SAACB news

January 2017

The South African Association for Clinical Biochemistry and Laboratory Medicine

SAACB becomes the South African Association for Clinical Biochemistry and Laboratory Medicine.

In keeping with international trends, the SAACB has changed its name to the South African Association for Clinical Biochemistry and Laboratory Medicine. This decision was taken by the council several years ago and is being implemented this year in 2017 by the new SAACB Council. The current council consists of the new President, Prof T.S.Pillay; past president, Prof R.T. Erasmus; new treasurer, Dr F. Omar; secretary, Dr M. Turzyniecka; Prof N. Crowther; Prof G. Van der Watt. There are currently two vacant council positions and elections in the membership will be held shortly.

IFCC WorldLab Durban 2017 22-25 Oct 2017

" Multi-omics & Laboratory Medicine"

Preparations for IFCC Worldlab Durban are at an advanced stage. More information is available at www.durban2017.org

Important deadlines:

15 May 2017 - Poster abstracts;

17 July 2017- Early Registration reduced fee

ICPLM - International Congress of Paediatric Laboratory Medicine, Durban 20-22 October 2017,

Benefits of becoming a paid-up member of the SAACB

- **You will receive the newsletter featuring interesting cases and discussions, as well as news**
- **Substantial discounts are being offered to members who pay in advance. This year, a 40% discount is being offered to members who pay fees for 2017 and 2018 by 31 January.**
- **You will be eligible to apply for sponsorship to attend meetings**
- **You will receive a discount on registration at meetings and workshops organised by the SAACB**
- **You will be eligible to apply for IFCC Scholarships to attend international meetings**
- **You will be eligible for nomination to IFCC positions**

IFCC Nominations - Current calls

From: **Prof. Philippe Gillery – IFCC SD Chair**

Date **January 26th, 2017**

Ref: **8.2.23 Call for Nominations for Membership of Committee on Traceability in Laboratory Medicine (C-TLM)**

To: **All National Representatives of the Full and Affiliate Member Societies**
All Corporate Members' Representatives

Dear Colleagues,

In 2004, IFCC established a Committee on Traceability in Laboratory Medicine (C-TLM). Since then, the Committee has provided IFCC with high level expertise in the specific area of metrological traceability and standardization. The Committee, under the Chairmanship of Prof. Lothar Siekmann, wishes to appoint one member to start in March 2017 to replace a member who is coming to the end of his period of appointment.

The specific terms of reference of this Committee are:

To support activities regarding Traceability in Laboratory Medicine, permitting IFCC to play its international role in this area and providing an operating link between the Scientific Division and the Working Groups of the Joint Committee on Traceability in Laboratory Medicine (JCTLM) (in which IFCC plays, as a founding member, a key role along with other organisations such as BIPM and ILAC), concerning identification of reference measurement procedures, reference materials and reference laboratory services.

To support reference laboratories in the context of complete reference systems (accepted reference measurement procedures of higher order, reference materials and reference laboratories) by establishing External Quality Assessment Schemes (EQAS) for reference laboratories in order to monitor their competence.

To promote establishment and maintenance of IFCC reference laboratory networks for clinically relevant measurands (e.g. the IFCC HbA1c network).

C-TLM consists of 5 full members, including the Chair, nominated by the IFCC Member Societies and/or Corporate Members. This letter asks you for a nomination for this position.

Nominations should be directly sent to the IFCC Office (paola.bramati@ifcc.org) using the attached Application Form **by February 20th, 2017**. We would particularly welcome applications from candidates with experience in directing a JCTLM listed reference laboratory or in standardisation activities, as well as nominations of young scientists.

Following approval, the candidates will be appointed for a three-year term on the Committee. A second three-year term is allowed following satisfactory review at the end of the first term by the Scientific Division Executive Committee following consultation with the C-TLM Chairman.

Please note that there is an internal SAACB deadline to screen nominations

Why expertise in calculations is important?

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News

Students left fighting for lives after taking enough caffeine for 300 cups of coffee in botched university experiment

Two students were nearly killed after they were given enough caffeine for 300 cups of coffee during a botched science experiment.

Northumbria University has been fined £400,000 for the incident in March 2015 which caused Alex Rossetto and Luke Parkin to be rushed to hospital and put on dialysis.

On Wednesday a judge said the two sports science students probably only survived because they were fit and and active young men.

The pair had volunteered to take part in a test aiming to measure the effect of caffeine on exercise, but a basic calculation error meant the second-year students were given 100 times the correct dosage.

Prosecutor Adam Farrer told Newcastle Crown Court that the pair should have been given 0.3g of caffeine in the orange juice mix, but were in fact given 30g.

There is 0.1g in the average cup of coffee.

1) There is a substance in a solution (3 g/liter). The length of cuvette is 3 cm and only 45% of the certain light beam is transmitted. What is the absorption coefficient?

2) The absorption coefficient of an albumin dye complex is 0.35 at light of 540 nm. What is the concentration when the transmission is 40 % in a cuvette of 2 cm?

3) If 5x + 6y =108 and 7x+13 y = 211; solve for x and y

Answers in the next issue

Clinical Case

Clinical Chemistry 62:9
1181–1185 (2016)

Clinical Case Study

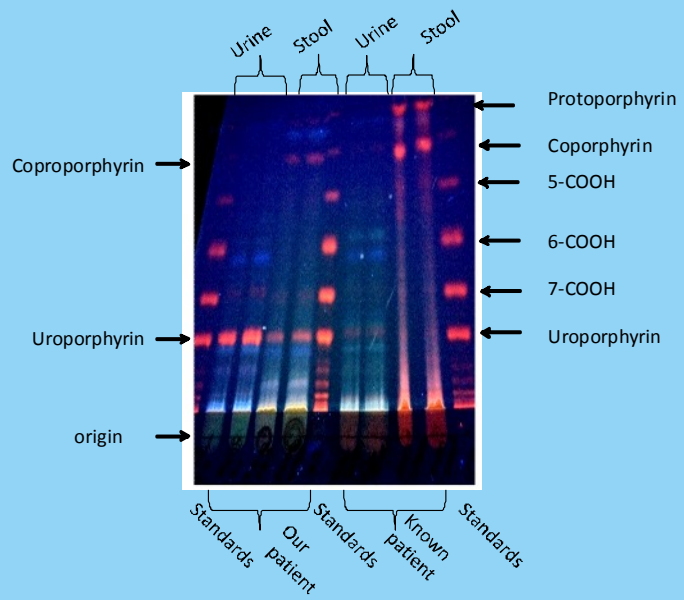
Red-Brown Urine in a Patient with Chronic HIV Infection and Quadriparesis

Nicholette M. Oosthuizen,[1†] Janine Olivier,[1†] Janine Martins,[1] Clara Schutte,[2] and Tahir S. Pillay[1,3*]

A 42-year-old woman with a 6-year history of HIV-infection presented with a sudden onset of progressive weakness of her arms and legs that rendered her unable to walk over a 4-day period. Approximately 6 weeks prior, she had been commenced on highly active antiretroviral therapy (HAART) consisting of efavirenz/emtricitabine/tenofovir and an opportunistic infection prophylaxis protocol including co-trimoxazole. Following diagnosis of HIV infection 6 years earlier, she had declined HAART but was successfully =multidrug-resistant tuberculosis.

Examination revealed bilateral lower motor neuron facial nerve palsies, tetraparesis, global areflexia, absent proprioception and patchy loss of sensation below the level of T4. No meningeal signs were observed and magnetic resonance imaging excluded focal lesions and progressive multifocal leukoencephalopathy. Cerebrospinal fluid (CSF) analysis revealed raised total proteins of 1.25 g/L (reference interval 0.15-0.45 g/L) with no white blood cells. CSF examination and culture excluded opportunistic infections . Full blood count, renal and liver function tests were unremarkable except for hypoalbuminaemia of 28 g/L (reference interval 35-52 g/L). Vitamin B12 was within limits and serum iron studies suggested anemia of chronic disease with ferritin marginally elevated at 326 µg/L (reference interval). Other virological tests were unremarkable.

During admission the patient's urine was noted to have a red-brown colour, which could not be ascribed to myoglobinuria as creatine kinase was only slightly raised at 229 U/L (reference interval 20-180 U/L).
Two weeks after initial presentation, an acute porphyric attack was confirmed by a urine porphobilinogen (PBG) of 378 µmol/L (reference value <9 µmol/L). Urine total porphyrins were grossly elevated at 2127 nmol/L (reference value <300 nmol/L) and thin-layer chromatography (TLC) showed it was virtually all due to uroporphyrin with only a trace of heptacarboxylic porphyrin. Fecal total porphyrins were elevated at 374 nmol/g dry weight (reference value <200 nmol/g) comprising of proto- and coproporphyrin on TLC . Since faecal porphyrins were only slightly raised and skin lesions were absent, a diagnosis of acute intermittent porphyria (AIP) was considered. This was supported by finding a plasma peak at 619 nm on plasma emission spectroscopy .



Questions to consider:

1. What are the biochemical causes of red urine?
2. Can IRIS present with acute motor axonal neuropathy and acute neurovisceral crisis as seen in porphyric attacks?
3. What is the association between HIV and porphyria?
4. What are the mechanisms whereby HAART and co-trimoxazole can precipitate an acute porphyric attack?

Please submit interesting cases to the SAACB newsletter (saacb1@gmail.com)