

NEWSLETTER

KIGELIA ISSUE 6

From the Editor

I have the pleasure once again to introduce the July (no 6) edition of the AAMPS newsletter which gives excellent background information about not only the plants included in the new African Herbal Pharmacopoeia but also the people and events surrounding the completion of this second edition. In this edition we review the amazing work of Dr Simon Jackson who has devoted much of his career to the study and development of *Kigelia Africana* (the African Sausage Tree)

As you will read this is an amazing product with globally important ingredients. Simon has amassed huge amounts of information and practical experience in the development of safe and effective herbal products using *Kigelia Africana*.

In this newsletter we also look at the pioneering work of entrepreneur Ryan Gibson whose work to help companies seek funds for legal cannabis production in Southern Africa has done much to bring this industry forward. We need more people like you Ryan !

Warm Regards,

Denzil .



Highlights

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Meet the Monograph Author

Dr Simon Jackson

Where are you based?

I live in Ireland, at the most South Westerly point, its called the Wild Atlantic Way on the very edge of Europe. I love it here, its so green and unspoilt.

What species are you working on?

I have been working on *Kigelia* for over 30 years now, they say you don't get to choose to study a particular plant, they choose you! Well that's the case for me and *Kigelia*.

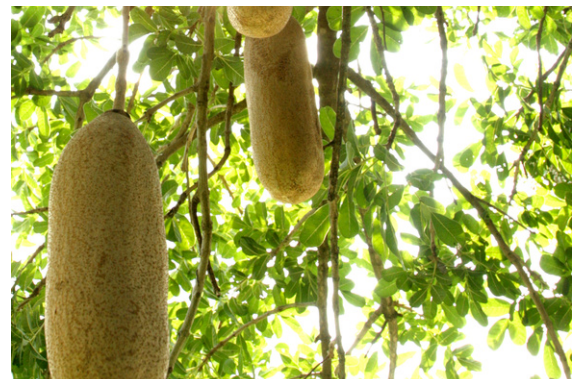
Tell us one fun fact about the species that you choose.

Crikey there are so many fun facts about *Kigelia*, its used traditionally for breast firming in women, its used for hyperpigmentation, has anecdotal reports against skin cancer but also used to help young men with erectile dysfunction, I think all medicinal plants at some point are claimed to be aphrodisiacs!



Dr Simon Jackson (Pharmacognosist)

PhD (Pharmacognosy) BSc Hons MSCS MABC MGA MASP
Member of the Society of Cosmetic Scientists
Member of the American Botanic Council (ABC)
Member of the Society for Medicinal Plant and Natural Product Research (GA)
Member of the American Society of Pharmacognosy (ASP)



**Kigelia Fruit in swaziland -
Copyright Dr Simon Jackson**

**"They say you don't get to choose to study a particular plant, they choose you!" -
Dr Simon Jackson**

Why do you have such Interest In this species?

Thirty years ago when I was a PhD student, my supervisor Prof. Peter Houghton at Kings College (who was part of the founders of the AfHP), introduced me to *Kigelia*, we did a study on antineoplastic activity on human melanoma cells at Charing Cross Hospital in London, we found preliminary results indicated selective anti-cancer activity to melanoma cells, and I did some work on iridoids and naphthaquinones structural elucidation using bio-assay guided fractionation and that was it I was hooked. It's been a passion of mine ever since, anything I can do to promote *Kigelia* and carry on my studies on this interesting plant.

What are some of the challenges that you have faced?

One of the biggest challenges I have faced was that no one here in Europe believed that the plant existed, as you all know *Kigelia* is commonly known the 'sausage tree' in Africa, but over here very few people have actually seen one. So it took me a while to be taken seriously, the 'sausage tree' was difficult to market, but over the years and many meetings with Press and PR, I think it's an ingredient that's becoming more and more common in personal care brands. I have spent a lot of time publicizing the amazingness of this plant, it can be found in a lot of topical formulations now for dermal complaints like eczema and psoriasis.

If you think 20 years ago, very few people had heard of 'Tea Tree' and now its everywhere, you mark my words one day so will the 'sausage tree'!

What uses does it have and have you used it yourself?

Kigelia has a long history of medicinal uses, to many to mention here, but in short its mainly for topical use for dermal complaints, it has many interesting compounds, including, naphthaquinones, iridoids, sterols to name a few and its these compounds that have shown interesting activity in skin brightening for hyperpigmentation, and for tightening and firming of skin.

Potential Commercial Applications for Sausage Tree Extracts

The potential commercial applications for fruits of the sausage tree could include the following :

- Anti-inflammatory agent^{29,40} – Possibly due to the iridoids having anti-inflammatory effect
- Sun creams³⁵ – Potential anti-cancer (melanoma activity)
- Anti-Eczema – Anecdotal reports on use against eczema
- Anti-Psoriasis – Anecdotal reports on use against psoriasis
- Breast-firming creams – Traditional uses and skin tightening properties
- After-sun lotions – Anecdotal report on treatments of solar keratoses (naphthaquinones)
- Cosmetics/Cosmeceuticals – Skin tightening, anti-inflammatory, even skin tone and blemish-free skin
- Anti-microbial moisturizing^{34,45,46} – Possibly due to iridoids, minicoside 1, and specioside 2, and presence of fatty acids, giving anti-microbial activity
- Anti-malarial agent²⁰ – Research suggests that *Kigelia* is used as an anti-malarial locally in Africa
- Anti-bacterial agent^{34,40} – Potentially due to fatty acids
- Anti-molluscicidal agent^{26, 30} – Potentially due to anti-amoebic activity of iridoids

Potential commercial uses of the *Kigelia** Copyright Dr Simon Jackson

Yes I have used it myself, I formulated several products using *Kigelia* fruit extracts in a day cream, a night cream and also a face wash, it's a great ingredient to formulate with as mixes really well, in a lotion or emulsion, in fact I use it most days in some way or other either in a moisturiser or face wash.

What kind of research have you done into it?

My own research has been based on structural elucidation. I have also done some bio activity assays, as mentioned we did some bio-assay guided fractionation and used different melanoma cell lines to test active fractions. We identified that *Norviburtinal* and *Isopinnatal* showed interesting activity on melanoma cell lines but not on control fibroblast cell lines or on any other cancer lines like ovarian cells, so indicating a selective activity. These are very preliminary results though, so they would need repeating but a good indicator that there is some activity there worth pursuing.



Sleeping under the *Kigelia* tree- Dr Simon on a research trip Copyright Dr Simon Jackson

What are your thoughts on the African Herbal Pharmacopoeia (AfHP)?

I'm a big fan! It's such a valuable resource, the British and European Pharmacopoeia's only really focus on the herbs found in those markets, like chamomile or calendula.

There was a big gap on African species, there was also such a lack of good quantifiable and qualitative data on African species, so I welcome the AfHP and I am happy to support in anyway that I can. I think the more that we work together, the better for African species, the more they become accepted into wider communities across the world and the more we can benefit the country of origin of these species.



Distribution of the *Kigelia* species in Southern Africa* Copyright Dr Simon Jackson

For me the AfHP is such a valuable source of information, as we all know natural ingredients are becoming more and more popular, and with it we are seeing more adulteration of materials. The AfHP gives me a standard to refer to so I know that I am dealing with the correct botanical sample.

In five years' time, what advancements to do you think this species would have made commercially and in research?

I think working along side partners such as CAMAG, we can standardize what we would see as acceptable controls of Kigelia samples. Using techniques like HPTLC (High performance thin layer chromatography) we can really understand what consists of a good sample of Kigelia. I think what we are finding commercially is that its crude extracts of plants that are showing higher efficacy, so a synergy of compounds showing activity rather than a single active magic bullet compound, so I'd like to see more work done on crude extracts, mimicking how they are used traditionally.

I would like to think that Kigelia will be a more commonly used ingredient in topical, skin preparations, it is already found in many formulations, so I see this increasing. From a research perspective, I can only see this going from strength to strength, as its popularity rises so will the research. I would personally like to see more research done on melanoma and solar keratoses with Kigelia extracts especially with regard to synergistic effects, I can only see positive movement in research on Kigelia, but maybe I am a bit biased. I truly believe it's a real Cinderella species, one that has been massively overlooked, but one day will take its place amongst all the other great African plant species.

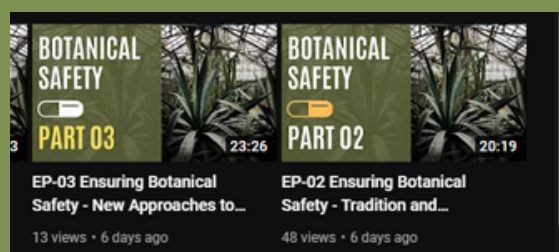
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Connect Conversations Highlights

Ensuring the safety of botanically derived products is an important public health priority. This webinar provides an overview of approaches to ensuring the safety of botanicals following scientifically valid methods and from a regulatory perspective.



[Follow the conversation...](#)

Meet the Entrepreneur

Ryan Gibson

Ryan Gibson is a well known name in the South African cannabis business landscape. We were lucky enough to snag him for a quick interview and for him to share his thoughts on the business of cannabis in South Africa. Here are excerpts of the interview.

You are well known in the cannabis circles in South Africa, what's your claim to fame?

Seed To Science was one of the first sponsors of the Prohibition Partners African Cannabis Report. We were one of the pioneer firms helping Cannabis and Hemp growers find offtake agreements for their products in Europe, US, Canada, Israel and Australia. In addition, we helped a lot of companies produce realistically financial models for their investors based on what they can actually achieve-

and helped many business plans, pitch decks, etc be built. I Co-Chair the African Cannabis Industry Association, and my claim to fame is sharing my knowledge free to the industry to help South Africa and Africa grow a sustainable industry and quality product.

Can you shed some light on the Cannabis Trade group?

The African Cannabis Trade Group and African Cannabis Industry Association are two WhatsApp groups with over 500 hemp and cannabis farmers, manufacturers, distributors, discussing licensing, sales, export, and production techniques. It's for the industry to support the industry.

The point of the industry trade group is to bring the retailers, wholesalers, manufacturers, and cultivators together under one roof to make it easier for all to do business with each other and understand each other's opportunities and struggles. For example, I have sold probably 500kg of CBD isolate into South Africa over 3 years into this group so people could start making cbd products for the retail market.



As a financier in Africa, I built a network of over 500 young entrepreneurs who I mentor and connect with each other. I don't have the time to support everyone, so I made a group where they can all support each other. Based on this success, we came up with the idea of the African Cannabis Trade group a place to freely post about products in a private membership setting, not public advertising, to discuss what we are doing and growing and selling and how to best do this for export.

What's your mission and are you winning?

My mission is to have as many EU GMP, CUMCS, GACP registered growers who have listened to me in South Africa and built quality certified products for export.

We have now introduced a Cannabis focused insurance for growers and their crops, and offtake agreement program where by we organize connections to offtakes, and a software system run on the blockchain that is FREE to clients to implement, seed to sell to end user track and tracing. Our goal is to not make the mistakes made in other markets, and build a brand for South Africa's top quality producers. That someday we be known for our Cannabis more than our Wine.

Before cannabis, what were you focused on?

I have been focused on Cannabis for over seven years, 12 years if we count the first lab we were involved in, that did research on cannabinoids. However, before Cannabis I focused on taking companies public on stock exchanges as Business Listings Group, of which we listed over 3000 companies. I still consult with stock exchanges (such as BVM, Mozambique Stock Exchange) as well as listings (In Canada and Germany). I highly advise South African companies to consider working with us/me now to discuss the structure for Canadian, US, and European holding

companies to enable a future capital raise and IPO on foreign markets. Before Cannabis I did this for hundreds of mining companies, tech, pharma, manufacturing, farming, and real estate projects... in addition to Cannabis.

What sparked your interest in cannabis?

At first my interest in Cannabis was for listing and taking public companies. However my father died of Cancer, Bill Gibson, who was a famous Sales Trainer and Speaker globally, but few knew he suffered from cluster headaches and migraine headaches. He took myprodol and other opioids daily for his headaches, which destroyed his stomach lining, of which later became cancer of the lungs, stomach, kidney, liver. If my father had the alternative of Cannabis for his headaches, he would be alive today. For this reason I am passionate about cannabis.

Where do you see cannabis in 5 years time at global level and in South Africa?

CBD and THC will be available on recreational levels but like alcohol it will be regulated by percentages that one can sell for consumption, like 5-20 percent thc requires special licenses. I see THC prices dropping to around 25-50 cents per gram, due to over production in Columbia, Jamaica, Africa and not enough eu gmp certificates. In 5 years south africa should have at least 15 groups with EU GMP and competing with new products and research specific to Africa.

What do you think are the factors that will contribute to the success of the cannabis industry in Africa?

South Africa needs to focus on low cost of construction and operations for indoor, greenhouse, and tunnels, but at the same time registering their products to EUGMP, and CUMCS. Registration is not the only thing, photos and testing of South African product needs improvement with better testing facilities-

as well as products that meet the quality assurance necessary for export. Decriminalization will be an important step in creating a domestic market.

What services do we provide to the Industry?

- We provide business plans
- Pitch deck
- Financial modeling
- Capital raising,
- Insurance and offtake agreement consulting
- We assist with distribution into foreign markets, testing, stability testing, certifications
- Direct companies to suppliers from seeds and nutrients to extraction equipment and airflow, etc
- Mergers and acquisitions.
- Selling your business or helping you find target companies to acquire
- e-commerce websites, banking, credit processing, designs, distribution online, exchanges, forums, social media

- Insurance for the Cannabis market
- Tracking and tracing software (Global Cannabis Application Corp)
- Ultimum tax structuring and holding company for going public on the Canadian Stock Exchange, US, AIM, LSE, FSE ASX, or even maybe (usually small budgets starting at \$20,000 and up to \$100,000 as milestones are reached.
- White Label Manufacturing in EU GMP facilities in Europe and South Africa
-
- Product formulation, research, especially vitamins, cosmetics, oils, tinctures, and turn-key drop shipping of over 250 different formulas and products from skin creams to dog food.
- Provide business development and partnerships consulting
- Extraction of South African product in South Africa to EU GMP standard.

Business Focus

Nutrigo

By David Katerere

Nutrigo is a food innovation company founded in South Africa in 2018. Established as a Tshwane University of Technology spin-off, Nutrigo aims to formulate food and beverage products which are burnished in tradition and informed by science for good nutrition and health for all. The company has a strong scientific representation on its board which distinguishes it as an R&D – founded nutraceutical company. We also have an arrangement with the university to be a holder of license/ IP for the products we manufacture.



Niselo- a product of Nutrigo

The company was given a kickstart by winning a grant from the Finnish and South African governments via the AU NEPAD Southern African Network of Biosciences (SANBio). The grant allowed the company to develop and commercialize its flagship product called *Niselo*. Niselo is a sorghum beverage drink which is infused with probiotics.

It is a ready to drink non-dairy drinking yoghurt for all people “on the go” (busy), athletes, convalescents, young and old. The rallying call for Niselo is that Niselo is for everyone as seen by its distribution footprint. Niselo has numerous health benefits, specifically, it is high in protein, containing antioxidant phenolics and prebiotics. It is gluten and lactose free and fortified with probiotic culture (which enhance the immune system and improve gut health). Niselo is currently available in four flavours. We have several follow-on products in the pipeline including a cannabidiol (CBD) variety soon to hit the market.



Niselo representative distributing the drink at Tshwane University of Technology

Nutrigo was selected for the University Innovation (UI) Global inaugural UI-Learn accelerator programme. This was an intensive 7 week programme. Through that programme, Nutrigo was introduced to partners in the UK and was the only African company awarded a £10,000 grant to partner with Abertay University in order to enter the UK market. This gave the company a new lease of life following the ravages of COVID-19. Nutrigo –

UK, a subsidiary of NutriGo-SA is now setting to receive technology transfer from South Africa to the UK in order to start manufacturing and marketing Niselo in the UK. An interesting turn of events. More recently the company has received the SANBio BioBOOST grant to set up its own manufacturing facility in Pretoria and therefore increase Niselo's market footprint. The product can be seen on the streets of Pretoria, at selected stores or ordered online. It is also being distributed in KwaZulu Natal and Harare in Zimbabwe. Hopefully you will be seeing it at the shop next to you as NutriGo is always open to negotiating distribution agreements.



Niselo shared by motorcycle club members

NutriGo is not just any other company. It is a company built on the values of ubuntu. We have recently partnered with Rotary Club of Pretoria Capital to donate it to two orphanages for Mandela Day (67 Niselo's for Mandela x 2!). We will continue to help communities in need with better nutrition and play our part.

Follow us - Niselo.com
Twitter - Niselobev



Niselo distribution on the streets of Pretoria Central, South Africa



(Sixty-seven Niselo's for Mandela day)



Country Focus

Angola

Angola has a population of 33 086 278 people. The population is composed of 37% of Ovimbundu (Umbundu language), 25% of Ambundo (Kimbundu language), 13% of Congo and 22% of other ethnic groups (such as Chocues, Ovambos, Vambunda and Xindongas), as well as as for about 2% of mestizos (mixture of Europeans and Africans) and 1% of Europeans. The Ambundo and Ovimbundu ethnicities combined form the majority of the population (62%).

Portuguese is the official language of Angola. Among the African languages spoken in the country, some have the status of national language. These as well as other African languages are spoken by the respective ethnicities and have dialects corresponding to the ethnic subgroups. The ethnic language with the most speakers in Angola is Umbundu, spoken by the Ovimbundu in the south-central region of Angola and in many urban areas. It is the mother tongue of about a third of Angolans.

Kimbundu is the second most spoken ethnic language - by about a quarter of the population, the Ambundos who live in the north-central zone, on the Luanda-Malanje axis and in Kwanza Sul.

It is a language with great relevance, as it is the language of the capital and of the ancient Kingdom of Dongo.

It was this language that gave many words to the Portuguese language and vice versa. The Kikongo spoken in the north (Uíge and Zaire) has several dialects. It was the language of the former Kingdom of Congo, and with the post-colonial migration of the Congos to the South, today it has a significant presence in Luanda as well.

Also in this region, in the province of Cabinda, Fiote or Ibinda is spoken. Tchokwe is the eastern language par excellence. It has overlapped with others in the east and is, without a doubt, the one that has expanded the most throughout the territory of present-day Angola, from Lunda Norte to Cuando-Cubango.

Kwanyama or Oxikwanyama, Nyaneca and above all Umbundu are other languages of Bantu origin spoken in Angola. In southern Angola other languages are still spoken, some belonging to the Khoisan group, spoken by small groups of San, also called Bushmen, others spoken by small Bantu ethnicities.

There are several natural medicine groups in Angola. Like COMMENTA, FOMETRA, Kitoco Group, etc. For example, according to VOA Portugal, the Kitoko group, for more than three decades in the world of traditional medicine, has 61,000 doctors and 33,000 traditional midwives affiliated.

As for medicinal use, there exists *Cochlospermum angolense*, *Chenopodium ambrosioides* and *Steganotaenia araliacea*, plants from the Fabaceae, Vitaceae, Passifloraceae, Lamiaceae, Poaceae families.

Below are some plants and their uses:

- *Abutilon mauritianum* (Jacq.) Medik. (Malvaceae)-**Emulgent**;
- *Adenia lobata* (Jacq) Engl. (Passifloraceae)-**Anthelmintic**
- *Adenia rumicifolia* (Engl & Harms) (Passifloraceae)- **Fractures of the limbs**;
- *Lanata herb* (L) Juss. ex Schult. (Amaranthaceae)- **Antidiarrheal**
- *Blumea gariepina* DC. (Asteraceae)- **Relief of rheumatic pain**
- *Boerhavia adscendens* Willd. (Nyctaginaceae)-**Combating bleeding**
- *Cajanus cajan* (L.) Millsp. (Fabaceae) **Gargling and relief of Toothache**;
- *Canarium schweinfurthii* Engl. (Burseraceae)-**Wounds and ulcers**
- *Chenopodium ambrosioides* L. (Chenopodiaceae)-**Oxyurosis**
- *Cissus aralioides* (Welw. Ex Baker) Planch. (Vitaceae)- **Placed on wounds to prevent infections**
- *Cissus rubiginosa* (Welw. Ex Baker) Planch. (Vitaceae)-**Neck pain**
- *Cissus* sp. (Vitaceae)-**Smearred on the body to deter snakes**
- *Datura stramonium* L. (Solanaceae)- **Relief of rheumatic pain**;
- *Dichapetalum lujae* De Wild & T. Durand (Dichapetalaceae)- **Intestinal worms (roundworms)**
- *Diospyros lycioides* Desf. (Ebenaceae)-**Purgative**
- *Dorstenia psilurus* Welw. (Moraceae)- **Urinary tract diseases and menstrual pain**
- *Fragaria vesca* L. (Rosaceae)- **Antidiarrheal**
- *Garcinia mannii* Oliv. (Clusiaceae)- **Stomach pain**



***Canarium schweinfurthii* Engl. of the family, (Burseraceae) used to treat Wounds and ulcers (Komakech, 2022)**

- *Cassia angolensis* Welw. ex Hiern (Fabaceae)-**Deworming**



***Dorstenia psilurus* Welw. (Moraceae) used to treat Urinary tract diseases and relieve menstrual pain (Download psilurus images for free, 2022)**

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Upcoming Events

- 11 & 25 August WOMENpreneurs of Africa (in conjunction with SEDA)

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