Dec 2019.

This year continued to be a productive one for PhD students, some of whom graduated during 2018 and moved to research fellow posts. One new student started their PhD journey in October 2018, giving a student compliment of 14 at the end of December 2018. Five students are expected to complete their PhD journey during 2019. In addition, staff in the Lilian Sutton Building supported 2 MSc students during the project phase of their Masters degree and also hosted a 2nd Year medical student for a short project with further information noted under the student section. These projects provided excellent opportunities for training in the value of brain imaging, beyond the familiar clinical use.

Professor David Lurie’s group continues to see progress with the Fast Field Cycling MRI with continuing positive results as the scanning of stroke patients continues. Significant progress has been made to bring Fast Field Cycling closer to a clinical system and there are active plans to build and install a next generation system in the scanning suite on the ground floor of the Lilian Sutton Building. Design of the magnet is at an advanced stage and funding for the reconfiguration of the suite has been secured with a generous donation from the Hall Family Charitable Trust.

ABIC staff and students continue to be a part of the SINAPSE (Scottish Imaging Network: A Platform for Scientific Excellence) community, with Professor Alison Murray continuing with the Director’s role during 2018.

This annual report lists the staff, the grant income, current projects, publications and presentations over the past year. Further information can be found at http://www.abdn.ac.uk/ims/research/abic.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Professor Alison D Murray</td>
<td>Roland Sutton Chair of Radiology (part-time from Oct 2018)</td>
</tr>
<tr>
<td>Professor Alan R Denison</td>
<td>Personal Professor in Radiology</td>
</tr>
<tr>
<td>Dr Leela Narayanan</td>
<td>Honorary Clinical Senior Lecturer in Radiology</td>
</tr>
<tr>
<td>Dr Arnab Rana</td>
<td>Honorary Clinical Senior Lecturer in Radiology</td>
</tr>
<tr>
<td>Dr Tanja Gagliardi</td>
<td>Honorary Clinical Senior Lecturer in Radiology (left NHSG post Nov 2018)</td>
</tr>
<tr>
<td>Dr Rosalind Mitchell-Hay</td>
<td>Honorary Clinical Senior Lecturer in Radiology</td>
</tr>
<tr>
<td>Professor David Lurie</td>
<td>Professor</td>
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<tr>
<td>Professor Andy Welch</td>
<td>Professor</td>
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<tr>
<td>Dr Alim Yucel-Finn</td>
<td>SCREDS Clinical Lecturer in Radiology (left August 2018)</td>
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<tr>
<td>Dr Gordon Waiter</td>
<td>Senior Lecturer</td>
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<tr>
<td>Dr Tim Smith</td>
<td>Senior Research Fellow</td>
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<tr>
<td>Dr Jiabao He</td>
<td>Lecturer in MR Physics</td>
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<tr>
<td>Dr Trevor Ahearn</td>
<td>Honorary Lecturer</td>
</tr>
<tr>
<td>Dr Hugh Seton</td>
<td>Lecturer</td>
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<tr>
<td>Dr Lutz Schweiger</td>
<td>Senior Research Fellow &amp; Senior Radiochemist</td>
</tr>
<tr>
<td>Dr Ian Fleming</td>
<td>Lecturer</td>
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<tr>
<td>Dr Vesna Vuksanovic</td>
<td>Research Fellow</td>
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<tr>
<td>Dr Anca Sandu-Giuraniuc</td>
<td>Research Fellow</td>
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<tr>
<td>Dr Gareth Davies</td>
<td>Research Fellow</td>
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<tr>
<td>Dr Lionel Broche</td>
<td>Research Fellow</td>
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<tr>
<td>Dr Chris McNeil</td>
<td>Research Fellow</td>
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<tr>
<td>Dr Tina Habota</td>
<td>Research Fellow (left August 2018)</td>
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<tr>
<td>Dr Dorota Chapko</td>
<td>Research Fellow</td>
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<tr>
<td>Dr James Ross</td>
<td>Research Fellow</td>
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<tr>
<td>Dr Gema Cebello Carramolino</td>
<td>Research Fellow</td>
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<tr>
<td>Ms Elizabeth Hannaford</td>
<td>Research Assistant (left August 2018)</td>
</tr>
<tr>
<td>Dr Nicola Miller</td>
<td>Honorary Research Fellow</td>
</tr>
<tr>
<td>Mr George Cameron</td>
<td>Senior Research Assistant</td>
</tr>
<tr>
<td>Mr Marco Mingarelli</td>
<td>Research Assistant (contract ended Dec 2018)</td>
</tr>
<tr>
<td>Mr Gordon Buchan</td>
<td>Research Technician (MRI)</td>
</tr>
<tr>
<td>Mr Stuart Craib</td>
<td>Honorary Research Technician (PET)</td>
</tr>
<tr>
<td>Ms Eleanor Hutcheon</td>
<td>Technician</td>
</tr>
<tr>
<td>Mrs Beverley MacLennan</td>
<td>Lead Superintendent Radiographer</td>
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<tr>
<td>Mrs Nichola Crouch</td>
<td>Radiographer</td>
</tr>
<tr>
<td>Ms Laura Reid</td>
<td>Radiographer</td>
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<tr>
<td>Mr Michael Hendry</td>
<td>Radiographer</td>
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<tr>
<td>Mrs Nicola Irwin</td>
<td>Radiopharmacy technician (on extended leave)</td>
</tr>
<tr>
<td>Dr Alim Yucel-Finn</td>
<td>SCREDS Clinical Lecturer in Radiology (left August 2018)</td>
</tr>
<tr>
<td>Mr Mike Shek</td>
<td>Radiopharmacy technician</td>
</tr>
<tr>
<td>Miss Kirsty Murray</td>
<td>Radiopharmacy technician (joined Dec 2018)</td>
</tr>
<tr>
<td>Mrs Teresa Morris</td>
<td>Imaging Facilities Co-ordinator</td>
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<tr>
<td>Mrs Dawn Younie</td>
<td>Secretary</td>
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</tbody>
</table>
RESPONSIBILITIES AND ACTIVITIES OF STAFF

Professor Alison D Murray
2. Aberdeen Biomedical Imaging Centre, Director (Aug 2012 - Sept 2018)
3. Generation Scotland Executive Committee, University of Aberdeen representative.
4. British Society of Neuroradiologists, Academic Subcommitteee, Member.
5. Scottish Radiological Society, Member.
7. Scottish Dementia Research Consortium, Executive member.
8. Alzheimer’s Research UK (Scotland) executive member
9. School of Medicine, Medical Sciences and Nutrition, Disability Co-ordinator.
10. Radiology Committee, NHS Grampian, Member.
11. Radiology Education and Training Committee, NHS Grampian, Member.
12. Radiology MRI Modality Group, NHS Grampian, Member.
13. Nuclear Medicine Service Committee, NHS Grampian, Member.

Professor Alan R Denison
1. Scottish Deans Medical Education Group, Member
2. Scottish Fitness to Practise Leads Group, Chair
3. Bursaries and Endowments Committee, University of Aberdeen, Member
4. NES Medical Education Awards Committee, Member
5. Scottish Clinical Leadership Fellow Scheme, Board Member
6. Academy of Medical Educators, Council Member
7. Education Associate, General Medical Council
8. Scottish Medical Education Research Consortium, Board Member
9. Education Leads committee, Medical Schools Council, Member
10. Strathallan School, Board of Governors, Member
11. Quality Leads Network, General Medical Council, Member
12. Royal College of Radiologists Academic Committee, Member
13. Queens University Belfast, External Examiner
14. Faculty of Health Sciences, International Medical University, Malaysia, External Examiner
15. Institute of Education in Medical and Dental Sciences, University of Aberdeen, Deputy Director
16. Institute of Education in Medical and Dental Sciences, University of Aberdeen, MBChB Programme Lead
17. Institute of Education in Medical and Dental Sciences, MBChB Curriculum Steering Group, Chair
18. Institute of Education in Medical and Dental Sciences, Learning Technologies in Healthcare Education Group, Chair
19. Institute of Education in Medical and Dental Sciences Degree Examination Boards, Chair
20. Clinical Supervisor, NHS Grampian
21. Nuclear Medicine Service Committee, NHS Grampian, Member
22. PET Modality Group, NHS Grampian, Member
23. CT Modality Group, NHS Grampian, Member
24. Ultrasound Modality Group, NHS Grampian, Member
25. Radiology Senior Staff Committee, NHS Grampian, Member
26. Radiology Specialty Training Committee, NHS Grampian, Member
27. North of Scotland Lung Cancer Network, NHS Grampian, Member
28. Scottish Interstitial Lung Disease Network, NHS Grampian, Member

Professors Alison Murray and Alan Denison act as regent to 7 undergraduate medical students each, to whom they provide advice and support, as and when required by the students. Prof Denison is also regent to 2 physician associate students.
Professor David J Lurie
1. Institute of Physics & Engineering in Medicine (IPEM), Academic Gold Medal award 2017.
2. Institute of Physics, Fellow
3. Institute of Physics and Engineering in Medicine, Fellow
4. International Society for Magnetic Resonance in Medicine, Member
5. International EPR (ESR) Society, Member
6. European Society of Radiology, Member
7. Fellowship Panel, Institute of Physics, Member
8. Course Accreditation Panel, Institute of Physics and Engineering in Medicine, Member
9. Research Degrees Committee, University of the Highlands and Islands, Member
10. Academic Line Manager, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen
11. Quality Assurance Committee, University of Aberdeen, Member
12. Senatus Academicus, University of Aberdeen, Member
13. European Congress of Radiology, Physics in Radiology Subcommittee, Chair 2017 meeting
15. European Congress of Radiology, Physics in Radiology Subcommittee, Chair 2017 meeting
16. European Congress of Radiology, Programme Planning Committee, Member for 2018 and 2019 conferences
17. Vice Chair of EU COST Action CA15209, “European Network on NMR Relaxometry” 2016-
19. Promotions panel for Greek universities, Member
20. Royal Society Challenge Grants Panel, Member

Professor Andy Welch
1. Institute of Physics and Engineering in Medicine, Corporate Member
2. NCRI PET Scanning Methodology Expert Panel, Member
3. Course Co-ordinator of the M.Sc./Pg.Dip. programmes in Medical Physics and Medical Imaging, University of Aberdeen
4. University of Aberdeen, Radiation Hazards Sub-committee, Chair
5. Scottish Imaging Network: A Platform for Scientific Excellence (SINAPSE). Executive Committee, Member

Dr Gordon D Waiter
1. Aberdeen Biomedical Imaging Centre, Acting Director (from Oct 2018)
2. Institute of Physics, Member
3. Institute of Physics and Engineering in Medicine (MIPEM), Corporate member
4. Health and Care Professions Council (HCPC), Registered Clinical Scientist.
5. SINAPSE Executive Committee, Aberdeen representative
6. SINAPSE Image Analysis Group, Lead
7. Institute of Medical Sciences Safety, Safety and Wellbeing Committee, University of Aberdeen, Chair (til Sept 2018)
8. College of Life Sciences and Medicine Ethical Review Board (CERB), Deputy Chair
9. University of Aberdeen Health and Safety Committee, member
10. Institute of Medical Sciences (IMS) Executive Committee, member
11. MR Responsible Person, University of Aberdeen
12. Honorary Clinical Scientist and MR Safety Expert, NHS Grampian
13. MSc in Medical Physics/Imaging: MR Imaging, course co-ordinator and lecturer (BP5503); Medical Image Processing (BP5505) Lecturer, Biomedical and Professional Topics in Healthcare Science (BP5003) Lecturer.
Dr Timothy Smith
1. Royal Society of Biology, Member
2. Chartered Biologist
3. Institute of Biomedical Sciences, Fellow.
4. Review board Harvard researcher initiated Bio-protocols, Member
5. Nuffield Research Placements, Project Supervisor

Dr Hugh Seton
1. MR Responsible Person for 4.7T preclinical MRI system, University of Aberdeen
2. Exams co-ordinator for MSc programmes in Medical Physics and Medical Imaging.
3. Musculoskeletal Programme Executive Group, Member

Dr Jiabao He
1. International Society for Magnetic Resonance in Medicine, Member
2. International Society for Magnetic Resonance in Medicine British Chapter, Member
3. European Society for Magnetic Resonance in Medicine & Biology, Member
4. Biomedical Physics: MSc in Medical Physics, lecturer.
5. Course Co-ordinator, MBChB Year 4 Student Selected Component, Institute of Medical Sciences, University of Aberdeen

Dr Ian Fleming
1. Programme coordinator & lecturer BT3006, Working out: Placement & career skills
2. Programme coordinator BT5007, MSci Industrial Placement
3. Course coordinator & lecturer BP5003, Medical Physics/Medical Imaging
4. Course coordinator & lecturer PA3802, Pharmacology: Mechanisms of disease and principles of chemotherapy
5. Positive Outcomes Task Force (SMMSN representative).
6. Industry Liaison Group (member)
7. Coordinator IMS Hotstart programme
8. Principle Investigator IMS Molecular Imaging laboratory
9. Radiation Protection Supervisor in IMS

All academic staff participate in the Personal Tutor Scheme for undergraduate students at the University of Aberdeen providing general support to students in matters such as achievement of the Graduate Attributes, Employability, Co-curricular opportunities and feedback as well as a pastoral support role.

The radiographic staff are actively encouraged to participate in departmental research, undertake a further qualification and continuing professional development.

Mrs Beverly MacLennan
1. MRI Lead Superintendent Radiographer, University of Aberdeen & NHS Grampian
2. Aberdeen Biomedical Imaging Centre executive committee, University of Aberdeen, member
3. Radiology MRI Modality Group, NHS Grampian, member
4. Plain Film Orbit Reporting prior to MRI- referrer and reporting radiographer
5. Society of Radiographers, Professional Member
6. Health and Care Professions Council (HCPC), Registered Diagnostic radiographer
7. PgC Health Studies (Clinical Practice) University of Dundee
8. PgC Clinical Reporting (MRI-General Investigations) Canterbury Christchurch University
9. Reporting Radiographer, NHS Grampian (MRI-MSK imaging)
10. Currently undertaking MSc Medical Imaging, Queen Margaret University (expected completion date April 2019)
Mrs Nichola Crouch
1. Research MRI radiographer, University of Aberdeen & NHS Grampian
2. Plain Film Orbit Reporting prior to MRI - referrer and reporting radiographer
3. Society of Radiographers, Professional Member
4. Health and Care Professions Council (HCPC), Registered Diagnostic radiographer
5. Completed MSc. Imaging (with distinction) at University of Edinburgh – May 2017
6. Radiology Contrast Group, NHS Grampian, member
7. Adviser role with FFC MRI Group
8. Supervise and oversee student visits

Miss Laura Reid
1. Research MRI Radiographer, University of Aberdeen & NHS Grampian
2. NHS Grampian Key Handler for Moving & Handling
3. Society of Radiographers, Professional Member
4. Health & Care Professions Council (HCPC), Registered Diagnostic Radiographer
5. MRI In Practice Course, Essential Guide to Philips in MRI
6. Undertaking training in cardiac volume analysis

Mr Michael Hendry
1. Research MRI Radiographer, University of Aberdeen & NHS Grampian
2. Society of Radiographers, Professional Member
4. Health & Care Professions Council (HCPC), Registered Diagnostic Radiographer

PhD STUDENTS

Miss Alexandra Andriu successfully defended her PhD thesis entitled ‘Evaluating the utility of αvβ3 integrin antagonists to detect and treat angiogenic tumour cells’. She published 3 papers during her PhD and an additional paper was in progress. Supervisors – Dr Ian Fleming and Prof Matteo Zanda.

Mr Gabriel Cheung submitted his thesis entitled “Development of Rapid IH Magnetic Resonance Chemical Shift Imaging Methods for Non-Invasive Measurement of Lactate in Heart and Breast Cancer”, in July 2018 with his viva voce undertaken in October. He had minor corrections to submit which were done and accepted and he will graduate in Spring 2019. Supervisors - Dr Jiabao He and Prof David Lurie.

Ms Clarisse de Vries is in Year 4 of her PhD entitled “Early Life Determinants of Brain Structural and Functional Connectivity and Relationship with Cognitive and Depressive Outcomes”. Her supervised period of study finishes in September 2019 and she hope to submit mid 2019. Supervisors – Prof Alison Murray and Dr Roger Staff.

Mr Adalberto Ferrari is in Year 3 of his PhD entitled “PET/CT Radiotracers for Molecular Imaging of Autocrine-Paracrine Serotonin Effect in Cancer” supported by a James Mearns Trust Studentship. He has optimised conditions for binding of radiolabelled ligands to the receptor and is investigating how anti-cancer agents that inhibit particular signal transduction pathways influence radiotracer binding. This will provide some insight into the potential utility of this class of radiotracers for assessing response to therapy in cancer patients. Supervisors – Dr Ian Fleming, Dr Lutz Schweiger and Dr Sergio Dall’Angelo.

Ms Maria Goni completed her PhD study entitled “Towards a neuroimaging biomarker of fatigue in inflammatory disease” supported by the Jules Thorn Charitable Trust, undertook her viva voce in December 2018 and look up a research fellow post in Berlin. Supervisors - Dr Neil Basu, Dr Gordon Waiter and Prof Alison Murray.

Ms Mina Khezrian is in Year 2 of her PhD entitled “Investigating the Role of Polypharmacy in Brain Ageing, and Cognitive, Physical and Emotional Impairment in Three Well Characterised Cohort Studies in Aberdeen”. Supervisors: Prof Alison Murray, Dr Chris McNeil and Prof Phyo Myint.
Dr Kirsten Laws is in Year 3 of an MD entitled ‘Hypoxia PET CT Imaging in Cancer’. The project will evaluate the utility of two PET radiotracers to detect hypoxia in lung cancer and investigate the mode of action of these radiotracers to provide a better understanding of the factors that enable their retention in hypoxic cancer cells. Supervisors – Dr Ian Fleming, Prof Matteo Zanda and Dr Les Samuel.

Mr Philipp Loske commenced his PhD in October 2018 entitled “Using Brain Network Models to Improve Diagnostic Accuracy of Behavioural Variant of Frontotemporal Dementia and Alzheimer’s Disease and Predicting Determinants of Treatment Response to LMTM” and is funded by Medical Research Scotland and TauRx. Supervisors: Dr Vesna Vuksanovic, Prof Alison Murray and Dr Gordon Waiter.

Mr Naif Majrashi is in Year 2 of his PhD entitled “Lifespan Model of Photo-Induced Neural Plasticity” in October 2017. Supervisors: Dr Gordon Waiter and Dr Trevor Ahearn.


Mr Nick Senn is in Year 4 of his PhD entitled “Development of Non-invasive Advanced Diffusion Magnetic Resonance Imaging Method for Human Skeletal Muscle”. Supervisor – Dr Jiabao He & Prof David Lurie.

Mr Shaun Stone is in Year 3 of his PhD supported by funding from SINAPSE and IXICO entitled “Prediction Models of Dementia Risk from Brain MR Images and Proxies of Cognitive Reserve”. Supervisors: Prof Alison Murray, Dr Gordon Waiter and Dr Anca Sandu-Giuraniuc.

Mr Robert Stormont continues his part-time PhD entitled “Radiofrequency coils for Fast Field-Cycling MRI” while working from GE Healthcare in the United States. Supervisor: Prof David Lurie.

Mr Shalendra Tripathi is in Year 2 of his PhD entitled “A study of Machine Learning analysis of brain FDG PET as a predictor of treatment response and progression in patients with Alzheimer’s dementia (AD)” Supervisors: Prof Alison Murray, Dr Bjoern Schelter, Prof Claude Wischik.

Ms Jennifer Waymont is in Year 3 of her PhD entitled “Automated detection of brain lesions in the Aberdeen Children of the 1950s and analysis of lifecourse determinants” funded by University of Aberdeen Development Trust. Supervisors: Dr Gordon Waiter, Prof Alison Murray and Dr Chris McNeil.

Mr Vasileios Zampetoulas undertook his viva voce in March 2018 and graduated in Summer 2018 from his PhD project entitled “Ultra-low field effects in Fast Field-Cycling MRI”. Supervisors – Prof David Lurie and Dr Lionel Broche.


Mr Nicholas Payne had completed his supervised period of his PhD entitled “Quadrupolar relaxation-based methods in FFC MRI” in 2017 and submitted his thesis in 2018. His viva voce took place in Sept 2018 and will graduate in 2019. Supervisors – Prof David Lurie, Dr Lionel Broche and Prof Malcolm Levitt (Southampton).

Dr Gordon Waiter supervised 2 masters students working in the field of Computational Neuroimaging with a focus on Ageing and Dementia. Their thesis titles were “Magnetization Transfer Imaging MTI changes in Fatigue: Comparison to DTI” and “Automated detection of Enlarged Perivascular Spaces EPVS”

Over the summer of 2018 the Lilian Sutton Building hosted one University of Aberdeen 2nd Year medical student and Mr Qaisar Khan, worked with Dr Chris McNeil for 7 weeks. This Medical Research Scotland funded summer studentship was entitled “Investigating the effect of early-life socioeconomic circumstances on late-life brain health”.

8


Basu N, Kaplan CM, Ichesco E, Larkin T, Harris RE, Murray AD, Waiter GD, Clauw DJ. Neurobiologic Features of Fibromyalgia Are Also Present Among Rheumatoid Arthritis Patients (2108). Arthritis and Rheumatology. doi.org/10.1002/art.40451


Andriu A, Crockett J, Dall’Angelo S, Piras M, Zanda M. & Fleming IN. Binding of αβ3 Integrin-Specific Radiotracers Is Modulated by Both Integrin Expression Level and Activation Status. Molecular imaging and biology 2018; 20, 1, 27-36.


BOOK CHAPTERS


PRESENTATIONS


Chapko D, Black C, Murray AD. Birth weight, metabolic syndrome and their associations with information processing speed in mid-life in the Generation Scotland subsample of the Aberdeen Children of the 1950s. SINAPSE Scientific Meeting, Edinburgh, June 2018.


Vuksanovic V, Staff RT, Ahearn T, Murray AD and Wischik CM. Divergent changes in structural correlation networks in Alzheimer’s disease and behavioural variant frontotemporal dementia SDRC Annual Conference 2018, 23 April, Glasgow, UK.

Vuksanovic V. Changes in structural correlation networks in Alzheimer’s disease and behavioural variant frontotemporal dementia. UK DRI @ Edinburgh Launch Symposium 2018, 11-12 April, Edinburgh, UK.


Ross P.J., Broche L.M., MacLeod M.J., Davies G.R. and Lurie D.J., “Fast field-cycling MRI: Novel contrast changes through switched magnetic fields”, 2nd European Congress of Medical Physics, Copenhagen, Denmark, August 2018, pOA020.


Senn N, Masannat Y, Husain E, Siow B, Heys SD, He J. Evaluation of microstructure heterogeneity from diffusion q-space imaging (QSI), diffusion weighted imaging (DWI) and non-Gaussian diffusion models in whole breast tumour. ISMRM (Paris, France) 2018.


Cheung SM, Husain E, Masannat Y, Mallikourti V, Heys SD, He J. Profiling lipid composition in whole breast tumours using two dimensional (2D) double quantum filtered (DQF) correlation spectroscopy (COSY) and multiple quantum coherence (MQC) magnetic resonance spectroscopy (MRS). ISMRM (Paris, France) 2018.

INVITED LECTURES

Murray AD. Brain imaging in people with dementia. What the general radiologist and specialist registrar need to know. British Institute of Radiology Annual Scientific meeting, Glasgow 25th May 2018.

Waiter GD. Multi-modal Neuroimaging with MRI. KDUIRC International Research Conference, Sri Lanka, September 2018

Waiter GD. (f)MRI in Neuroimaging Research. International Conference of Molecular Imaging, CUDIM, Uruguay, December 2018.

Waiter GD. fMRI and Brain Tumours: Clinical Use and Future Perspectives. International Conference of Molecular Imaging, CUDIM, Uruguay, December 2018.


Habota T. Prospective memory and social cognition in patients with chronic heart failure. NHS neuropsychology department CPD day, Aberdeen, February 2018.

Denison AR. Global Health and Medical Education. IFMSA Congress, Aberdeen 2018.

PUBLIC ENGAGEMENT

The University of Aberdeen communications team were inspired to develop a short video describing the work by Prof Alison Murray’s team on the MRC funded grant “Early-life origins of brain resilience to mental illness and cognitive impairment across the life-course”. The press release in August 2018 can be found here https://www.abdn.ac.uk/news/12148/
In September, Prof Murray gave an opinion piece “A change in approach to tackling Alzheimer’s” which was released to coincide with World Alzheimer’s Day. [https://www.abdn.ac.uk/news/12267/](https://www.abdn.ac.uk/news/12267/)

Also in September we were saddened by the death of Prof James Hutchison [https://www.abdn.ac.uk/news/12225/](https://www.abdn.ac.uk/news/12225/)

The University of Aberdeen held a reunion event to mark 50 Years of the Medical Physics MSc programme on Friday 2 November 2018. [https://www.abdn.ac.uk/news/12368/](https://www.abdn.ac.uk/news/12368/)
CURRENT GRANTS


Using Brain Network modules to improve diagnostic accuracy of behavioural variant of frontotemporal dementia and alzheimer’s disease and predicting determinants of treatment response to LMTM. Waiter
GD, Murray AD, Vukanovic V. MRS/TauRx funded PhD Studentship – P. Loske. £93,912/£10,000 1/10/2018 to 30/09/2022.


FAZA & FDG PET/CT Imaging in the evaluation and contouring of tumour and affected lymph nodes for volumetric modulated ARC radiotherapy (VMAT) for the radical treatment of squamous cell carcinoma of the anus. Samuel L, Fleming IN, Biao G Dall’Angelo S. 2014-2018.

Hypoxia PET CT Imaging in Cancer. Laws K, Fleming IN, Dall’Angelo S. Friends of Anchor Fellowship £144,403, 2016-2019.

Hypoxia in non small cell lung cancer: Molecular, translational and clinical study. Fleming IN. NHS Grampian Endowments. £15,000. 2018-2021

Detection of hypoxia in non small cell lung cancer with 18F FMISO PET/CT. Fleming IN, Dall’Angelo S, Samuel L. NHS Grampian Endowments. £11,634. 2017-2019.


Preclinical optimisation of targeted nanoparticles loaded with beta-emitting radionuclides for molecular radiotherapy. Smith TAD, McLaughlin AC, Trembleau L, Flux G. Chief Scientists Office (Scottish Government) £265,000 1/1/2017-31/12/2019.

End of Report