

Section 5.6 – Chemical Pathology Tutorials Received

We were very fortunate to receive occasional tutorials from pathologists within our department, as well as from alumni that had moved to private practice. Each pathologist covered a variety of topics but also had special interest areas that they focussed on. Repetition of some of these topics through the years has been very helpful as our insight deepens and we appreciate the relevance of each topic to a greater extent.

PRESENTER	TOPICS
Dr J Stanfliet	Benchmarking, Accounting, Point-Of-Care Testing, Accreditation, Automation, Ion Sensitive Electrodes, Electrophoresis, Enzymology, Mass Spectrometry, Prenatal diagnosis, Tumour, Markers, Vitamins, Haemoglobin, Liver Enzymes, Therapeutic Drug Monitoring, Thyroid Disorders, Clinical Cases.
Dr P Fortgens	Biological variation, Chromatography, Enzymology, Immunoassays, Interference, GIT, Renin & Aldosterone measurement and application, Phaemochromocytoma, Pseudohyperparathyroidism, Requisition and the process of obtaining new analysers
Dr F Omar	Method validation, Quality Control, External Quality Assurance, Interference, Molecular Lab, Bone Disease and Mineral Metabolism, Endocrine Causes of Hypertension.
Assoc Prof G vd Watt	IMD, GIT, Carbohydrates, Renal Function, Paeds Lab Management, Gas Chromatography
Prof AD Marais	Lipidology, Toxicology, TLC, biochem lab techniques

Dr H Vreede	Autoverification, Electronic Gatekeeping, Cost Coding, Data Mining
J Pillay	Lab Practicals
S Meldau	Molecular Tutorials
B Southon	Laboratory Practicals: Interference and recovery, Safety in the Laboratory, Good Laboratory Practice, Protein assays Bradford and Lowry, Calculations and Solution Preparation

Section 5.5 – Attendance Certificates

Attendance Certificates for some of the CPD-accredited lectures and tutorials attended are attached in this section.

Section 5.4 – NHLS ECHO Course Content

Pathologists and scientists around the country have set up a video-conferencing-based tutorial programme that allows registrars to benefit from the expertise in all the academic centres.

DATE	TOPIC	PRESENTER
2018/10/02	Examination questions and calculations	Prof TS Pillay

2018/09/25	Learning Objectives and styles	Dr AA Khine
2018/10/12	PCR presentation I	Dr Chantal van Niekerk
2018/10/15	PCR presentation II	Dr Chantal van Niekerk
2018/12/01	Biological variation concepts and applications	Dr SE Nagel
2019/01/15	Chronic Kidney Disease for distribution	Prof Jaya George
2019/03/12	Hyperammonaemia and the urea cycle defects	Prof George van der Watt
2019/05/07	Diagnostic Accuracy presentation	Dr Jocelyn Naicker
2019/05/10	Lipoproteins	Prof David Marais
2019/06/26	Branch Chain Amino Acid Metabolism and IEMs	Prof George van der Watt
2019/06/26	Phenylalanine and tyrosine metabolic defects	Prof George van der Watt
2019/08/23	Likelihood and Odds Ratios	Dr Jocelyn Naicker
2019/08/23	Total Error	Dr Jocelyn Naicker
2019/08/23	Fatty Acid Oxidation Disorders	Prof George van der Watt
2020/02/05	Renal stone – methods –	Dr AA Khine
2020/02/26	Dynamic function part 1	Prof Verena Gounden
2020/06/04	QC and 6 sigma metrics	Dr Sten Westgard
2020/07/08	NICD zoom covid update	
2020/07/26	Creating tests on TrakCare and Costing	Dr Helena Vreede
2020/08/11	Metabolic encephalopathy	Prof George van der Watt
2020/09/02	Urinalysis Webinar ECHO.docx	

2020/10/22	Lipids and lipoproteins	Prof David Marais
2020/10/22	Uncommon lipid disorders	Prof David Marais
2020/12/08	Cases- COVID pt and Hypocalcemic patient	Registrars
2021/02/02	Vit B12 Deficiency	Prof Annie Zemlin
2021/03/02	Dynamic Function part 2	Prof Verena Gounden
2021/03/23	Vitamin E	Razia Banderker
2021/04/21	Porphyria Diagnosis	Dr Katrien Kruger
2021/04/21	Vitamin B1	Katrien Kruger
2021/04/29	Renal stones part I.ppt	Dr AA Khine
2021/05/03	Glycation	Prof Annie Zemlin
2021/05/03	Hypothesis Testing	Dr Jocelyn Naicker
2021/05/03	Common IEMs in SA	Prof George van der Watt
2021/05/04	Vitamin K Echo Talk 04 May 2021	Dr Thumeka Jalavu
2021/05/13	Webinar Method validation and verification	

Section 5.3 – Combined Endocrine and Metabolic Seminars

2018

DATE	TOPIC	SPEAKER
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06/02/2018	Posterior pituitary bright spot	Dr. Lyndall Gibbs
13/02/2018	PCOS	Dr. Cole
20/02/2018	Building reproductive networks	Dr. S. Dyer
27/02/2018	Clinical approach to dyslipidaemia	Prof. Marais
13/03/2018	New treatment to type 2 DM	Prof. Dave
20/03/2018	Adolescent care	Ryan Moore
17/04/2018	Ethics: alcohol	Prof. Dave
24/04/2018	Hypoparathyroidism	Dr. Greyling
08/05/2018	Organic acidurias	Dr. Ramcharan
15/05/2018	Life giving amines (vitamins)	Dr. van der Weshuizen
12/06/2018	IAAF regulations	Prof. Dave
17/08/2018	Thyroid imaging	Dr. Kotze
21/08/2018	Diabetes and Coeliac	Dr. Mendes
28/08/2018	Hyperammonaemia and Urea Cycle Defects	Dr. Cole
04/09/2018	Assisted reproduction: Effect on offspring	Dr. Senaya
18/09/2018	A peak beyond the curtain	Dr. Greyling
23/10/2018	Newer insulin analogues	Prof. Dave
30/10/2018	Case presentations	Dr. Abdulla

2019

DATE	TOPIC	PRESENTER(S)
05/02/2019	Acromegaly	Dr. Abdelfadiel
12/02/2019	Precocious puberty: a rare cause	Dr. Mendes
19/02/2019	Snake bite & Envenomation	Prof. Marais

26/02/2019	Anti-Phospholipid Syndrome	Dr. Matjila
05/03/2019	Vitamins -B12 and folate	Dr. van der Weshuizen
11/03/2019	Obesity	Prof. Dave
18/03/2019	Ca, Mg, Pi metabolism in HIV	Dr. J Singbo
25/03/2019	Inherited Metabolic Disease	Dr. Ramcharan
02/04/2019	Hypercalcaemia in pregnancy	Dr. Gcingca
09/04/2019	Case of psychiatric patient wanting to become trans-male	Dr Tshikosi
17/04/2019	Podiatric Pearls for Prompt Wound Healing	
07/05/2019	Diabetes type 1 in a neonate	Dr. Jacqueline Mendes
13/05/2019	A case of glycogen storage disease	Dr. R Dalmacio
21/05/2019	Hyperprolactinaemia	Gynaecology
20/08/2019	Secondary Pseudohypoaldosteronism	Dr. Ruan Vosloo
27/08/2019	Biotin interference in immunoassays	Dr. J Lunn
03/09/2019	Endometrial abnormalities	Gynaecology
10/09/2019		Dr. M Carrihill
17/09/2019		Dr. A Ramcharan
01/10/2019	Renal function testing: A lab perspective	Dr. TA Gcingca
22/10/2019	Radiation Oncology: An Overview	Dr. T. Naiker
29/10/2019	Personal Overview of Interesting Cases	Dr. C Greyling
05/11/2019	Case of Disorder of Sexual Differentiation	Dr. J Mendes
12/11/2019	Counselling in Health Care	Ethics

2020

Unfortunately for most of this year no combined metabolic meetings were held as the Clinicians as well as lab personnel were mostly focussed on COVID management.

2021 – To still be completed

DATE	TOPIC	SPEAKER

Section 5.2 – Journal Club & Case Presentations

2018

DATE	TOPIC	SPEAKER
12/02/2018	Water	D Marais
26/02/2018	Review on Toxic alcohols	GF vd Watt
12/03/2018	Free Androgen Index/Testo Calculations	J Cole
19/03/2018	Deep Learning in Medicine	J Rusch
26/03/2018	CASE: Congenital Hyperinsulinism (Nesidioblastosis)	D vd Westhuizen

23/04/2018	Munchausen syndrome and factitious disorder: the role of the lab in its detection and diagnosis	C Hudson
14/05/2018	Renal Stones	E Gantana
21/05/2018	UK Visit – Mitochondrial disorders	S Meldau
28/05/2018	CASE:Two cases of hyperphosphataemic familial tumoral calcinosis caused by homozygous mutations in the GALNT3 gene.	J Cole
29/05/2018	Plasma steroid metabolome for diagnosing and subtyping patients with Cushings	C Hudson
11/06/2018	TB NanoDisk, MS-MS in TB diagnosis	D vd Westhuizen
18/06/2018	Case Discussions and Feedback from LASSA	H Vreede and D Marais
25/06/2018	Case – Hyperandrogenism	R Dalmacio
23/07/2018	Apolipoprotein E: Update	D Marais
13/08/2018	ZFN, TALEN, CRISPR – Genetic engineering	D vd Westhuizen
20/08/2018	A phase-3 trial of L-glutamine in Sickle Cell Disease	G vd Watt
27/08/2018	Organophosphate poisoning	R Dalmacio
01/09/2018	Using Machine learning to aid the interpretation of urine steroid profiles	C Hudson
22/10/2018	Network Medicine	J Cole
15/10/2018	Imaging Mass Spectrometry	J Pillay
29/10/2018	Hypercalcaemia: An Approach	T Gcingca
01/11/2018	Lipoic Acid Biosynthesis Defects	S Meldau
18/11/2018	Immune checkpoint inhibitors	C Hudson

2019

DATE	TOPIC	SPEAKER(S)
11/02/2019	Snake envenomation	D Marais
18/02/2019	Case presentation:	R Banderker
25/02/2019	Metabolomics and mortality of naked mole rats.	C Hudson
11/03/2019	Monitoring glycaemic control in individuals and populations	H Vreede
18/03/2019	Cannabis in research	R Dalmacio
08/04/2019	Between Chemistry and Genetics. Based on Carl Zimmer's book <i>She has her mother's laugh</i>	D Marais
16/04/2019	Biomarkers in Schizophrenia	J Lunn
29/4/2019	Disorders of Protein Folding	D vd Westhuizen
13/05/2019	Unusual cases of metabolic disorders in 4 neonates	G van der Watt
20/05/2019	Open Source Capillary Electrophoresis	DJ vd Westhuizen
27/05/2019	Hypertriglyceridemic pancreatitis	TA Gcingca
03/06/2019	Journal Watch	R Dalmacio, TA Gcingca, J Cole, J Lunn, DJ vd Westhuizen
20/06/2019	Short case presentations: DSD, Septic Cholestasis, SPE's and their various presentations	D vd Westhuizen, R Dalmacio, TA Gcingca
01/07/2019	Journal Watch	R Dalmacio, TA Gcingca, J Cole, J Lunn, DJ vd Westhuizen

08/07/2019	Book Review Part 2: She Has Her Mother's Laugh. Carl Zimmer	AD Marais
22/07/2019	Flagger and Percentiler: A revolutionary EQA alternative	C Hudson
29/07/2019	Case Presentation: A case of secondary hypogonadotropic hypogonadism with Ecdysterone supplements	DJ vd Westhuizen
05/08/2019	Journal Watch	R Dalmacio, TA Gcingca, J Cole, J Lunn, DJ vd Westhuizen, J Rusch
12/08/2019	Nanobody development in Chemical Pathology	TA Gcingca
19/08/2019	Book Review Part 2: <i>She Has Her Mother's Laugh</i> . Carl Zimmer	AD Marais
26/08/2019	Short case presentations: Macroprolactin and High dose hook effect; Urea Cycle defects in neonates at RXH	TA Gcingca, JA Rusch
02/09/2019	Journal Watch	R Dalmacio, TA Gcingca, J Cole, J Lunn
09/09/2019	Vaping vs. Smoking	D Blackhurst
12/09/2019	Short case presentations: Insulin ; Globulin Gap	J Cole, J Lunn
16/09/2019	Energy Metabolism – Micro-organisms metabolising lactate into Crebs Cycle intermediates	G vd Watt
23/09/2019	Immunology overview	R Dalmacio
30/09/2019	Meeting cancelled	n/a

07/10/2019	Journal Watch	D vd Westhuizen; TA Gcingca; R Dalmacio
10/10/2019	Short case presentations: Enzymology in reagents; A case of cryoglobulinaemia	TA Gcingca; D vd Westhuizen
07/11/2019	Short case: Methaemaglobinaemia	R Dalmacio
11/11/2019	Microfluidics in Sweat Testing	J Pillay
18/11/2019	Iron metabolism in microcytic hypochromic anaemia (Iron Lion Zion)	J Rusch

2020

DATE	TOPIC	PRESENTER(S)
30-Mar-20	Case presentations: Transient benign hyperphosphatasaemia; An approach to hyperandrogenism	T. Gcingca; M. Mahomed
20-Apr-20	Book review Part 3: <i>She Has Her Mother's Laugh</i> . Carl Zimmer	Prof D Marais
30-Apr-20	Case presentations 1) Electrolytes 2) Excess GH: Acromegaly	D Roque, T. Gcingca
11-May-20	Excess GH: Acromegaly Part 2	T. Gcingca
18-May-20	Case Presentation: Hyperalbuminaemia	D. Roque
25-May-20	Case Presentations: OTC Case; Chylothorax from Thoracic injury	R. Dalmacio, D. vd Westhuizen
08-Jun-20	Hyperammonaemia	M. Mahomed

11-Jun-20	Case presentations: A World of Colour; A Lack of evidence is not evidence of absence	T. Gcingca, D. Roque
13-Jul-20	Quality assurance in clinical chemistry	D. vd Westhuizen
20-Jul-20	EM Guidance, "Your future depends on your dreams so go to sleep"	Kim Jacobs, J Rusch
27-Jul-20	Case presentations: MSc Project presentation; Porphyria cutanea tarda	S. Lampert; T. Gcingca
17-Aug-20	Dyslipidemia	R. Ateko
24-Aug-20	Anosmia/ Hyperosmia	S. Meldau
31-Aug-20	Case presentations: CSF Leaks; CSF-IgG index	M. Mahomed; C. Francis
14-Sept-20	DKA vs HHS	T. Gcingca
21-Sept-20	Population genetics of the Indian Ocean humpback dolphin (Honours project)	S. Lampert
29-Sept-20	Case presentations: Methanol poisoning; COVID big data project	T. Gcingca; D. vd Westhuizen
19-Oct-20	Vitamin and homocysteine levels correlation with cardio metabolic risk factors	K. Seakamela
26-Oct-20	Case presentations: Galactosaemia; Cryoglobulins	M. Mahomed; C. Francis
11-Oct-20	Myeloma	C. Francis
23-Nov-20	Case presentations: Does this urine make me look fat? Lipiduria and fat embolism syndrome; Critical results	M. Mahomed; R. Dalmacio

30-Nov-20	Machine learning	D. vd Westhuizen
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2021

DATE	TOPIC	PRESENTER(S)
08-Feb-21	Epigenetics and Diabetes	J Rusch
15-Feb-21	Interference in Chemical Assays during COVID	R. Dalmacio
22-Feb-21	Case Presentations: High testosterone in female (?) patient; Hyponatremia with urine sodium measurement	T. Gcingca; D. vd Westhuizen
04-Mar-21	Case Presentations: Biochemical features of Pre-eclampsia; Organophosphate poisoning	M. Mahomed; C. Francis
08-Mar-21	Green illness before the red carpet – Iron Metabolism	D. vd Westhuizen
15-Mar-21	Malabsorption	T. Gcingca
25-Mar-21	Supplemental nutrition	C. Francis
29-Mar-21	Project presentations	J. Pillay; R. Dalmacio; S. Lampert; S. Meldau; K. Khan
01-Apr-21	Insulin Sensitivity	T. Gcingca
01-Apr-21	Project Presentations	D. vd Westhuizen; C. Francis; M. Mahomed
15-Apr-21	Project presentation	T. Gcingca
19-Apr-21	Fluorimetry	C. Francis
26-Apr-21	Toxic Alcohol ingestion	M. Mahomed
06-May-21	Persistent hypocalcemia	D. vd Westhuizen
10-May-21	The Vital Question: Nick Lane	D Marais

Journal Watch

We have a monthly meeting during which each attendant may briefly present relevant journal articles. Initially, it was left entirely up to the individual what they would present. However, from late in 2017, it was formalised the registrars' contributions to ensure that the important journals were being covered. These include: *Clinical Chemistry*, *Clinica Chimica Acta*, *Annals of Biochemistry*, *Clinics in Laboratory Medicine* and *Clinical Chemistry and Laboratory Medicine*. Registrars are also encouraged to read *NEJM*, *Nature*, *Cell*, *Science*, *The Lancet* or any other journals of interest and to present what they feel is relevant. Each month we read and present several articles from at least one of these journals.

This was done on the first Monday of each month, after our departmental staff meeting. Dates are not recorded.

Section 5.1 – Learning Activities

Courses

COURSE	INSTITUTION	DATE	COURSE DIRECTOR
Leadership and Laboratory Management	University of Stellenbosch	02-05/11/2020	Prof. R.T. Erasmus

<p>Manuscript Writing Course</p> <p>Workshop 1: Principles of scientific writing + poster presentations</p> <p>Workshop 2: Proposal writing for ethical approval</p> <p>Workshop 3: Writing up your thesis vs for publication</p> <p>Workshop 4: Finding your academic voice + referencing</p>	<p>UCT FHS Writing Lab</p>	<p>31/07/2019 18/09/2019 02/10/2019</p>	<p>Taahira G Hoosen</p>
<p>Data Analysis in Stata</p>	<p>CESAR: Centre for Statistical Analysis and Research</p>	<p>28-30/11/2018</p>	<p>B. Bello</p>
<p>WildMedix Winter Wilderness Medicine Course</p>	<p>Wildmedix, Wilderness Medical Society</p>	<p>05-10/08/2020</p>	<p>Walther Meyer / Prof Ross Hofmeyr</p>

Lectures

DATE	TOPIC	PRESENTER
02-Aug-19	DIARRHOEA: Biochemistry of diarrhoea	P Fortgens
18-Sep-19	Male reproduction and hypogonadism	C Hudson
20-Sep-19	Pituitary disease	C Hudson

20-Sep-19	Tumour markers and PSA	H Vreede
02-Oct-19	Disorders of female reproduction	C Hudson
07-Oct-19	Adrenal disorders	H Vreede
18-Oct-19	FASD: Alcohol metabolism	G vd Watt
29-Oct-19	Anemia: Iron metabolism	F Omar
30-Oct-19	Anemia: Haemolysis, folate, B12	G vd Watt
11-Feb-20	Obesity & Satiety Pathways	G vd Watt

Workshops

DATE	TOPIC	PRESENTER/ VENUE	REFLECTIONS
05/03/2018	Riqas QC Roadshow	Radox QC/ Protea Hotel, De Waterkant	This was an amazing experience at the beginning of my registrarship. It was an introduction to EQA and the 1-day workshop included tips on troubleshooting EQA reports and identifying possible caveats.
16/05/2018	Exam Workshop	Prof. TS Pillay/ Red Cross Hospital Laboratory	Learned valuable techniques for studying and approaching exam questions. Some calculations in chemical pathology was discussed. The approach to questions in general in chemical pathology was discussed. The common pitfalls in questions was also discussed.

2019	Siemens Plasma Protein Market Day	Siemens Healthineers / 99 on Kloof Hotel, Cape Town	<p>This was a day where Siemens Healthineers invited us to their “Plasma Protein Market Day” aimed at introducing us to the Siemens Plasma Protein portfolio. Their test repertoire, methods, state of the art machines and laboratory systems was showcased. There was also an interactive questions and answers session where I could see how some of the pathologists in private practice asked Siemens some important questions.</p>
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Congresses and Symposia attended

DATE	CONGRESS	REFLECTIONS
Aug 2018	PathCape, Stellenbosch	<p>I was pleased that most people in the exam workshop agreed to some fundamental changes in the exams. The changes are not yet formalised but it seems that the examiners were unanimous.</p>

<p>30-31 October 2018</p>	<p>Red Cross Research Days</p>	<p>This was two days at the Red Cross Children's hospital where researchers at the hospital could showcase their work. I presented a poster on an in-house experiment I had done on the interference of N-acetylcysteine on the measurement procedure of paracetamol. This was taken well by the toxicology centre and it aided in the guidelines for paracetamol testing. There were also interesting case presentations and interesting state of the art neuroscience projects presented.</p>
<p>18-20 July 2019</p>	<p>PathRed, Johannesburg</p>	<p>This was an amazing experience to connect with fellow registrars from other centers. Sessions attended was: Developing registrar knowledge, skills and reflection of learning objectives and learning opportunities – Dr. Aye Aye Khine & Dr Rivak Punchoo, Risk Management in the Clinical Laboratory Prof Tahir Pillay & Prof Rajiv Erasmus, Supporting surveillance and outbreak investigation for communicable diseases in RSA – Dr Kerrigan McCarthy (Epidemiology), and a registrar meeting convened by Dr Ashlin Rampul.</p>

<p>Dec 2020</p>	<p>AACC International conference (Virtual)</p>	<p>This congress wasn't necessarily a trip to San Francisco as we hoped, but, although virtual, due to the travel and convening restrictions, was one of the most interesting congresses attended. I presented a poster on our findings of a big data project on COVID-19 related laboratory analyte changes and the relationship between SARS-CoV2 and HIV, TB and HbA1C in South Africa.</p> <p>There were interesting talks on Machine Learning, some laboratory management topics, and some inspiring talks about Clinical Chemistry in general. Quite a few topics focussed on testing in SARS-CoV-2, such as an interesting talk on neutralising antibody testing in COVID – all very relevant to Chemical Pathology and very worth while to attend. The time difference from America to South Africa was, however bit of a challenge as some of the talks I needed to attend at 2AM in the morning. Nonetheless, quite interesting and I could attend these afterhours from work.</p>
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