Happy New Year!

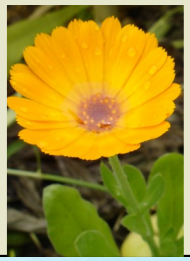
17 December 2017

Herbal Analysis Reporter

HERBAL ANALYSIS SERVICES

SPECIAL THANK YOU:

- EPSRC UK NATIONAL MASS SPECTROMETRY FACILITY
- OUR COLLABORATORS
- OUR WORLDWIDE FOLLOWERS



GREETINGS!

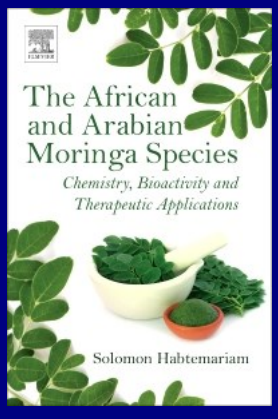
New year means more research, more collaborations and new hope (...page 2)



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OUR BOOK ON MORINGA WAS THE HIGHLIGHT OF OUR SCIENTIFIC CONTRIBUTION IN 2017



No one writes a book without being inspired to do so and even though this was a self authored book, many still deserve to be thanked for. We also thank all those who commented on the book and gave us valuable feedback.

The book covered all aspects of *Moringa species* growing in Africa but the emphasis was on *Moringa stenopetala*. Their use as food, medicine and water purification; the chemistry of the leaves, seeds and other parts; the pharmacology from the anti-microbial to anticancer and antidiabetic effects are all covered.

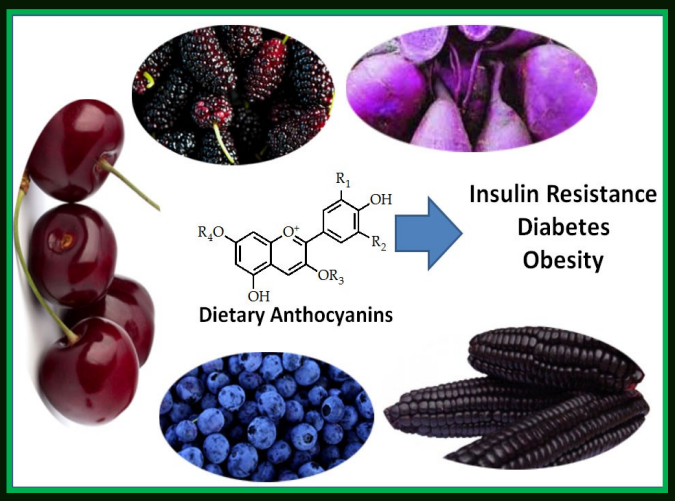
Special thank you also goes to the Elsevier team.

From Research Front

Our Study on Diabetes

From common food to purified active compounds

It was another year for diabetes research taking the central stage. We looked at various medicinal plants as potential source of novel drugs, and we also reviewed several structural groups of compounds as potential therapeutics. One of the major emphasis of significance is now medicinal foods as antidiabetic agents. This will continue to be our major area of research in 2018. Click on the image on the right for exemplary publication.



Something for the Aging Brain

We continued our work on neurodegenerative disease areas particularly, the Alzheimer's disease. We scrutinised a number of natural products that act through multiple mechanisms. We also modified natural products to maximize their potential benefit by adding structural moieties for favorable outcomes. This include, acetylcholinesterase inhibition combined with antiinflammatory and antioxidant effects. We are also currently looking at possible efficacy improvements by modifying bioavailability parameters. Click on the image on the right to see exemplary review of our work on natural products showing a promise in this area.

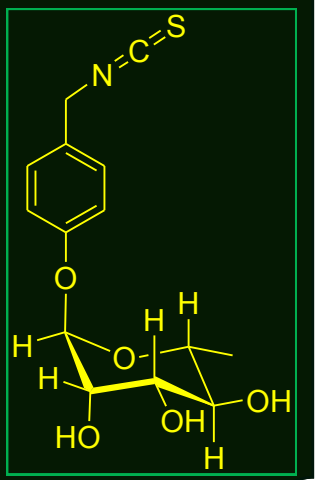


The gift of nature goes to the brain too!

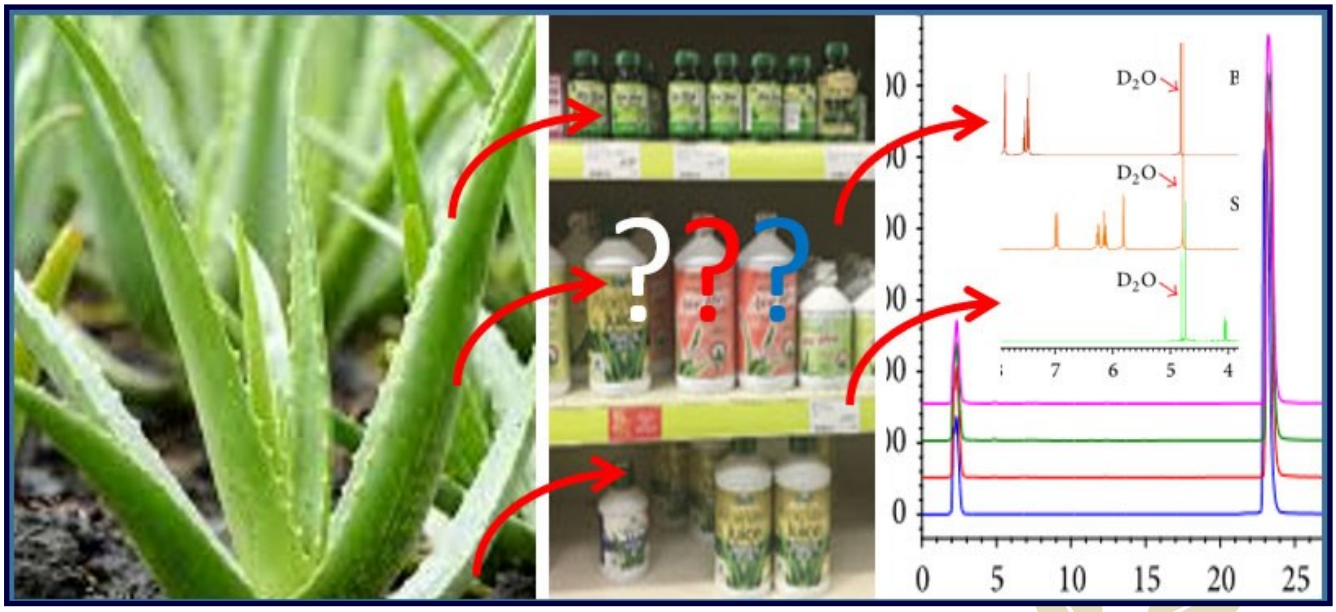
On The Cancer Front

Our search for potential anticancer compounds of natural products origin started some 25 years ago. This year, we have uncovered the potential of *Moringa stenopetala* seeds as anticancer agent. The seeds (image on the right) being packed full of oils, their anticancer effect is masked and hence the potential benefit largely underestimated all this long. We developed extraction methodology along with a rapid isolation procedure that allowed large-scale exploitation of the active principle (image on the right). The compound, moringin, has *in vitro effects* in good order of comparison with known anticancer agents such as etoposide.

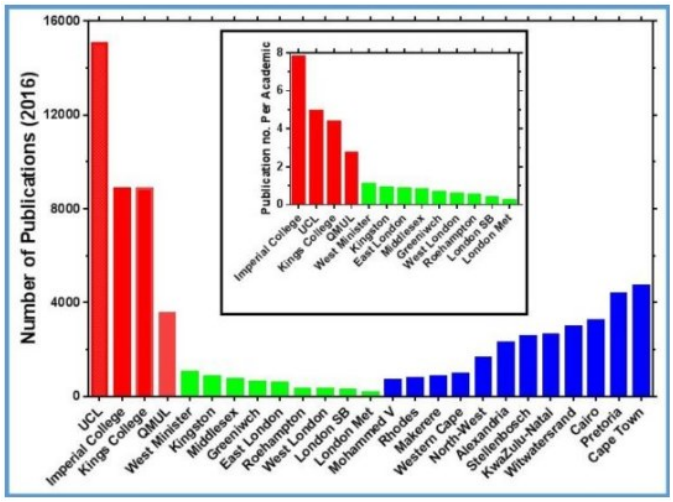




OUR STUDY ON QUALITY ASSURANCE



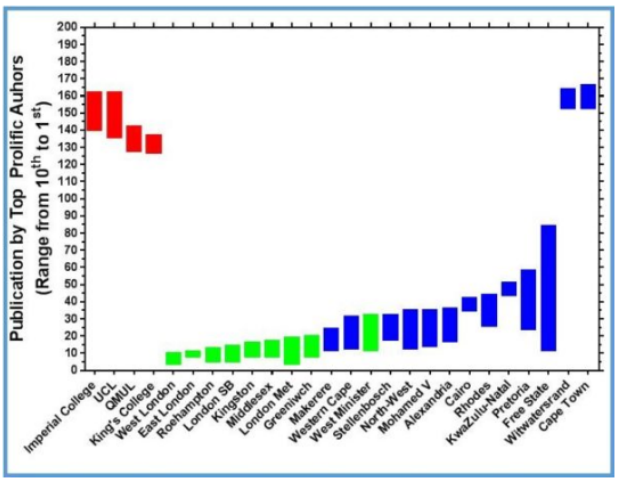
Quality Assurance in Plant Medicines: Our core activities have always been centred in two broad areas: The search of natural products-based novel pharmacological active compounds (through Pharmacognosy Research Laboratories) and quality control of medicinal plants and/or medicinal food products (Herbal Analysis Services). In the latter case, our classical example of the year 2017 was on *Aloe vera* food supplements (picture above). After the listing of this plant in Diabetes UK website as potential therapy, we scrutinised the quality of products available at the local Holland & Barrett outlets. Our findings (picture above) include some shortcomings in the best selling brand, Aloe Pura, such as mislabelling and unwanted contaminants (methanol!)



i.e., The newer (post-92) universities are performing far below the older traditional elites or African top universities. Our current interest in this field include enhancing institutional capabilities, particularly in Africa, through indigenous system of performance analysis that recognize scientific contribution and also those contributions directed towards local and regional economic development agendas.

As always, collaboration initiatives by colleagues from higher education institutions across the globe is most welcome.

Quality Assurance in Higher Education: Working in the Higher Education sector offers an opportunity to scrutinise quality assurance both in teaching and research at various levels. The article in Euro Scientist highlights what is being assessed and not assessed in the UK league tables as well as winners and losers at institution levels. The number of core scientific publications in the various London universities as compared to top African performers (graph on the left) as well as published papers by top prolific professors/authors (below) clearly show the lack of parity in scientific contribution by the UK universities.





Dr Solomon Habtemariam

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Herbal Analysis Services has been founded & exclusively owned by Dr. Solomon Habtemariam. Its mission is three-fold: to discover novel drugs from natural sources; employ phytochemical and pharmacological assays to standardise plant medicines; and provide expert advice and services on the subject area. The website also provides resources and news on our progress both on modernisation of herbal medicines and the discovery of novel pharmacologically active compounds. Dr. Habtemariam has published over 150 papers in peer review journals and regularly hosts experts from all over the world who come for research visits and trainings. We welcome all requests on natural medicine researches and businesses.

Elected Fellow:

the Royal Society of Medicine (2007); the Royal Society of Chemistry (2009); the African Scientific Institute (2014); the African Academy of Sciences (2015).

EDITORIALS: JOURNALS– BOOKS

In the capacity of an Editor and editorial board member, Dr Habtemariam continue supporting many journals in natural products research and drug discovery areas. As an editor, two special issues of MDPI journals were also completed in the year 2017: 'molecules' and 'biomedicines'. He is currently associated with the following journals:

Biomedicines;

Beverages;

Evidence-Based Complementary and Alternative Medicine (eCAM);

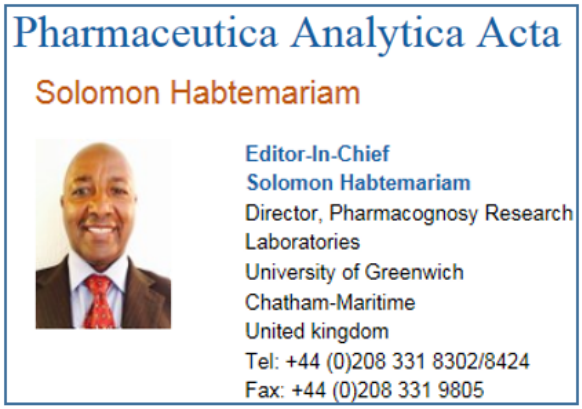
Current Pharmaceutical Biotechnology;

Mini Review in Medicinal Chemistry;

Plos One;

Clinical Diabetes and Research;

Pharmaceutical Analytica Acta (Editor-in-Chief).



We will be announcing our upcoming book projects in 2018.

COLLABORATIONS

We thank the following for continued support and being with us ....

THE EPSRC UK NATIONAL MASS SPECTROMETRY FACILITY — Reliable mass spectrometry service as usual.

OUR COLLABORATORS: The numerous collaborators from Italy (particularly the team lead by Prof. Giovanni Lentini); Indian Collaborators but primarily Dr George Varghese; Ghanaian colleagues led by Prof. Abraham Mensah; Iranian scientists (Dr Seyed Mohammad Nabavi and colleagues) are just few to mention. Our productive collaboration with the Iranian team that won us a *Tanner Award* from the Institute of Food Technologists for the '*Most Cited Paper of 2014 publications*' was among the recognition we received in 2017. We always welcome new research ideas and additional input to our existing projects.

OUR CONSULTANCY CUSTOMERS: We will continue hosting colleagues coming for short-term trainings and visits to our labs. We also welcome enquires in any areas of our expertise and consultancy service areas.

OUR FOLLOWERS: Great support, encouragement and feedback from the thousands of Herbal Analysis Services website visitors — We are looking forward to continue working with you all and advance science in natural products field.

Thank You!

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