IEQAS

Irish External Quality Assessment Scheme

Programme & Book of Abstracts

Annual Participant Conference

Thursday 3rd October, 2019, Ashling Hotel

Contents

Welcome

Welcome to this year's IEQAS Participants' Conference. Now in its 38th year, IEQAS is one of the longest-standing quality initiatives in the Irish health service. We provide External Quality Assessment (EQA) schemes for laboratory medicine (including primary care), offering professional advice and guidance as necessary.

The scheme is educational rather than regulatory in nature and provides a means of external audit that operates continuously, thus helping laboratories to achieve their aim of continuous quality improvement.

An increasingly important role for IEQAS is participation in national and international initiatives that have the objective of improving quality of analysis in laboratory medicine.

IEQAS is a non-profit professional association directed by a Steering Committee consisting of nominees from the major professional bodies involved in Irish laboratory medicine:

- **Academy of Clinical Science & Laboratory Medicine**
- **Association of Clinical Biochemists in Ireland**
- **Royal College of Physicians of Ireland, Faculty of Pathology**

On behalf of the IEQAS Steering Committee

ISO 9001:2015 EQA QUALITY ASSURED ORGANISATION

EQALM European Organisation For External Quality Assurance Providers in Laboratory Medicine

IEQAS Committees

Steering Committee

Murphy, Dympna[4]	Chair Former Chief Medical Scientist, Tallaght UH
Driscoll, Therese[4]	Vice-Chair Senior Medical Scientist, Tallaght UH
Barrett, Ned[2]	Formerly Consultant Clinical Biochemist, UH Limerick
Brady, Jennifer[2]	Consultant Clinical Biochemist, Children's Health Ireland, Temple St and Crumlin
FitzGerald, Susan[3]	Consultant Microbiologist, St Vincent's UH
Graham, Hazel[4]	Formerly IEQAS Quality Manager
Howley, Patricia[5]	IEQAS Operations and Quality Manager
McGing, Peadar[4]	Principal Biochemist, Mater Misericordiae UH
Kane, Anne[5]	IEQAS Scheme Manager
Kelleher, Patricia[4]	Senior Medical Scientist, Tallaght UH
Ward, Cara[4]	Senior Medical Scientist, St Vincent's UH

Associated Professional Bodies

[1] Academy of Clinical Science & Laboratory Medicine
[2] Association of Clinical Biochemists in Ireland
[3] Royal College of Physicians of Ireland, Faculty of Pathology
[4]Co-opted by Steering Committee
[5]IEQAS Operations Management

Additional Specialist Advisors

Boran, Gerard	Consultant Chemical Pathologist, Tallaght UH
Brady, John	Formerly Laboratory Manager, Children's Health Ireland, Crumlin
Clarke, Frank	Lecturer, School of Biological Sciences, DIT
Griffin, Damian	Consultant Chemical Pathologist, Galway UH
McCafferty, Richard	Chief Medical Scientist, St James's Hospital
O'Kelly, Ruth	Principal Clinical Biochemist, Coombe Women & Infants UH
O'Sullivan, Niamh	Consultant Microbiologist, Children's Health Ireland, Crumlin/Coombe Women & Infants UH
Perera, Kanthi	Consultant Haematologist, MRH Tullamore
Phelan, Maria	IEQAS Scheme and Quality Administrator
Shirley, Ivan	Chief Medical Scientist, St Vincent's UH
Smith, Tom	Principal Biochemist, St Vincent's UH

Operations Management

Howley, Patricia (Operations & Quality Manager)
Kane, Anne (Scheme Manager)
Phelan, Maria (Scheme and Quality Administrator)
(UH = University Hospital)

Plenary Programme

FIRST PLENARY SESSION: Liffey Suite – 1st Floor

Chair: Ms Dympna Murphy, IEQAS Chair*

09:50 **Opening Address**
Ms Dympna Murphy*, IEQAS Chair

10:00 **National Laboratory Handbook & Communication of Critical Results in the Community:** Dr Mary Keogan, National Clinical Programme for Pathology and Beaumont Hospital

10:35 **Labquality – An Update for 2020:** Ms Jonna Pelanti, Labquality, Finland

10:50 – 11:20 Tea/Coffee

SECOND PLENARY SESSION: Liffey Suite - 1st Floor

Chair: Dr Peadar Mc Ging, Mater UH*

11:20 **National Trophoblastic Disease Registry, Monitoring & Advisory Centre:** Dr John Coulter, GTD Centre, Cork

11:55 **New Medicine – Will we cure all diseases by targeting Inflammation?:** Professor Luke O'Neill, School of Biochemistry & Immunology, Trinity College Dublin

12:30 – 13:45 Lunch**
(Chesterfields Restaurant - Ground Floor)

Afternoon Workshops

CLINICAL CHEMISTRY: Liffey Suite – 1st Floor

Chair: Dr Graham Lee, Mater UH

13:45 **Fluid EQA: Pilot Report:** Dr Peadar McGing*, Mater UH
14:10 **6 Sigma-based IQC**: Mr Antonio Martinez, UH Limerick
14:30 **Case Studies:**
1. A case of severe of hypokalaemia in primary care: Ms Noreen Montgomery, Sligo UH
2. A case of unusual test results: Ms Clodagh Kivlehan, SVUH
15:05 **Investigation and Management of Hyponatraemia in a Model 2 Hospital**: Mr Micheál Ryan, St John's Hospital, Limerick

HAEMATOLOGY: Phoenix Suite - 2nd Floor

Chair: Dr Norma Reidy, Cork UH

13:45 **Blood Cell Morphology Scheme - Annual Review:** Dr Kanthi Perera*, Midland Regional Hospital, Tullamore

14:45 **An Evaluation of the Clinical Utility of the Advanced Red Blood Cell Application of the CellaVision DI60 Digital Morphology System**: Ms Mairéad Kearns, St James's Hospital

15:00 **Update on Current ICSH Guideline Projects**: Mr Richard Mc Cafferty*, St James's Hospital

15:10 **Haematology Quiz:** Ms Therese Driscoll *, Tallaght UH

MICROBIOLOGY: Kilmainham Suite - Lower Ground Floor

Chair: Dr Suzy Fitzgerald SVUH*

13:45 **Implementing Film Array for CSF into the Diagnostic Laboratory; the University Hospital Waterford Experience:** Ms Kate Donnachie, UH Waterford

14:15 **Application of Next Generation Sequencing Technologies in Clinical Virology:** Dr Suzie Coughlan, National Virus Reference Laboratory

14:45 **LabScala: EQA in Microbiology - Result Input and Interpretation:** Ms Jonna Pelanti, Labquality, Finland

15:05 **From Bench to Bedside: Clinical Case:** Dr Mary Lucey, St. Vincent's UH

15:25 **Microbiology Quiz:** Dr Suzy Fitzgerald*, St Vincent's UH

TRANSFUSION: Montpelier Room - 2nd Floor

Chair: Ms Patsy Kelleher, Tallaght UH*

13:45 **Improving Blood Inventory Management: A Collaborative Approach:** Ms Alison Harper, Tallaght UH & Ms Helena Begley, Naas Hospital

14:25 **Introduction of a Second Sample Policy in Beaumont Hospital:** Ms Caoimhe Brady, Beaumont Hospital

15:05 **The Identification and Management of Anti-Jk3 in Pregnancy:** Ms Cáit Geaney, IBTS

***IEQAS Steering Committee member or Specialist Advisor**

Evaluation forms & badges: Leave at registration desk or workshops

ACSLM - 1 Day Conference: Accredited with CPD as a one-day event

Lunch: Gluten free & vegetarian options will be available. For other dietary requirements, contact the Restaurant Manager.

IEQAS Annual Report 2019

IEQAS continues to provide and expand a wide-ranging EQA service. Our national schemes include Clinical Chemistry, Full Blood Count, Blood Cell Morphology and HbA1c. We currently have participants in over 90 different schemes, run either by IEQAS directly, or in collaboration with Labquality, the Finnish EQA scheme. We are the partner in Ireland for this international EQA provider, which has 4500 laboratories from more than 50 countries participating in their programme of >150 different schemes. IEQAS has ISO 9001:2015 certification.

We wish to thank all members of the Steering Committee and other IEQAS Specialist Advisors for their continued support and commitment.

Thanks also to the staff in Tallaght UH, SVUH, Mater UH, Children's Health Ireland (CHI) at Crumlin and MRH Tullamore for facilitating IEQAS with sample collection, storage and distribution.

In November 2018, Dympna Murphy (formerly TUH) was elected as IEQAS Chair and Therese Driscoll (TUH) was elected as Vice-Chair.

We would like to thank the following retired members for their assistance over the years:

Mary Ryan, Cork UH - Haematology Review Group.

Ivan Shirley, SVUH - Steering Committee & Haematology Review Group. Ivan remains as a Specialist Advisor.

John Brady, CHI, Crumlin - Steering Committee & Clinical Chemistry Review Group. John remains as a Specialist Advisor.

Hazel Graham - IEQAS Quality Manager. We wish her great adventures and enjoyment in her retirement. Hazel remains in contact with IEQAS and will continue to serve the Steering Committee for the foreseeable future.

Activities 2019:

- **Fresh material IEQAS schemes:** Such material provides valuable information and will be continued where possible. Fresh material was used in our Clinical Chemistry Scheme (Feb, May, Sept & Dec 2019); HbA1c (all 5 distributions 2019) & Full Blood Count (Fresh Blood Survey, March 2019).

- **IFCC EurAAA1c project for HbA1c**

  IEQAS has been collaborating with this project since it was established in 2016. It was originally set up to as the EurA1c project, in order to achieve a Europe-wide assessment of HbA1c analysis, but the project has expanded to include participants from Asia, America and Africa. The name of the project has been changed to EurAAA1c, to reflect this.

  The project is part of the IFCC committee for Education in the Use of Biomarkers in Diabetes (C-EUBD). Its success highlights the importance of EQA in driving analytical quality improvement and follows on from the successful 2011 implementation of International Standardisation of HbA1c in Ireland.

  The 2016 data published in The Journal of Clinical Chemistry http://clinchem.aaccjnls.org/content/early/2018/05/22/clinchem.2018.2887955 shows that Irish (IEQAS) participants demonstrated the best performance (bias, CV) of the 10 countries collaborating in the fresh blood element of the survey.

  The EurA1c Report for 2017 and 2018 can be found at http://www.ieqas.ie/surveysstudiesandpublications/hba1c/

  This year's set of two whole blood samples will be sent to participants in two weeks' time. We encourage all participants to analyse their samples before Friday October 18th, so that their anonymised data may be included in the EurAAA1c project.

- **NCCP Tumour Marker Harmonisation Project (for NCCP designated cancer centres):** IEQAS is continuing to assist the National Cancer Control Programme with EQA and IQC elements of this project; currently for PSA, CA125 and hCG. Each centre takes turns to supply samples.
- **EQALM:** IEQAS is a member of the European Organisation for EQA Providers in Laboratory Medicine; IEQAS contributes to many EQALM surveys, which assist in suggesting improvements for EQA schemes across Europe.
- **National POCT Committee:** IEQAS are represented on this committee.
- **Reference Interval Harmonisation Project Group**: IEQAS assist on this National Clinical Programme for Pathology project.

- **ICSH:** Jointly with the ACSLM, IEQAS are affiliated with the International Council for Standardisation in Haematology; Richard McCafferty is the Irish representative.
- **Health Products Regulatory Authority:** IEQAS have regular contact with the HPRA. Individual participant performance is never discussed and remains the responsibility of the participant.
- **Suppliers:** IEQAS maintains good relations with many suppliers and assists with problems and issues as they arise.

Our Order Forms for 2020 will be sent out shortly. A summary of all schemes offered by IEQAS, and the changes for 2020, is included with this booklet.

A copy of the Labquality Product Catalogue 2020 is available in your Conference bag and can be found on IEQAS website. Labquality schemes should be ordered directly from IEQAS and we are delighted to assist you with any queries you may have throughout the year.

Ms Patricia Howley, Operations and Quality Manager, IEQAS

IEQAS
Irish External Quality Assessment Scheme

Are you interested in becoming more involved with IEQAS?

We welcome…

- **New Review Group Members**
- **Interesting cases for Blood Cell Morphology**
- **Sample collection for HbA1c & Clinical Chemistry**
- **Fresh Blood for Full Blood Count**
- **Statistical Analysis**

Please Contact IEQAS

…or if you are shy - fill out your details on the Conference Evaluation Form
We will contact you with further information

IEQAS EQA Schemes 2020

IEQAS provides schemes directly and from Labquality, our Finnish EQA partner

- IEQAS deal with all your orders & queries, incl. Labquality
- No VAT payment is required; prices in Euro
- Local advice & expertise
- Special Surveys
- Pre-order Conference places 2020

IEQAS National schemes

Blood Cell Morphology

- One sample, distributed every 2 months
- Educational (not scored)
- Annual review at IEQAS Conference
- Interesting cases - always welcome from any participant (contact IEQAS)

Clinical Chemistry (general)

- One sample, distributed monthly
- Special feature: >3 minimally processed patient pools
- >1 with Reference Values quoted
- Pilot study for 2020 - Peritoneal fluids

Full Blood Count

- Two samples, distributed every 2 months (analytes include RDW)
- Occasional Fresh Blood Survey

HbA_{1c}

- Two samples, distributed 5 times/year
- Fresh single-donor blood samples from donors with diabetes and/or pooled patient samples.
- Participation in $EurAAA_{1c,}$ (Annual survey since 2016 in Europe plus for 2019 will include African, Asian & American participants)
- Scored vs Reference Value (ERL)
- Suitable for Laboratory and POCT meters

NCCP Pilot: PSA, CA125, hCG

(for NCCP Designated Cancer Centres)

- One sample/analyte, distributed quarterly
- Minimally processed patient pools

Labquality (Finland

(Further details in 2020 Labquality Product Catalogue)

Changes for 2020 include:

New schemes & products

4330 Activated partial thromboplastin time, INR & fibrinogen
2703 Anti-Mullerian hormone
2749 Faecal occult blood, quantitative
3501 Flagger programme (NOKLUS)
5304 Gastrointestinal viral multiplex
3500 Percentiler programme (NOKLUS)
7806 Preanalytics in anatomic pathology

Integrated EQA service

Labquality is the first EQA provider, who has integrated pre-analytical, analytical and post-analytical phases to its EQA programmes. Advanced and traditional EQA schemes have been designed to fully support the total quality management system of the participating laboratories and fulfil ISO 15189 requirements concerning the extra-analytical phases. In addition to the samples, the integrated schemes include pre- and/or post-analytical questionnaires concerning the scope of the scheme.

All integrated EQA schemes are marked in the catalogue with EQA3 label

Preanalytical EQA programmes

8817 HIL-index |(DEKS)
7806 Preanalytics and process in anatomic pathology
7800 Preanalytics, clinical chemistry
7802 Preanalytics, microbiology
7804 Preanalytics, POCT in chemistry
7801 Preanalytics, urine and blood sample collection

6-7 FEBRUARY, 2020
HELSINKI, FINLAND

LABQUALITY
DAYS

International Congress on Quality in Laboratory Medicine

Labquality Days is one of the largest international congresses in 2020 focused on quality and laboratory medicine. The congress is held at Messukeskus Helsinki, Expo and Convention Centre. The program will cover topics on harmonization of medical practices, how to communicate the results to clinicians and patients, and quality assurance of new measurement technologies. Come and enjoy the inspiring scientific atmosphere and feel the pleasant cool winter days in Helsinki.
More information at **www.labqualitydays.com**

Under the auspices of

ifcc
International Federation of Clinical Chemistry and Laboratory Medicine

EFLM

Follow us @LabqualityDays, @LabqualityEQAS, #LQD2020

Plenary: Abstracts & Biographies

National Laboratory Handbook & Communication of Critical Results in the Community

Dr Mary Keogan, Clinical Lead, National Clinical Programme for Pathology and Consultant Immunologist, Beaumont Hospital

Abstract

The overall aim of the National Clinical Programme for Pathology (NCP-P) is to support the development of pathology to optimise patient care, to maximise the value of pathology in the healthcare system, and to ensure that services are delivered in a way which supports evolving models of care and clinical programs. The NCP-P is supported by several multidisciplinary, discipline-specific working groups. From a governance perspective, the output of the NCP-P is discussed and reviewed by the Clinical Advisory Group, and subsequently submitted to the Board of the Faculty of Pathology. All policies and documents are also subject to extensive external consultation, prior to progression through the HSE approvals process.

The National Laboratory Handbook is a suite of guidance documents, providing guidance for clinical laboratory users, laboratory scientists and pathologists, about specific laboratory tests, and optimal strategies for testing for particular conditions. In many cases strategies recommended by guidance documents in the National Laboratory Handbook can be supported and implemented through the design of MedLIS.

The NCP-P was asked to prioritise development of a procedure for the Communication of Critical Results (CCR) in the Community. Critical results can arise when patients, who appear well attend their GP or an outpatient clinic for investigation. Test results may indicate a potential medical emergency and the medical scientist processing these tests becomes aware of the potential risk in advance of any clinical suspicion. Many of these tests require urgent action to prevent adverse clinical consequences such as arrhythmias, seizures are altered consciousness or haemorrhage. The CCR procedure was developed with the input of a multidisciplinary focused working group, together with the discipline specific working groups of the NCP-P. The document provides guidance on which results should be regarded as critical, requiring action within two hours, those which should be phoned on the same day and those which should be phoned on the next working day. An escalation procedure has been developed to allow hospital staff contact the requesting physician,

and if contact cannot be made to contact the patient directly. In the event that a patient cannot be contacted support is available from the Gardaí, if appropriate. A suite of supporting documents to assist laboratories with the development of suitable posters for phlebotomy areas, laboratory instructions for scientists on call to follow, and suggested registration templates have been developed. This document will be launched at a Faculty of Pathology event to mark International Pathology Day, which will take place in the Royal College of Physicians of Ireland on 22 November 2019. The NCP-P would like to thank the many, multidisciplinary health care providers who contributed to this important piece of work.

Biography

Dr Mary Keogan is a Consultant Clinical Immunologist in Beaumont Hospital Dublin, Honorary Senior Lecturer in Pathology in the Royal College of Surgeons in Ireland, and is currently the Clinical Lead for the National Clinical Programme in Pathology.

Dr Keogan studied medicine at University College Dublin, undertook postgraduate medical training in medicine in Dublin, specialist training in Immunology in Cambridge in the UK, and was appointed as a Consultant Immunologist in Papworth NHS Trust to establish a specialised clinical immunology service.

Since returning to Dublin, Dr Keogan has developed a busy clinical immunology service in Beaumont Hospital, managing patients with allergy, immunodeficiency and autoimmunity. Additionally, the department provides a laboratory immunology service, and Dr Keogan is the Medical Director of the National Histocompatibility and Immunogenetics Service for Solid Organ Transplantation.

Dr Keogan is involved in undergraduate and postgraduate education, and is currently the National Specialty Director in the Royal College of Physicians of Ireland, with responsibility for Higher Specialist Training in Immunology. Research interests include optimisation of transplantation outcomes, as well as improving clinical and laboratory aspects of immunodeficiency diagnosis.

Labquality: An Update for 2020

Ms Jonna Pelanti, Head of EQA, Labquality, Finland

Abstract
An update on Labquality services and products.

Biography
Jonna Pelanti works in Labquality, a Finnish service company focused on quality assurance of medical laboratories and point of care testing, where she is the head of EQA production and part of Labquality's management team.

Jonna's main responsibility is to digitalize Labquality's EQA services and to develop its service portal LabScala, which is a used by Labquality's customers and employees.

Jonna is interested in external quality assurance in general and as a science. She finds that it is important to work towards correct results in laboratory medicine through co-operation between EQA-providers, customers and relevant groups, institutions and organizations. One of her key interests is in developing new kinds of products for end-to-end quality assessment and especially for the pre-analytical phase. She has, thanks to her technology background, an interest and knowledge in digital solutions, is fascinated with developing external quality assurance and eventually patient safety through professional utilization of modern solutions.

Jonna Pelanti is a board member of the Finnish society of clinical chemistry and a member of the Nordic pre-analytical working group.

National Gestational Trophoblastic Disease Registry, Monitoring & Advisory Centre

Dr John Coulter, Consultant Gynaecologist & Clinical Lead, GTD Centre, Cork

Abstract

About the National Gestational Trophoblastic Disease Registry, Monitoring & Advisory Centre.

Biography

John Coulter is a sub-specialty trained gynaecological oncologist working at Cork University Maternity Hospital. Having completed pre-fellowship surgical training, he attained FRCSI in Dublin in 1993. He then pursued a postgraduate career in obstetrics and gynaecology with the intention of training in gynaecological oncology, completing his MRCOG in London in 1996. From 1998 to 2002 he undertook a gynaecological oncology fellowship training in Melbourne and Perth, Australia and attained CGO certification in 2003 with RANZCOG. John is a current member of the National Clinical Leads group in Gynaecological Oncology in Ireland and the gynaecology representative on the National Guideline Committee for the management of hereditary cancers. He is the clinical lead of the Irish National Trophoblastic Disease Centre in Cork and works closely with the National Cancer Control Program in Ireland.

New Medicine: Will we cure all diseases by targeting Inflammation?

Professor Luke O'Neill, Professor and Chair of Biochemistry, School of Biochemistry & Immunology, Trinity College Dublin

Abstract

Will we cure all diseases by targeting Inflammation?

Inflammation lies at the heart of a huge number of diseases. These include Rheumatoid Arthritis, Osteoarthritis, Crohn's disease, Ulcerative Colitis, Psoriasis and also neurodegenerative conditions such as Alzheimer's and Parkinson's disease. The cause of these diseases remains unknown, but it has become clear that a dysfunctional inflammatory response lies at their core.

This presents a number of targets to develop novel anti-inflammatory agents against. Mechanistic insights into these targets is providing new opportunities for drug development and there is much optimism that new treatments will be found that could revolutionise medicine.

Key targets that will be discussed include the NLRP3 inflammasome and metabolic changes occurring in inflammatory cells that might be amenable to therapeutic targeting. The vista of slowing down progression or even limiting initiation of inflammatory diseases will be discussed.

Biography

Professor Luke O'Neill holds the Chair of Biochemistry at Trinity College Dublin where he leads the Inflammation Research Group. He has a PhD in Pharmacology from the University of London and carried out Post-Doctoral research at Cambridge U.K. His research is in the area of the molecular basis to inflammation, with a particular focus on innate immunity, Toll-like receptors, inflammasomes and metabolic reprogramming in macrophage activation.

In 2018 Luke was named by Clarivates/Thompson Reuters as one of the world's most influential scientists, being in the top 1% in Immunology. He has also recently been ranked by the journal PLoS Biology as Ireland's leading scientist, based on the impact of his work.

Luke is co-founder of spin-out companies Inflazome and Sitryx, which are developing new treatments for inflammatory diseases.

Luke has won numerous awards for his research including the European Federation of Immunology Societies medal, the International Cytokine and Interferon Society Milstein Award, The Royal Dublin Society Boyle Medal for Scientific Excellence, The Royal Irish Academy Gold Medal for Life Sciences. He was elected a Fellow of the Royal Society in 2016.

Luke has also recently published a best-selling popular science book 'Humanology: a scientist's guide to our amazing existence'.


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Workshop Abstracts & Biographies

Clinical Chemistry:

Fluid EQA: Pilot Report

Dr Peadar McGing, Principal Biochemist, Mater UH*

Abstract

Biochemical analysis of atypical body fluids (fluids other than blood and urine) is a small but clinically significant component of routine workload in Clinical Chemistry laboratories. In the past this has been carried out using assays validated for serum / plasma and the assumption made that these assays are valid in that different matrix. In the very recent past there has been a questioning of that assumption and a push to verify the use of such testing.

At the 2018 IEQAS Annual Conference Peadar presented a workshop to discuss this new reality, and arising from that it was agreed to run one pilot distribution of a pleural fluid sample with the standard Clinical Chemistry Scheme distribution. That sample was posted out with September's Clinical Chemistry sample A1909.

This workshop will report on the findings of that distribution and discuss possible future fluid EQA.

Biography

Dr Peadar McGing is a Principal Clinical Biochemist at the Mater Misericordiae University Hospital in Dublin. He has a strong interest in EQA and in the biochemistry of atypical body fluids. Peadar is a member of the IEQAS Steering Committee and the immediate past chair. He is co-author and co-editor of the ACBI's guideline booklet The Biochemistry of Body Fluids and was an invited speaker on this topic at the 2018 ACB Focus Conference Trainee Day in Manchester. At the 2018 IEQAS conference Peadar led a workshop on fluids which led to the 2019 pilot distribution being discussed at this meeting.

6 Sigma-based IQC

Mr Antonio Reche Martinez, Principal Biochemist, UH Limerick

Abstract

CLSI third edition of the C24 guide published on 2006 gives practical advices on the selection of Statistical Control procedures and includes a simple graphic proposal that uses the 6 Sigma Metric as a tool for the selection of Quality Control procedures.

This workshop will describe the use of the 6 Sigma Metric as a tool for the selection of the correct IQC rules and number of control measurements to ensure the required quality for an assay based on its estimated performance (imprecision and bias). The goals are to understand and learn how to calculate these 6 Sigma Metric values and how to use them to select the best IQC strategies.

Biography

Antonio Reche (PharmD, PG Cert Clinical Genetic, MSc Clinical Biochemistry, EuSpLm), is a Principal Biochemist at Limerick University Hospital, who has accumulated over 10 years training and experience in Clinical Biochemistry, working in the publicly funded healthcare system of 3 different countries - Spain, UK and Ireland.

Antonio has actively participated in the clinical, educational and managerial elements of the profession and in particular, providing clinical and scientific advice to clinicians regarding biochemical investigations and their interpretation. He develops best practice guidelines, clinical protocols and testing strategies within the department, leading and managing some of the main tasks to acquire and maintain ISO 15189. Antonio has also played a main role in setting up a new automated laboratory, being actively involved in the merging project for the integration of two hospitals, while overcoming the challenges of providing a comprehensive clinical biochemistry service across a laboratory network.

A case of severe hypokalaemia in primary care

Ms Noreen Montgomery, Chief Medical Scientist, Sligo UH

Abstract

In 2014 the Clinical Biochemistry department at Sligo UH conducted an audit of critical Potassium result communication in primary care locations and reviewed patient follow up.

The audit findings were shared and a period of consultation between the Renal Consultants, GP network representatives and the laboratory teams followed, leading to the removal of Potassium reporting from the routine GP Renal profile. Potassium analysis remained available to GPs when specifically requested and when the specimen was received in the laboratory within 4hrs of phlebotomy. Other hospitals within the Saolta group had previously implemented this change. The introduction of improved data management features via Cobas IT middleware in more recent years has permitted greater result manipulation through automated rerun, data blocking and flagging capabilities.

This presentation will outline the original audit findings and review a case of severe hypokalaemia in a GP patient, which was detected as an incidental finding. The study reflects on the clinical investigation of the patient over the previous years and emphasises the critical role of laboratory testing, leading to diagnosis and treatment. Furthermore, the importance of cross discipline communication is highlighted, when in the same case, another incidental Hb variant finding was presented on HbA1c analysis. In conclusion the current "rules" based approach to reporting Potassium values to GPs will be summarised.

Biography

Noreen Montgomery has worked at the Biochemistry Department of Sligo University Hospital for the past fourteen years. A graduate of GMIT Medical Laboratory Science, Noreen began her career in 1992 as a Trainee Biomedical Scientist at the Clinical Biochemistry Laboratories of King's College Hospital, London. She continued her studies, completing the University of London MSc in Clinical Biochemistry. Noreen worked for five years at the Clinical Biochemistry Department of Antrim Area Hospital, Northern Ireland, progressing to Senior Biomedical Scientist. A member of the ACSLM Advisory Body for Clinical Chemistry, she has been in her current role as Chief Medical Scientist at Sligo UH since 2012.

A case of unusual test results

Ms Clodagh Kivlehan, Clinical Biochemist, St Vincent's UH

Abstract

Immunoassays are employed in Clinical Biochemistry laboratories to measure a wide variety of analytes such as protein and steroid hormones, drugs and tumour markers. Sandwich or non-competitive immunoassays are used to measure large molecules, such as TSH and cardiac troponins. Competitive immunoassays measure small molecules, such as the thyroid hormones. Certain immunoassay manufacturers will utilise streptavidin-biotin technology in their assay detection systems.

Biotin is a water-soluble B vitamin necessary for several metabolic reactions. Biotin can form strong bonds with various molecules, including streptavidin and avidin. Therefore, the presence of circulating biotin can cause immunoassay interference when a specimen is taken and analysed. The interference can be positive or negative in nature depending on the immunoassay. In sandwich assays, results can be falsely decreased and in competitive assays, the results can be falsely increased.

This combination of positive and negative interference can resemble pathological states, such as hyperthyroidism, and, as such, may lead to incorrect diagnosis and patient mismanagement. While biotin is a vitamin commonly supplemented in the population, high doses of biotin may be used to treat particular inborn errors of metabolism and, in more recent times, multiple sclerosis. Here, a case will be presented of biotin interference on the Roche TSH, FT4, PTH and 25 hydroxyvitamin D assays and the implications of this interference in the interpretation of laboratory results.

Biography

Clodagh has worked as a Clinical Biochemist in St Vincent's University Hospital since 2016. She graduated from the National University of Ireland Galway with a BSc honours degree in Biochemistry. Clodagh is currently undertaking an MSc in Clinical Chemistry at Trinity College Dublin which she will complete in June 2020. Her MSc research project involves the investigation of calprotectin concentrations in pregnancy.

Investigation and Management of Hyponatraemia in a Model 2 Hospital

Mr Micheál Ryan, Senior Clinical Biochemist, St John's Hospital, Limerick

Abstract

Micheál Ryan[1], Con Cronin[2], Inas Makki[2], Liam O'Halloran[2]
Pathology Department[1], St. John's Hospital, Limerick.
Department of Medicine[2], St. John's Hospital, Limerick.

Introduction: Hyponatraemia is the most common disorder of body fluid and electrolyte balance encountered in clinical practice. It can lead to a wide spectrum of clinical symptoms, from subtle to severe or even life threatening and is associated with increased mortality, morbidity and length of hospital stay.

Objective: The primary aim of this clinical audit was to assess current practice relating to the investigation and management of patients with Hyponatraemia based on the European Society of Intensive Care Medicine (ESICM), the European Society of Endocrinology (ESE) and the European Renal Association – European Dialysis and Transplant Association (ERA–EDTA) Clinical Practice Guideline (1).

Study Design: This was a retrospective audit (1st Jan 2017 – 31st Dec 2017) at St. John's Hospital which is a model 2 hospital (non-ICU /HDU/CCU). Patients referred to the Medical Assessment Unit (MAU)/ In-patients under the care of a single hospital medical team were included. Patients were included for analysis if they had at least one serum Sodium result <128 mmol/L during their hospital in-patient stay/MAU assessment. Data was collected from the Laboratory Information System and a review of patient charts, with special reference to clinical setting and biochemical investigations.

Results: There were 25 patients (pts), mean age 75.4 years (range 55-88), sex 17:8, F:M, Mean serum sodium: 124 mmol/L. 4 patients were managed in MAU, 21 were in-patients. 15/25 patients had background diuretic therapy contributing to Hyponatraemia. Osmolality studies were carried out in 11 patients (44%) including 6 patients on diuretics. Significant underlying Cardiorespiratory and Renal disease was seen in 14/25 (56%) of patients. 3 patients were transferred to University Hospital Limerick (model 4 hospital) and 3 patients died from advanced cardiorespiratory failure. The remaining 19 patients responded to discontinuation of diuretics, cautious fluid and electrolyte replacement and fluid restriction.

Conclusions: Patients with Hyponatraemia often have multiple co-morbidities and require careful clinical and laboratory assessment for optimal management.

Reference

(1) Spasovski G. et al. European Journal of Endocrinology (2014) 170: G1-G47.

Biography

Micheál Ryan is currently Senior Clinical Biochemist in the Pathology Department of St. John's Hospital, Limerick. Micheál graduated from the University of Limerick with a BSc. in Industrial Biochemistry (2003) and completed a MSc. in Biomedical Science (2007), University of Ulster, Coleraine. He returned to the University of Limerick and completed a Post-Graduate Diploma in Quality Management – Lean Health Systems (2009). Micheál is the current ACB Trainee Representative for the Republic of Ireland Region.'

Workshop Abstracts & Biographies

Haematology:

Blood Cell Morphology Scheme: Annual review

Dr Kanthi Perera, Consultant Haematologist, Midland Regional Hospital (MRH), Tullamore

Abstract

During 2018-2019 IEQAS circulated 6 morphology cases. The presentation will review some of the morphological abnormalities in each case with a brief review of the diagnosis, to include how one could arrive at the diagnosis.

Biography

Dr Kanthi Perera graduated from the Faculty of Medicine, University of Colombo, Sri Lanka, initiated her post-graduate training in Sri Lanka and completed it at The Royal London Hospital in England. She was appointed as the first Consultant Haematologist in the National Cancer Hospital in Colombo and gave the leadership for the establishment of the first stem cell transplant unit in the country at the National Cancer Hospital. Dr Perera was hugely involved with both undergraduate and postgraduate teaching in the country. She moved to Ireland in 2001 and held a temporary consultant post in Mid-Western Regional Hospital, Limerick for 3 years and in UCH Galway for 9 months and is now Consultant Haematologist at the Midland Regional Hospital in Tullamore. Dr Perera carries out regular morphology teaching for SpRs and is a member of IEQAS Haematology Review Group.

An Evaluation of the Clinical Utility of the Advanced Red Blood Cell Application of the Cellavision D160 Digital Morphology System

Ms Mairéad Kearns, Medical Scientist, St James's Hospital

Abstract

Introduction: Manual microscopy is the gold standard method for examination of peripheral blood smears. However, manual microscopy is laborious, subject to subjectivity and lacking in accuracy of quantification, particularly in regard to red cell morphology. This study is the first to evaluate the clinical efficiency and operational utility of the Advanced Red Blood Cell Application using reporting criteria established by the International Committee for Standardisation in Haematology.

Method: 100 samples; 80 abnormal and 20 normal samples were analysed over the course of this study. Once a grading had been given by the Cellavision, a trained operator manually reclassified the cells in the event they had been erroneously grouped into the incorrect category. The gold standard method of light microscopy was compared to the preliminary grading given by the red cell module and to the post-classification result after manual adjustment. Time trials were run and a questionnaire was completed by the scientist in the department to assess the clinical utility of the application.

Results: Each abnormality yielded varied results, the most notable being for Sickle cell samples and schistocytes. Sickle cells had high sensitivity and specificity across all comparisons. Schistocytes had a significant false positive percentage when the manual method was compared to the pre and post classifications. However, the detection of apparent low levels of schistocytes, below clinical significance in a high proportion of samples, which may not be apparent using manual microscopy, was of interest as regards the "true" lower cut-off for normal as regards schistocytes that might be revealed by this technology.

Discussion: The advanced red blood cell application is a useful and user friendly tool when used as a visual aid, along with optical light microscopy. The varied results for schistocytes means there may be scope for the ICSH guidelines to be adjusted for this morphological abnormality.

Biography
Mairéad Kearns will be graduating from TU Dublin in October 2019 and is currently working in the Biochemistry laboratory in St. James's Hospital in Dublin. She majored in both Clinical Chemistry and Blood Transfusion in her final year.

For her final year project, Mairéad carried out a study of the Advanced Red Blood Cell Application on the Sysmex CellaVision Di-60 in the Haematology laboratory in St. James's Hospital. This study took place over the course of 12 weeks and focused on red blood cell abnormalities.

Update on Current ICSH Guideline Projects

Mr Richard McCafferty, Chief Medical Scientist, Haematology, St James's Hospital

Abstract

The International Council for Standardization in haematology (ICSH) is a not-for-profit organization that aims to achieve reliable and reproducible results in laboratory analysis in the field of diagnostic haematology. It was founded by the European Society of Haematology in 1963. It is recognized as an NGO by the World Health Organization (WHO). Both IEQAS and the Academy of Clinical Science and Laboratory Medicine (ACSLM) are jointly affiliated to the ICSH. ICSH guidelines and recommendations are free to download from their website at www.icsh.org.

Expert ICSH working groups are currently working on or have recently published the following projects:

In haematology:

- ICSH Guideline for the standardization of MPV testing
- ICSH Guideline for Immuno-differential method by Flow Cytometry
- ICSH Guideline for CD34 staining by Immunohistochemistry
- ICSH Guideline for Digital Morphology systems in Haematology
- ICSH Guideline for Internal Quality Control Policy for Blood Cell Counters
- ICSH New Haemoglobin A2 standard (in collaboration with WHO)
- ICSH Guideline for Immature Reticulocyte testing

In haemostasis:

- ICSH Guideline on Pre-analytical variables in Coagulation testing
- ICSH Guideline on Factor VIII / Factor IX inhibitors
- ICSH Guideline for mixing studies in Coagulation testing
- ICSH Guideline for Point of Care Testing in Coagulation
- ICSH Guideline for ADAMTS13 testing

- ICSH Guideline for Critical Result reporting in Haemostasis

This presentation will provide an overview of a selection of the above ICSH guideline projects and give an update on their status.

Biography
Richard McCafferty has been Chief Medical Scientist in Haematology at St. James's Hospital Dublin since 1997 and has over 30 years' experience at a senior level in haematology laboratory management.

He trained and worked in both Ireland and in the UK, having spent 14 years in London firstly at University College Hospital and subsequently at the National Hospital for Neurology and Neurosurgery, where he became Chief Biomedical Scientist in Haematology. He has been involved in laboratory accreditation since 1996; both the lab at the National Hospital gained CPA accreditation under his leadership and subsequently the haematology laboratory at St James's was among the first in Ireland to become accredited in 2003.

Richard served as Chair of the Haematology Advisory Body of the Academy of Clinical Science and Lab Medicine (ACSLM) for 10 years from 2005 to 2015 where he led the organisation of blood cell morphology workshops, seminars and short courses in all aspects of Laboratory Haematology presented by Irish and international speakers. He remains involved with the Academy as a member of the Academy council.

He has represented both the Academy and IEQAS on the International Council for Standardisation in Haematology (ICSH) since 2013, where he is the only Irish participant and is co-author on several guideline papers.

He has presented the blood cell morphology quiz at the annual Haematology Association of Ireland (HAI) meeting, in collaboration with colleagues at St James's for many years. He was also a co-founder of the Laboratory Science session at the HAI which is now a regular feature of this conference.

Haematology Quiz

Ms Therese Driscoll, Senior Medical Scientist, Haematology, Tallaght UH*

Abstract
An interactive quiz on various aspects of Haematology.

Biography
Therese Driscoll graduated as a Medical Scientist from C.I.T later obtaining an MSc in Biomedical Science from the University of Ulster in Coleraine in 1993. She has been employed as a Senior Medical Scientist in the Haematology Laboratory in Tallaght Hospital since 2000 where she has a particular interest in blood film morphology.

Therese has been involved with IEQAS since 2004 serving as a Specialist Adviser and is also a member of the IEQAS Haematology Review Group and currently Vice Chair of the IEQAS Steering Committee.

Workshop Abstracts & Biographies

Microbiology:

Implementing Film Array for CSF into the Diagnostic Laboratory; the University Hospital Waterford Experience

Ms Kate Donnachie, Medical Scientist, UH Waterford

Abstract

Rapid diagnosis of meningitis and encephalitis is essential in minimising the associated mortality and morbidity. Molecular testing can aid diagnosis by reducing the turnaround time of results compared to traditional culture methods and by providing concurrent bacterial and viral investigation. The BioFire® FilmArray® Meningitis/Encephalitis (ME) Panel provides a multiplex PCR assay for the detection of 14 pathogens in cerebrospinal fluid.

The BioFire® ME Panel was introduced to the Microbiology Department, UHW in April 2016. In this presentation I will discuss the process involved in implementing the assay, the benefits of its introduction and the issues encountered. I will also discuss the impact of the introduction of the BioFire® ME Panel on patient length of stay, workflow within the laboratory and present the findings from the first three years of routine diagnostic use.

Biography

Kate Donnachie is a Medical Scientist working in the Microbiology Department in University Hospital Waterford. She began her career in Waterford in 2006 after completing her honours degree in Biomedical Science (Cork Institute of Technology/University College Cork). Kate completed her MSc in 2009.

Application of Next Generation Sequencing Technologies in Clinical Virology

Dr Suzie Coughlan, Principal Clinical Scientist, University College Dublin National Virus Reference Laboratory

Abstract

The integration of next generation sequencing (NGS) technology into routine diagnostic virology represents a paradigm shift in clinical practice. The breadth of applications for NGS technology continues to increase, and in 2019 extends from designing individualised therapies for HIV, to investigating local outbreaks of infection and to global pandemic preparedness planning. In addition, metagenomic NGS is a promising approach for the diagnosis of any infectious disease, including viruses, as a spectrum of potential causes can be identified by a single assay. This approach is currently used in specialist centres to improve the diagnosis of neurologic infections in CNS disease.

This presentation will review some of the applications of NGS employed at University College Dublin National Virus Reference Laboratory (UCD NVRL) to enhance patient care and inform public health responses to both to emerging events and preparedness planning. Significant challenges remain to maximise the potential of NGS in the clinical setting and these will also be reviewed.

Biography

Suzie Coughlan PhD FRCPath (Virology): Dr Suzie Coughlan is the Principal Clinical Scientist at the National Virus Reference Laboratory, University College Dublin, where she has responsibility for the diagnostic molecular virology department. She is also an Adjunct Associate Professor with the School of Public Health, Physiotherapy and Sports Science at UCD. Dr Coughlan is a Fellow of the Royal College of Pathologists and a member of the Irish Clinical Scientists Association and of the Irish Academy of Clinical Science and Laboratory Medicine advisory committee on Molecular Diagnostics.

LabScala: EQA in Microbiology - Result Input and Interpretation

Ms Jonna Pelanti, Head of EQA, Labquality, Finland

Abstract
An overview on the result input and report interpretation of Labquality's microbiology schemes will be provided. Examples of results from some individual schemes, will be discussed and some general tips on how best to use LabScala, will be provided.

Biography
Jonna Pelanti works in Labquality, a Finnish service company focused on quality assurance of medical laboratories and point of care testing, where she is the head of EQA production and part of Labquality's management team. Jonna's main responsibility is to digitalize Labquality's EQA services and to develop Labquality's service portal LabScala which is a used by Labquality's customers and employees.

Jonna is interested in external quality assurance in general and as a science. She finds that it is important to work towards correct results in laboratory medicine through co-operation between EQA-providers, customers and relevant groups, institutions and organizations. Developing new kinds of products for end-to-end quality assessment and especially for the preanalytical phase is one of her key interests. She has, thanks to her technology background, an interest and knowledge in digital solutions. She is fascinated with developing external quality assurance and eventually patient safety through professional utilization of modern solutions.

Jonna Pelanti is a board member of the Finnish society of clinical chemistry and a member of the Nordic preanalytical working group.

From Bench to Bedside: Clinical Case

Dr Mary Lucey, Specialist Registrar in Microbiology, St. Vincent's UH

Abstract

A Case study emphasising the importance of the microbiology laboratory diagnosis in identifying unusual sources of sepsis.

Biography

Dr Mary Lucey is a Specialist Registrar in Microbiology and is currently working in St. Vincent's University Hospital.

Microbiology Quiz

Dr Suzy Fitzgerald, Consultant Microbiologist, St. Vincent's University Hospital

Abstract

An interactive quiz on various aspects of microbiology.

Biography

Dr Suzy Fitzgerald is a Consultant Microbiologist at St. Vincent's University Hospital and St. Columcille's Hospital. She is a member of the IEQAS Steering Committee.

Workshop Abstracts & Biographies

Transfusion:

Improving Blood Inventory Management: A Collaborative Approach

Ms Alison Harper, Chief Medical Scientist, Blood Transfusion, Tallaght UH & Ms Helena Begley, Senior Medical Scientist, Blood Transfusion, Naas Hospital

Abstract

Introduction: Donated blood is a critical resource in healthcare. It is a perishable product and therefore good management is crucial. Good inventory management is a balance of maintaining sufficient stocks to meet clinical demand whilst keeping expiry losses to a minimum. A declining donor pool with frequent shortages, together with an increasing population and changes in age demographic presents a challenge to hospital blood banks. Developing innovative blood management strategies are essential for future demands.

Problem Description: In May 2018, a blood stock management meeting was held between Tallaght University Hospital, Naas General Hospital, The Coombe Women & Infants University Hospital, and representatives from the IBTS and HSE. A rerouting system already existed between the 3 hospitals but as HSE figures demonstrated, as a group, our orders of O Rh D Negative blood fell well above the national recommendation of 12%. We needed to find a collaborative solution to this issue.

Aims and Objectives: The aim was to reduce O Rh D Negative orders and improve overall blood inventory management across the 3 hospitals. A collaborative stock exchange program was introduced to improve overall blood inventory and reduce expiry losses across the 3 hospitals.

Intervention: A weekly exchange program was implemented in June 2018. With Tallaght Hospital acting as the main hub, short dated blood could be exchanged for longer expiry dates for all blood groups.

Results: Results from the 3 hospitals demonstrated considerable improvements in overall ordering trends and blood usage. All hospitals have seen improvements in blood inventory management. This project has not been without its challenges. An increased workload was observed in stock management and communication

between hospitals, and monthly returns to the HSE Blood Stock Management System database has become more time-consuming and complex.

Conclusion: Although implementation of this program has been challenging at times, results demonstrate it has been a worthwhile endeavour. This program has improved the blood stock management skills within each hospital, which will facilitate strategies for future blood inventory challenges.

Biography

Alison Harper graduated from DIT in 2004 with a BSc in Biomedical Science. She achieved an MSc in Molecular Pathology from DIT/TCD in 2009 and most recently, successfully completed an MSc in Leadership from RCSI (2019). Alison has worked as a medical Scientist in TUH since 2004 and took up post as Chief Medical Scientist, Blood Transfusion, in November 2016.

Helena Begley graduated from Kevin St DIT/TCD with a BSc in Biomedical Science in 1997 and then went on to complete her MSc in Molecular Pathology in 2004. She worked in TUH from its opening in 1998 until 2006 when she moved to Naas General Hospital. Helena is the Senior Scientist in Blood Transfusion NGH.

Introduction of a Second Sample Policy in Beaumont Hospital

Ms Caoimhe Brady, Medical Scientist, Blood Transfusion, Beaumont Hospital

Abstract

An ABO-incompatible red cell transfusion can be catastrophic for a patient and is often caused by WBIT. Over a 10-year period, 48 WBIT events occurred in our Blood Transfusion Department (BTD), with one case resulting in an ABO incompatible red blood cell transfusion. To address the issue a second sample policy was introduced specifically targeting first time non-O patients requiring a transfusion. This policy was implemented in January 2019 and a follow up audit was performed post implementation to ensure compliance. A cost analysis was also performed highlighting the cost savings achieved with this second sample policy.

Biography

Caoimhe completed her BSc in Biomedical Science from DIT in 2015. In 2019 she completed an MSc in Clinical Laboratory Science from TUD. As part of this MSc Caoimhe has implemented a second sample policy for first time for non-O patients requiring transfusion in Beaumont Hospital, where she works as a Medical Scientist in the Blood Transfusion Department.

The Identification and Management of Anti-Jk3 in Pregnancy

Ms Cáit Geaney, Senior Medical Scientist, IBTS

Abstract

Cáit Geaney, Edel Scally, Diarmaid O'Donghaile, Deirdre Murphy
Red Cell Immunohaematology Laboratory, Irish Blood Transfusion Service, James's St., Dublin 8, Blood Transfusion Laboratory, Rotunda Hospital, Parnell Street, Dublin 11.

Introduction: The Kidd-null phenotype Jk(a-b-) occurs in individuals who do not express the JK glycoprotein. The Kidd blood group system contains three antigens: Jka, Jkb and Jk3. Anti-Jk3 is a high incidence antigen present in more than 99.9% of populations. Jk(a-b) individuals can make an antibody against the Jk3 antigen. Jk(a-b-) is the rare null phenotype commonly found in Polynesians. Kidd antibodies may cause acute and delayed haemolytic reactions as well as haemolytic disease of the fetus and newborn (HDFN).

We present a case of a pregnant 45 year old female where anti-Jk3 was identified. The process of antibody identification, antibody titration throughout her pregnancy will be discussed. In addition, the complexity of trying to source blood for this patient; targeted screening of the Irish donor population and importation of blood from the European Union to cover delivery.

Results: On initial workup the patient grouped as ORhD positive, a historical red cell phenotype was available C+ E- c- e+ M+ S- s+ K- Fy(a+b-) Jk(a-b-). Pan reactivity was observed by the indirect antiglobulin test (IAT) and by enzyme-IAT technique. Using rare Jk (a-b-) cells from the RCI repertoire of rare reference cells negative reactions were obtained. To ensure there were no other clinically significant antibodies detectable adsorption techniques were performed. Throughout her pregnancy antibody titrations were performed. Titrations are performed using the Kidd phenotypes: Jk(a-b+), Jk(a+b-) and Jk(a+b+) to indicate the requirement for Fetal Medicine Specialist unit referral.

Conclusion: The provision of blood for these patients does require importation of units if suitable blood cannot be sourced in the country. Jk3- negative people are most likely to be found in Polynesians, South East Asians and Finns. Liquid donations and frozen units from the bank were sought to cover delivery. Siblings of patients with anti-Jk3 should be tested for compatibility for the

patient also and patients are urged to donate blood for cryogenic storage.

Biography

Cáit Geaney is a Senior Medical Scientist in Red Cell Immunohaematology Laboratory, IBTS. Since graduating from D.I.T (2009), Cait worked in Our Lady's Children's Hospital, Crumlin in the blood transfusion and haematology laboratories for 3 years and worked in a Medical Science Laboratory in Melbourne, Australia for 3 years. Since returning from Australia she has worked in the Irish Blood Transfusion Service. She completed an MSc in Biomedical Science (2018) which focused on antenatal testing in the Red Cell Immunohaematology Laboratory. Cáit is Senior Medical Scientist in charge of antenatal testing in the RCI laboratory and rare reference cell co-ordinator. Today she will present a recent case where anti-Jk3 was detected in a pregnant patient.

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