



Virtual Research Environments: The role of the facilitator

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CSIR Information Services

7 June 2012
11th SAOIM Meeting, Johannesburg
Convention Centre



VIRE Pol-SABINA Virtual Research Environment
You are not logged in. ([Login](#))



Researchers of natural products enhancing food security and improving health!

Login

Username

Password

[Create new account](#)
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This digital workspace is home to a number of researchers concerned with the utilisation of African natural products - to enhance food security and improve human and animal health.

SABINA is a network that constitutes the following partners: University of Malawi, University of Namibia, University of Dar es Salaam, University of Pretoria, University of Witwatersrand, Council for Scientific and Industrial Research and Tea Research Foundation of Central Africa. SABINA partnership is focused on the building of capacity in natural product research through training of MSc and PhD students. The main goal of the SABINA network initiative is to implement proactive postgraduate programmes in the chemistry/biochemistry of natural products. This project is funded as a Carnegie Regional Initiative in Science and Education (see <http://sites.ias.edu/sigrise/>).

The linked POL-SABINA initiative is mainly funded by EU ACP Science and Technology Programme and is supported through the Carnegie-RISE initiative. It focuses on the development of biological resources with application in medicine, health promotion, and agriculture.

Researchers and all other interested parties are welcome to register. Registration does not necessarily give access to content. However, once a new member is invited to join a project, he/she will be able to create and store research artefacts in a secure environment and share these artefacts easily with colleagues, dispersed across the globe.

SciDev.Net

LATEST NEWS
on science, technology & the developing world.

In defence of COMSATS
Eduardo Posada, chairman of the coordinating council of the Commission on Science and Technology for Sustainable Development in the South, defends its activities - [more...](#)
28 May 2012 | Source:

Chilean court of justice blocks dam in Patagonia
The Chilean Supreme Court has ruled that is illegal to approve a hydroelectric plant without first conducting environmental studies. - [more...](#)
28 May 2012 | Source: ScienceInsider

Egypt activates high

Background

- The South African Biochemistry and Informatics for Natural Products (SABINA) network was established as a collaborative initiative amongst **Namibia, Tanzania, Malawi and South Africa**
- The POL-SABINA project was created to develop policy and support actions for the SABINA network:
 - create a **collaborative environment** amongst partners
 - permit researchers engaged in natural products research and associated capacity building initiatives to **enhance their efficiency and effectiveness as researchers**
 - ensure that an appropriate environment exists **to facilitate the translation** of their research outputs into actual products

My profile

- Degrees: B.Sc. in Molecular Biology and B.Sc. in Medicine (Honours)
- Worked at: Centre for Occupational and Environmental Health Research, UCT
- ICT literate, but have **no background** in
 - library science
 - training
 - integrating systems
 - publishing
 - facilitating relationships



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on science, technology & the developing world.

Building a future for mathematics in Africa

The two branches of the African Institute for Mathematical Sciences are flourishing, with more in the planning stage. [More](#)

General functions and features

VIRE Pol-SABINA Virtual Research Environment

You are logged in as Natalie Bowers (Logout)

Home ▶ Site pages

Main menu

- Site news
- Site wiki
- Medicinal plant wiki
- Site wiki

Navigation

- Home
 - My home
- Site pages**
 - Participants
 - Blogs
 - Notes
 - Tags
 - Calendar
 - Reports
 - Site news
 - Site wiki
 - Medicinal plant wiki
 - Site wiki
- My profile
- My projects

Site news

[Add a new topic](#)

South African Genetics & Bioinformatics Society Conference

by [Natalie Bowers](#) - Monday, 21 May 2012, 08:20 AM

SAGS + SASBCB Joint Conference Second notice.pdf
 PLENARY SPEAKERS.pdf

The South African Genetics Society and South African Society for Bioinformatics and Computational Biology have the pleasure to announce: "The Data-mining Revolution"; A joint meeting of these Societies to be held from the **10 – 12th September, 2012, at the Stellenbosch University Conservatoire.**

Important Dates

Deadline: early registration June 30th 2012

Deadline: abstract submission May 30th 2012

Acceptance emailed: June 15th 2012

Finalization of program: July 15th 2012

Calendar

May 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Project categories

- Student reports
- PhD Projects
- MSc Projects
- Courses
- Tools and resources
- Moodle training course
- POL-SABINA Admin
- Test

All projects ...

Messages

5

Student Project Template

The screenshot displays a web interface for a student project template. On the left is a navigation menu with a 'Settings' button at the bottom. The main content area is divided into four numbered sections, each with a checkbox in the top right corner. A red arrow points to the 'Identification of funding resources' menu item, and another red arrow points to the 'List of collaborators' link within the third section.

Site pages

- ▶ My profile
- ▶ My projects
- ▼ Projects
 - ▼ PhD Projects
 - ▶ Adushan Pillay
 - ▶ Benjamin Kumwenda
 - ▶ Godwil Madamombe
 - ▼ **Justin Omolo**
 - ▶ Participants
 - ▶ Reports
 - ▶ Communication
 - ▶ Identification of research area
 - ▶ Identification of funding resources
 - ▶ Identification of collaborators
 - ▶ Project planning
 - ▶ Project proposal / Literature review
 - ▶ Standard operating procedures
 - ▶ Writing reports
 - ▶ Dissertation/Thesis
 - ▶ Articles / Presentations / Posters
 - ▶ Kumbukani Nyirenda
 - ▶ Nicholas Ishmael
 - ▶ Pelly Malebe
 - ▶ Petrina Kapewangolo

Settings

Discussion forum
News forum

1 Identification of research area


As Organic Chemistry lecturer, my research interest from the beginning was in the area of Organic Chemistry. I was involved in the Tanga Aids Working Group (TAWG) Project with my co-supervisor Dr Vinesh Maharaj in March 2009, and this formed part of my PhD studies in South Africa.
Here you would add the information gathered while investigating and identifying your research area.

2 Identification of funding resources

I was informed about the SABINA scholarship by a fellow staff member, Dr Quintino Mgani and he asked me to submit all the required documents to the SABINA headquarters in Malawi for possible consideration. By that time the admissions for most South African universities were closed and SABINA representative, Prof Charles de Koning from WITS had to request that the School of Chemistry process my admission. I started my studies in March 2009 at CSIR in Pretoria where I stayed for 1.5 years and completed the first part (phytochemistry and HIV bioassay) of my PhD before moving to Wits in Johannesburg to finish the second part (synthesis).
Here you would add the information gathered while investigating and identifying your funding resources.

3 Identification of collaborators

Here you will list the details of all your collaborators in a database as demonstrated below.

 List of collaborators

4 Project planning

Here you will add your project planning files.

Research tools

The screenshot shows a web application interface. On the left is a navigation menu with the following items: Home, My home, Site pages, My profile, My projects, Projects, Tools and resources, Library resources, Scientific tools & applications, Tools, Participants, Reports, and General. Below the navigation menu is a 'Settings' panel with options for Project administration (Turn editing on, Edit settings, Users, Filters, Grades, Backup, Restore, Import, Publish, Reset, Question bank), Switch role to..., My profile settings, and Site administration. The main content area is titled 'Research tools & applications' and features a central banner with the word 'Science' in a stylized font, accompanied by icons of a globe, a sun, and a lightbulb, with the tagline 'Explore The Possibilities'. Below the banner is a list of tool categories, each with a checkbox:

- 1 **Apple - Science tools & applications**

Apple-Science provides a plethora of tools and applications support many scientific disciplines. On Mac OS X, you'll find tools and applications that cover a broad scope of disciplines used both in life sciences and physical sciences, including data acquisition, experimental design and analysis; visualization and imaging; instrumentation; and mathematics and statistics.

Apple Life Sciences provides World-class commercial and open source tools for DNA and protein sequence analysis, pathway/expression analysis and structural biology are all available on Mac OS X.
- 2 **Broad institute software**

Scientists in the Broad institute software community have developed many critical software tools for the analysis of increasingly large genome-related datasets, and they make these tools openly available to the scientific community.
- 3 **HUBzero**











E.g. Apple-Science: has a plethora of tools and applications for all scientific disciplines

Roles of the facilitator

- Controlling permissions
- Training & troubleshooting
- Evaluating & testing platform and tool features
- Identifying resources to be integrated into Moodle
- Liaison with the VRE developer(s)
- Scouting for relevant content – irrespective of format
- Facilitating the development of relationships
- Spotting opportunities & making linkages
- Pushing only relevant content to the community

Defining user roles and permissions

- Roles and permissions define exactly what can be done and who is entitled to act

Role 	Description	Short name	Edit
Manager	Managers can access course and modify them, they usually do not participate in courses.	manager	↓  x2 ✕
Project creator	Project creators can create new projects.	projectcreator	↑ ↓  x2 ✕
Project owner	Project owners can do anything within a project, including changing the activities.	prowner	↑ ↓  x2 ✕
Project observer	Project observers can view the project content, but may not alter activities.	probserver	↑ ↓  x2 ✕
Student	Students generally have fewer privileges within a course.	student	↑ ↓  x2 ✕
Guest	Guests have minimal privileges and usually can not enter text anywhere.	guest	↑ ↓  x2
Authenticated user	All logged in users.	user	↑ ↓  x2
Authenticated user on frontpage	All logged in users in the frontpage course.	frontpage	↑ ↓  x2 ✕
web services	Allow to connect via webservices	ws	↑  x2 ✕

Creating and presenting user training



<http://showroom.ituta.net/>

Moodle Training Course



 News forum

2 Overview of the course

This course will introduce you to and assist you with using Moodle and it's functions.

On completion of this course you will be able to:

- Navigate through moodle
- Create a personal profile
- Manage your own project
- Make use of standard Moodle functions

Evaluating and testing platform features

- Developers can extend Moodle's modular construction by creating plugins for specific new functionality or they can introduce a new module or stand-alone system (e.g. BBB) that would enhance Moodle's functionality.

The screenshot displays the BigBlueButton web interface. The central area shows a presentation slide titled "The Precision Approach" with a diagram of a runway and glide slope. The diagram includes labels: "Glideslope (typically 3 degrees)", "MAP", "Decision height", and "Runway". The interface also features a "Users" panel on the left with a table of participants, a "Listeners" panel, a "Chat" window on the right with a message from Fred, and a "Video dock" at the bottom right showing three video thumbnails. The browser address bar shows "demo.bigbluebutton.org/client/BigBlueButton.html".

Role	Name	Status
	Fred	
	Richard	
	Tyler (you)	

Listeners	Audio	Video
Fred		
Richard		
Tyler		

Chat:

All Fred +

Welcome to ENGL-2013: Research Methods in English! 14:02

To understand how BigBlueButton works see our [tutorial videos](#).

To join the audio bridge click the headset icon (upper-left hand corner). **Please use a headset to avoid causing echo for others.**

Tyler Lorem ipsum dolor sit amet 14:12

Richard Nullam vel pretium velit. Aenean ut elit eros 14:12

Video dock:

BigBlueButton Main Interface

Jesus

Identifying resources to be integrated into the Moodle platform

The screenshot displays the VIRE Scientific tools interface. At the top left is the VIRE logo, and at the top right, it indicates the user is logged in as Natalie Bowers (Logout). The breadcrumb navigation path is: Home > Projects > Tools and resources > Scientific tools & applications > Tools > Marvin - draw and visualize chemistry > Marvin. On the left, a 'Navigation' sidebar lists various site and project options, including 'Tools and resources', 'Library resources', 'Scientific tools & applications', and 'Tools'. The main workspace features a menu bar (File, Edit, View, Insert, Atom, Bond, Structure, Tools, Help) and a toolbar with drawing tools. The central canvas shows a complex polycyclic chemical structure with a hydroxyl group, a methyl group, and a long branched alkyl chain. On the right, an 'Add a block' dropdown menu is visible.

MarvinSketch: an advanced chemical editor for drawing chemical structures, queries & reactions

Liaison with VRE developer

Warren

Trying to inspire the desire to be different

03:57 PM Johannesburg, Gauteng, South Africa

Offline

Video call Call Mobile +

can you tell me what it means if cron is running? 09:01

Warren oh okay... hmmm. well I'll be here if you need me 09:01

Natalie Bowers thnx 09:02

Warren a cron job is a process that runs at specific times or specific time intervals. So you can set up a cron to run every day at 1pm or to run every hour, etc. 09:03

Natalie Bowers so if its not running, will emails go out from moodle? 09:03

Warren a cron job can do anything... from backup your database to ... just anything... 09:03

Natalie Bowers oh ok 09:03

Warren yes... things should work better if there isnt anything running 09:04

Natalie Bowers I read that if someone os subscribed to a forum they will get an email notification, so yesterday marie wanted to test that, and no emails were received 09:04

Warren okay 09:04

well... what time did you test. I can check the system mail log and that will tel us if its the server... if not then its a Moodle setting issue 09:05

Natalie Bowers ok 09:05

that was around 11 ish i think 09:05

i know now that with messages each user can change the settings and have it send them an email every time they have a message on moodle 09:06

that worked yesterday 09:06

but marie wants the messages posted on the news site forum to go out to all users 09:07

Send message

Type a message to Warren here

MANTIS

Logged in as: natalie (Natalie Bowers - reporter) 2012-05-22 13:54 SAST Project: All Projects

Main | My View | View Issues | Report Issue | Change Log | Roadmap | Docs | My Account | Logout

Search: Apply Filter [Advanced Filters] [Create Permalink] Reset Filter

Viewing Issues (1 - 31 / 31) [Print Reports] [CSV Export]

P	ID	#	Category	Severity	Status	Updated	Summary
	0000043		[Moodle]	major	resolved (w/windvogel)	2012-05-08	Change the 'My projects' block so that it shows the project/course categories
	0000044		[Moodle]	major	new	2012-05-08	We need to set up a test session on BBB
	0000042	1	[Moodle]	major	resolved (w/windvogel)	2012-05-07	SCORM packager window dimensions
	0000036		[Moodle]	major	resolved (w/windvogel)	2012-04-23	Add Marvin drawing tool as an activity.
	0000041		[Moodle]	major	new	2012-04-19	Change the VRE domain
	0000040		[Moodle]	major	new	2012-04-19	Alfresco integration
	0000038		[Moodle]	minor	new	2012-04-19	Identify a project management application
	0000037		[Moodle]	major	new	2012-04-19	Identify an e-labbook application for Moodle
	0000035		[Moodle]	major	new	2012-04-19	Investigate and implement a DSPace repository for us on the VRE server
	0000034		[Moodle]	feature	resolved (w/windvogel)	2012-04-16	Please make it so that every user can add site news
	0000033		[Moodle]	major	resolved (w/windvogel)	2012-04-11	Moodle pre login page final tweaks
	0000030	2	[Moodle]	major	confirmed (w/windvogel)	2012-03-29	Moodle branding
	0000024		[Moodle]	feature	resolved (w/windvogel)	2012-03-29	Move the mentoring module to moodle
	0000021	1	[Moodle]	feature	resolved (w/windvogel)	2012-03-29	Change the dark green colour of the blocks in moodle to the brown colour of the chimbra VRE

Relevant content for research projects

- The students in the SABINA network are conducting research on the **biochemistry and chemistry of natural products**, including bioinformatics.
- In collaboration with an information specialist at the CSIR I was able to create **several search strategies** to assist with sourcing the most recent and relevant journal articles
- I have also created a **list of trusted web sites** that need to be interrogated regularly for new content

Facilitating relationships: getting users to cooperate and collaborate

- There are several **challenges** to getting our researchers to cooperate and collaborate, including: **time, isolation, poor motivation, lack of appropriate ICT skills and training**
- Initially we targeted the students but we have come to realise that the **supervisor determines priorities** for the students and we will therefore have to ensure that **supervisors become comfortable with the environment**. Without being comfortable it is highly unlikely that they would want to see the benefits of the VRE.

Spotting opportunities and making linkages

- This role is very broad and can be described as taking knowledge gained and putting it to good use
- It is about **developing a wide area of interest** and pulling in bits and pieces when they could make a difference in the researcher's very focussed project.
- For e.g. writing articles for the interest of the broader VRE community and adding this and other useful information to the newsletter- something that links them back to the VRE

Pushing content to VRE participants

VIRE NEWSLETTER

ISSUE 4, VOLUME 1

16 May 2012



GENERAL NEWS

South Africa: Scientists increasingly probe the health benefits of rooibos ([africatrac.com](#), Apr 2012)

The health benefits of rooibos have long been part of South African folklore, even as the indigenous brew was scorned by the upper classes throughout much of the 20th Century as being a 'poor man's tea'. But increased research into the properties of rooibos - which is part of the fynbos family and endemic to the Cedarberg region of the Western Cape - over the past ten years has found evidence that it is rich in anti-oxidants. [Read more](#)

South Africa: Wits plants medicinal garden (Johannesburg City News, May 2012)

It is hoped that the garden will expose students to phyto-medicine and teach them about a wider range of healing strategies from different traditions. Plants in the garden include St John's wort, Aloe ferox, Cape Honeysuckle, Snake Flower and Blue Lily. [Read more](#)

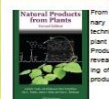
Tanzania: Hope for HIV/AIDS victims on the horizon (africatrac.com, May 2012)

There is a glimmer of hope for people living with HIV/AIDS to have their immune system activated faster by taking advantage of the nutritional benefits of the African potato. The African white potato is a bitter plant used for a wide variety of conditions including diabetes, mellitus, haemorrhage, prostate problems and boosting immune function. [Read more](#)

FORTHCOMING BOOKS

Adapted from Taylor & Francis

Natural products from plants



From medicinal, industrial, and culinary uses to cutting-edge laboratory techniques in modern research and plant conservation strategies, *Natural Products from Plants*, Second Edition presents a vastly expanded understanding of the natural products that plants produce.

Non-Timber Forest Products



This comprehensive book addresses the issues that arise when the principal practice of gathering and plants, fungi, reves, and bark occurs in a post-industrial world. Non-timber forest products include medicinal herbs, fungi, edible fruits and nuts, and other natural products from the forest.

SABINA NEWS

ACGT founder presented with lifetime biotech contribution award

April 2012



Co-founder, former Director of the African Centre for Gene Technologies (ACGT) and currently part time consultant to the organization, Dr Jane Morris, was honoured with the Lifetime Contribution Award at the 2012 Biotechnology Fundi Awards on 16 February.

held at The Innovation Hub in Pretoria, the Awards aim to incentivise, support, promote and develop individuals and companies who make a significant impact on the biotech sector in Gauteng. The Lifetime Contribution Award recognises a biotech sector role model who has made a significant and impactful contribution in the development and promotion of biotechnology that spans a lengthy period of time.

Over the last two decades of her career, Dr Morris has been involved in numerous aspects of the biotechnology sector. After spending a number of years managing biotechnology research in an industrial environment at ACGT Ltd Research and Development, she moved on to the public sector at the CSIR where she took on a strategic technology management role. In addition, she has played an active role in biotechnology and bio-safety issues and participated in various national and international programmes concerned with GMO (genetically modified organism) safety. Since establishing the ACGT in 2001, Dr Morris has also been part of a number of South African government delegations promoting international collaborations in biotechnology and health advisory and other roles on various science and technology forums. When asked what her personal career philosophy has been, she says, "In everything I do I just want to make more of an impact than simply sitting on the job bench. I always wanted to see and try to influence the bigger picture; to not just be part of the status quo, but to move it forward". She adds that she was first attracted to the concept of advancing the science and application of biotechnology on a larger scale when, after joining ACGT, she was introduced to the industrial applications. "I saw the potential for the commercialisation of biotechnology in a range of different fields. That was when a whole lot of things began to open up", she explains.

Part of her role at the time was to look at the feasibility of different industrial projects that were being developed. "These ranged from GM plants to feed additives for farm animals. In order to look at the potential for those, you really had to start thinking a lot more widely", she says. It was this experience that provided her springboard into the numerous areas in which she is now a recognised figure within the sector - including policy development, collaborative networking and review/evaluation.

On receiving of the Lifetime Contribution Award, Dr Morris gave a short speech of thanks, wherein she touched on what she views as some of the long-standing challenges in South Africa's biotech sector. "A big talking point for the National R&D strategy is the innovation chain, and often it seems that as soon as a new invention is introduced, a new gap opens up. We really have to put a lot more work into getting the full value chain right - from research to getting products into the market", she says.

According to Dr Morris, one of the keys to achieving this is for all role players to not only work hard, but to work together. She believes she can make a lasting contribution to this through the legacy that she wants to leave behind with her work at the ACGT. "Having started the ACGT, basically from scratch, and then to see it attracting more and more individuals that want to work together - I give me the feeling that I could walk away knowing that this is something that will survive".

Adopted from the ACGT website

SABINA NEWS

SABINA student awarded 1st prize for his presentation



PHD candidate and SABINA student, Adushan Pillay was awarded the first prize for his presentation at the 12th Frank Warran Organic Chemistry Conference, hosted in Bloemfontein from the 15-18 April 2012. This conference is known to be the leading organic chemistry conference held in South Africa and provides a platform for attendees to meet with international guests and showcase their work, as well as build relations for potential future collaborations.

Adushan is currently conducting his research at the University of Witwatersrand in Johannesburg, South Africa. The presentation he delivered was part of his PhD synthetic work, entitled: *Synthesis of Anti-Tumour Naphthoquinones*. He presented his most recent and successful work: The first reported total synthesis of the fungal naphthoquinone compound, *anhydrofusarin*. According to Adushan these specific naphthoquinone compounds have medicinal utility especially by synthesizing them they have access to larger amounts of material for biological testing and they have a synthetic route to these compounds, which can be altered to explore the activity of their structural analogues.

"It was a prestigious honour to win this award because: (i) there were numerous worthy presentations, (ii) the judges' panel consisted of three international and two local organic chemists and (iii) winning this award demonstrated that the quality of synthetic work undertaken in the WITCO chemistry department is of a very high standard. It also emphasizes that my supervisors are excellent mentors".

Adushan is currently dedicating his time to writing-up his PhD thesis and writing publications based on his work. We wish him every success in his current and future endeavours.

Announcements

- Changed the VRE domain from 'chisimba' to 'naturalproducts'**
Please note that the new VRE url is: <http://naturalproducts.bu.ac.za/vre/>
- Workshop invite: seven imperatives to succeed in research: 29 May 2012**
The Southern African Research and Innovation Management Association (SARIMA) is hosting a workshop on: *Seven Imperatives to Succeed in Research*. This workshop will be held in the Free State, South Africa on 29 May 2012. POL-SABINA is willing to pay the registration fee for SABINA students and staff interested in attending the workshop. To download the invitation and registration form go to the [Natural Products VRE](#).
- Postdoctoral positions in tree genomics and bioinformatics at the University of Pretoria**
Candidates are sought for two postdoctoral positions in genomics and/or bioinformatics (starting July/August 2012). [Application deadline is 31 May 2012. Read more](#)
- POL-SABINA call for "Motivation for support towards the development of a business / implementation plan for a project in the SABINA network"**
POL-SABINA is pleased to announce an award for support towards the development of a full implementation / business plan. Scientists and students from SABINA partner institutions are invited to submit motivations for support outlining how the award money would contribute towards the development of a full business / implementation plan for value addition to a natural product research project that they are involved in. [Deadline is 25 June 2012. Read more](#)

- POL-SABINA News
- Announcements
- Journal Articles

JOURNAL ARTICLES

Differential Effects of Tea Extracts on Growth and Cytokine Production by Normal and Leukemic Human Leukocytes

Boyer, D. Jansen, J. Bartz, L.A. *Functional Foods in Health and Disease* 2012, 2 (4):72-85

Tea is one of the world's most highly consumed beverages, second only to water. It is affordable and abundant and thus has great potential for improving health of those in both developed and developing areas. Green, oolong, and black teas differ in the extent of fermentation and types of bioactive polyphenols produced. Green tea and its major polyphenol decrease growth of some cancer cells and effect production of immune system cytokines. This study compares the effects of different types of tea extracts on viability and cytokine production by normal and leukemic human T lymphocytes. Generation of the toxic reactive oxygen species H₂O₂ by extracts was also examined.

Synthetic Genetic Polymers Capable of Heredity and Evolution

Vitor B. Pinheiro et al. *BioScience* 336, 341 (2012). DOI: 10.1126/science.1217622

Genetic information storage and processing rely on just two polymers, DNA and RNA, yet whether their role reflects evolutionary history or fundamental functional constraints is currently unknown. With the use of polymerase extension and design, we show that genetic information can be stored and recovered from six alternative genetic polymers based on simple nucleic acid structures not found in nature [pseudonucleic acids (PNAs)]. We also select XNA aptamers, which bind their targets with high affinity and specificity, demonstrating that beyond heredity, specific XNAs have the capacity for Darwinian evolution and folding into defined structures. Thus, heredity and evolution, two hallmarks of life, are not limited to DNA and RNA but are likely to be emergent properties of polymers capable of information storage.

Anti-ulcer activity of Ipomoea batatas tubers (sweet potato)

Perkins, V and Sontomirski, M. *Functional Foods in Health and Disease* 2012, 2(3):48-61

Peptic ulcers occur in that part of the gastrointestinal tract which is exposed to gastric acid and pepsin, i.e., the stomach and duodenum. Gastric and duodenal ulcers are common pathologies that may be induced by a variety of factors such as stress, smoking and noxious agents including non-steroidal anti-inflammatory drugs. Ipomoea batatas tubers (sweet potato) contain ample amounts of antioxidants. It has been proven already by many scientific studies that antioxidants have ulcer healing properties. In reference to this, we tried assessing the ulcer healing effect of Ipomoea batatas tubers.

6-Substituted Imidazo[1,2-a]pyridines: Synthesis and Biological Activity against colon cancer cell lines

HT-29 and Caco-2

Adnan-Ahmed, K. Elmaghrabi, A. Rasseem, A. Yassin, D. Cavalli, H. de Koning, C 2011, *European Journal of Medicinal Chemistry*, 46, 9, pp. 452-458

A range of 6-substituted imidazo[1,2-a]pyridines were synthesized using a multicomponent coupling reaction. Most of these compounds were found to exhibit excellent activity against the colon cancer cell lines HT-29 and Caco-2, whilst not showing significant toxicity against white blood cells. Our studies have shown that the proapoptotic phase of apoptosis was initiated 2 h after treatment with these imidazo[1,2-a]pyridines. The data suggests that the imidazo[1,2-a]pyridine-induced cell death in HT-29 and Caco-2 cells is mediated via caspase-3 that include the release of cytochrome c from the mitochondria to the cytosol and the activation of caspase-3 and caspase-8.

- General News
- Forthcoming Books
- Upcoming Conferences

Is this a role the librarians should play in the future?

- It has become clear that the **participation of the librarians at the very beginning** of the VRE can assist both in populating the VRE with content as well as in structuring access to the content.
- However, to be a VRE facilitator requires that the **facilitator is then also is involved in the next phase** – which would be to assist the researcher in managing the increasingly complex array of tasks involved in carrying out research online

Conclusion

- VRE facilitation is like being a mother, a logistics officer, a priest as well as a crazy inventor – all in one!
- The mother and the priest assist, forgive and hand out praise.
- The logistics officer is responsible for ensuring that everything that could go wrong does not and the inventor has to find new things to thrill and amaze the audience.
- But, as discussed in previous slides, there are very clearly defined and identifiable roles that need to be fulfilled by the facilitator.



Thank you!

Any questions?

References

- AOSIS Moodle training site. Available: <http://showroom.ituta.net/>. Accessed 25 May 2012
- BigBlueButton site. Available: <http://www.bigbluebutton.org/>. Accessed 25 May 2012
- ChemAxon site. Available: <http://www.chemaxon.com/products/marvin/marvinsketch/>. Accessed 25 May 2012
- Moodle site. Available : <http://moodle.org/> Accessed: 22 May 2012
- Deventer, M. 2011. Natural Products VRE: A gauge to help identify librarian roles & responsibilities in the online research environment. 4th African Conference for Digital Scholarship and Digital Curation, Pretoria: 16 May 2011. Available: <http://www.nedicc.ac.za/conference>. Accessed: 12 May 2012.