

# Peanuts :

benefits, calories  
and allergies



Gilbert KABANDA presents the  
SRTI digital portal

Ms Raïssa MALU, Director of Investing  
In People: "It's absolutely essential to  
promote knowledge and  
know-how..."

NSC President takes part in  
Science and Technology Week.



Call for publication in the  
Congolese Review of Sciences and Technology  
ISSN (Online) : 2959-202X  
ISSN (Print) 2960-2629  
DOI prefix : 10.59228/rcst  
[www.csnrdc.net](http://www.csnrdc.net)

BULLETIN N°020 May 2024

# CONTENTS

Quid of the barriers between the sciences in DRC?.....	P3
<b>Activities of the Ministry of SRTI</b>	
• Gilbert KABANDA presents the SRTI digital portal *AGISMAC .....	P4
<b>NSC activities</b>	
• NSC President takes part in Science and Technology Week.....	P5
<b>Echoes of Research Institutions</b>	
• NCPLR presents its activities at Science and Technology Week.....	P5
• NCRS: active participation in Science and Technology Week.....	P6
• Organization of Science and Technology Week.....	P7
• Kinshasa organizes Science and Technology Week.....	P7
<b>Interview with the Director of Investing In People Raïssa MALU.....</b>	<b>P8</b>
<b>Science and Technology Week in pictures.....</b>	<b>P9-10</b>
<b>At the time of Innovation</b>	
• GTD: new license plates link each vehicle to a number to guarantee traceability.....	P11
<b>Reflections from our researchers</b>	
• Professor NGBOLUA KOTO-TE-NYIWA: Transition to a sustainable climate economy in the DRC. What prospects for North Ubangi ?.....	P11-12
• Synergy between biodiversity and medicine: the role of biodiversity conversion in the use of phytomedicines and traditional practices.....	P12-13
<b>Read for you</b>	
• Peanuts: benefits, calories and allergies.....	P14



## ***Editorial Board of the Sciences and Technological Innovations Bulletin (STIB)***

### *Publication Director :*

Christian MAZONO MPIA (NSC)

### *Editor in chief :*

José MUSANGANA (HSRS)

### *General Secretary :*

Jacques ASUKA MOTUNDU (NSC)

### *Editorial Secretary :*

Jeanpi KALOMBO KANYINDA  
(NCRS)

### *Deputy Editorial Secretary :*

Nathalie NKANGA (CGI)

### *Central Editor :*

Dany LUYINDULA (NSC)

Jean-Luc BALOGIJE SELENGE  
(CRMD/BUNIA)

Eli MANUANA/GRC

Alain MBUYI MPOYI (WERC)

Nicole LUBUYA KANDA (GMRC)

Marcel MUENGULA

MAMYI (NIASR)

NDILU MALU (ATSRC)

LOTIME ANDANDA (CRLCA)

Freddy MADUKU MANZOMBA (NDRC/  
GEMENA)

Yves LUHEMBWE (AFRC/LUBUMBASHI)

Théodore LUMU MBINGE (AIPS)

Paulin MANDUNGU (VAC)

MBONZI NKWEDI (HSRC/BANDUNDU)

### *Marketing and Advertising :*

Mélanie MWAMINI ZUHULA (CEA)

Patrick NSILULU MIFUNDU (NSC)

### *Design and Computer Graphics :*

Patrick BHAYO (NSC)

Liévin MULUMBA KAPULU (MERC)

Josaphat MENAVUVU (NSC)

MPELO KANI. STEVENS

### *Camera :*

Jean Louis MBANDA (NCRS)

Johnny MINGANU (NSC)

### *Translator :*

Roger MBOMA KWENGE (NSC)

# Editorial

## Quid of barriers between sciences in the DRC.



**The world of science is a veritable labyrinth of divergent opinions. On the one hand, there are those who believe in the complementarity and on the other, those who believe in the superiority of one science over the others. This bipolarity of opinion is also evident in the scientific world in the Democratic Republic of Congo..**

Since this bipolar vision of science creates a boundary between the sciences, understanding the complementary or oppositional relationships between different scientific disciplines is crucial for researchers wishing to refine their understanding of a specific field. This issue has been addressed at several meetings organized in the DRC, notably in the provinces and in Kinshasa, as well as in the capital.

and in Kinshasa, such as during Science and Technology Week. But it remains a matter of concern, all the more so as many Congolese attach great importance to choosing the scientific field in which they wish to invest, conduct research, train and perfect their skills.

The multitude of domains in the scientific field can create a sense of confusion and uncertainty among scientists and researchers, presenting them with two major challenges: identifying the field that matches their interests, and choosing the right career path.

This particular case illustrates the complexity of the question of hierarchy and complementarity between different scientific disciplines, which raises a number of questions: How can we determine the relative importance of different scientific disciplines? Are there intrinsically less important fields that should be reserved for certain groups of people in society? Are these assertions true or false? How can we define the boundaries between the different sciences?

In reality, the boundaries between different scientific disciplines are not always clear-cut and well-defined. Sciences, disciplines, etc. often converge and diverge depending on the approach which can be explained by a variety of factors. It is precisely for this reason that Congolese scientists, each in their own field of expertise, should strive to follow the rigorous principles of their discipline, while exploring opportunities for collaboration and interdisciplinary exchange.

By adopting this approach, they can make a signifi-

cant contribution to the advancement of science and its positive impact on Congolese society.

In an ever-changing world, every nation aspires to occupy a more favorable position on the international stage in order to guarantee its development.

As one widely-held slogan emphasizes, development cannot be envisaged without science.

In other words, without science, development is of little value.

in the words of Henry Morton Stanley, is based on scientific discoveries that open up new prospects for improving human living conditions and protecting the environment. It is therefore undeniable that science plays a crucial role in the development process.

Rather than erecting barriers between scientific disciplines, it's crucial to understand them as a coherent whole, and to mobilize the full potential of all of them.

a coherent whole, and mobilize all of a country's vital sectors. Indeed, any scientific progress, such as the improvement of mining techniques, requires a multidisciplinary approach that integrates fields such as agriculture, health, hydrology, energy and environmental protection. Taking these interdependencies into account is essential to guarantee sustainable and inclusive development.

As underlined by the President of the Republic, it is imperative to create a new impetus to enhance each scientific field in order to contribute to the prosperity of the Democratic Republic of Congo. This wish expressed by the country's highest authority must not remain a mere credo for scientists. They must mobilize and put their skills at the service of the influence of each scientific discipline, by concretely bringing the fruits of their research to their field of expertise. The results obtained will help strengthen the DRC's position in the years to come.

Buoyed by the success of the first Conclave of Congolese Scientific Genius held under the impetus of SEM Gilbert KABANDA KURHENGGA between August and September 2023, and the growing dynamism of Research Institutions, the Democratic Republic of Congo is in a position to pursue large-scale programs with a high visible impact. This success highlights the complementarity of the various scientific disciplines, including research and techno-

logical innovation, which contribute to a coherent whole. The absence of boundaries between scientific fields underlines the importance of investing in each of them. Such investment will enable the DRC to take great pride in its future scientific achievements and benefit from a positive impact on development.

Indeed, all scientific disciplines have their own intrinsic importance and value. Each field has its own strengths and limitations, which complement and enrich each other. It is therefore inappropriate to rank the sciences in order of importance. On the contrary, it is essential to recognize each discipline's unique contribution to understanding the world and advancing knowledge.

It is imperative to overcome the artificial boundaries that separate scientific disciplines, while ensuring that this approach is guided by rigorous ethical principles to avoid any drift. This is precisely the mission of the National Scientific Council, which plays a crucial role in the decision-making and control of research institutions.

Intellectuals in the Democratic Republic of Congo have an essential role to play in the country's development. By actively engaging in reflection, criticism, creation and the production of ideas on social, political, cultural, artistic or philosophical issues, they can make a significant contribution to the progress of all sectors of national life, cultural, artistic or philosophical issues, they can make a significant contribution to the progress of all sectors of national life.

The principle of complementarity is opposed to any artificial fragmentation of scientific disciplines. Science cannot contradict or destroy itself. On the contrary, the different branches of science complement and enrich each other, contributing to the overall advancement of knowledge.

Today, we are witnessing the fruits of this interdisciplinary collaboration, in the form of innovations and discoveries from every field. Research institutions, inventors and innovators play a crucial role in this process, working together to build a strong and prosperous Congo.



## Activity of the Minister of SRTI

### Gilbert KABANDA presents the SRTI "AGISMAC" digital portal

**O**n April 19, 2024, SHIRISUNGU CHIZA, Director of Cabinet of the Minister of Scientific Research and Technological Innovation, chaired a meeting with all stakeholders, including engineers, concerning the Ministry's digital portal called "AGISMAC".

This activity was attended by the President of the National Scientific Council, Professor Pius MPIANA TSHIMANKINDA and several members of the Minister's Cabinet.

During the meeting, the Deputy Cabinet Director of the Minister of Scientific Research and Technological Innovation explained that the invention presented was the work of a team made up entirely of Congolese engineers, and that the portal would be managed by NSC.

This digital tool will enable all inventors, innovators and researchers, as well as all students preparing their final dissertations, whether Congolese or foreign, to register.

For their part, the team's engineers explained how the Portal works.

The President of the National Scientific Council, Pius MPIANA TSHIMANKINDA, stressed that the creation of this Digital Portal is of great importance for Congolese researchers.

It should be noted that this digital portal will be used to register inventors, innovators and researchers wishing to take part in the Congolese Scientific Genius Forum that will be held in August 2024.

**Communication Unit of the Minister of RSTI and Christian MAZONO/NSC**

## NSC activity

### NSC President takes part in Science and Technology Week.



The President of the NSC, Prof Pius MPIANA TSHIMANKINDA at the 11th edition of the Science and Technology Week on April 10, 2024

**T**he scientific community devoted the second week of April 2024 to a week called "Science and Technology Week". Opened on April 06, 2024, it saw lively activities on April 09 at the Athénée of Gombe and on April 10 at the Halle de la Gombe for the closing day. The event brought together scientists and students from the Democratic Republic of Congo (DRC)..

Professor Pius MPIANA, President of the National Scientific Council (NSC), took an active part in the event. During the week, conferences, workshops, exhibitions and other activities were organized to help stimulate curiosity and interest in science and technology in the DRC. At both the

Athénée of Gombe and the Halle de la Gombe, Congolese scientists once again demonstrated their commitment to science and technology-related activities.

The presence of Professor MPIANA TSHIMANKINDA is a strong signal, because in his capacity as Chairman of the NSC, he makes scientific and technological culture his hobbyhorse in order to promote knowledge and know-how.

He took the opportunity to encourage the Research Centers and Institutes that took part in the event and had set up stands, urging them to present their research products at this type of meeting. He particularly congratulated the NCRS and NCPLR as model centers for coming to speak about their fields of research in the scientific community.

Science and Technology Week is an event that engages pupils, students, young professionals and researchers in science and technology.

The NSC, through its President, Prof. Pius MPIANA TSHIMANKINDA, was very pleased not only with the smooth running of Science, but also with the presentations made.

Science and Technology Week is an event celebrated throughout Africa to stimulate research and technological innovation.

In the DRC, this scientific activity is organized with the support of the ASBL Investing In People, whose President is Madame Raïssa MALU, the ONGD Elongo Elonga, the Ministry of Primary, Secondary and Technical Education, the Ministry of Higher Education and the Ministry of Scientific Research and Technological Innovation. It's a scientific awakening to be supported in every respect. We'll come back to this in our next issue.

JJ ASUKA and Consort BELESI/NSC

## Echoes of Research Institutions

### AESC organizes fire-fighting training for AEC and UCK personnel

**F**rom April 08 to 10, 2024, African Energy Solution Company (AESC) organized a training session in Kinshasa on firefighting and the efficient use of first response equipment for staff from the French Atomic Energy Commission AEC/ RCNEK and University Clinics of Kinshasa (UCK).

Sponsored by the Management Committee of the French Atomic Energy Commission (AEC), the training took place at the AEC/RCNE-K facilities.

It was provided by the company "African Energy Solution" (AES). The training itself comprised two sessions: a theoretical session on fire, its origins and the as well as the appropriate means to be considered to deal with the onset of a fire, and a practical session preceded by video projections of actual interventions and other simulations.

On the practical side, in addition to the optimum use of fire extinguishers, a fire hose was used by each participant to ensure perfect mastery of the rules of the art in extinguishing a declared fire.

Finally, an evacuation simulation of a burning building was carried out AES organized a fire-fighting training course for AEC and UCK Echoes staff from the Research Institutions, using smoke bombs. Each participant had to cross the area concerned, following the instructions, to the pre-selected assembly point. An emergency was staged in which an agent was asphyxiated and left behind in a burning room. The forgotten agent had to be retrieved by a two-person team dispatched to the cause.

On their return with the stricken



agent, a resuscitation session was organized for everyone to learn.

At the end of the training course, all the agents trained in the subject received their certificates of participation.

A family photo was taken in front of the classroom to close the event.

Mélanie MUAMINI/AEC



*LNCRS staff on foot during the 11th Science and Technology Week*

## NCRS: Active participation in Science and Technology Week 2024

**"Science as a common language here and there" is the theme around the 11th edition of Science and Technology Week held from Saturday 06 to Wednesday 10 April 2024 in Kinshasa, capital of the Democratic Republic of Congo.**



*NCRS CEO Prof. David NGINDU surrounded by his close collaborators at the 11th edition of Science and Technology Week*

The aim of the conference is to show that science is a common language throughout the world, and also to stimulate curiosity and interest in science and technology, and to popularize Congolese science and technology. The aim was also to encourage vocations in science and technology, particularly among girls.

For its part, the National Center for Remote Sensing (NCRS), through exhibitions by its scientific staff, took the opportunity to raise awareness among young people of the importance of remote sensing in the DRC through the use of drones and satellites.

I invite Congolese youth to take an interest in science to develop this country, because the future of the DRC is in the hands

of its young people. All emerging countries started out locally from science, and today we're talking about new technologies that have developed the world. And if our young people start to develop a taste for science at an early age, it could bear fruit tomorrow", declared David NGINDU, NCRS General Manager.

Mrs. Raissa MALU, the initiator of Science Week in the DRC, emphasized that this 11th edition is exceptional in that it has placed at the heart of its activities a team of dynamic and motivated students and pupils, even involving experiments in several fields including science, mathematics and the arts, which are the common languages of humanity.

"It's these disciplines that transcend generations and geographical spaces, and ultimately break down any barriers we might put up," she concluded.

This 11th edition of Science Week took place in two countries: the DRC and Belgium. Mrs. Raissa MALU promises to be a major milestone in the promotion of scientific and technological culture in the DRC and more widely on the African continent.

**Jeanpy kalombo NCRS**

## NCPLR takes an active part in the 11th edition of Science and Technology.

**The National Committee for Protection against Ionizing Radiation (NCPLR) took part in the 11th Science and Technology Week, organized from April 6 to 10, 2024 in Kinshasa by ASBL Investing In People, in close collaboration with the Ministry of Primary, Secondary and Technical Education (PSTE) and the Ministry of Scientific Research and Technological Innovation.**

During the event, several items of equipment used by NCPLR were presented to the public. The members of the NCPLR Management Committee were delighted with the organization of this event, which enabled the institution to raise awareness of its activities and organization.

The NCPLR is the sole regulatory authority for nuclear and other radioactive sources.

The NCPLR is currently headed by a Chairman, Professor NYAMOGA KABANDA Florimond. He is assisted by Vice-President Prof. KABENA NGANDU Odette and Executive

Secretary Mr. NYANGURA AMISI Alfred.

**NGANDOMWALI DONDO NANA Rose/ NCPLR and Consort BELES/NSC**

### Organization of Science and Technology Week

#### Report

## Kinshasa organizes Science and Technology Week

**Science and Technology Week is an event organized by Investing In People ASBL, Elongo ONGD, the Ministry of Primary, Secondary and Technical Education, the Ministry of Higher and University Education, and the Ministry of Scientific Research and Technological Innovation.**

This annual event aims to develop a scientific and technological culture in Africa, promote knowledge and know-how in these fields, and inspire vocations among pupils, students and young professionals.

During the week, conferences, workshops, presentations and other events are organized to help stimulate curiosity and interest in science and technology in the Democratic Republic of Congo and throughout Africa.

As organizer, Raïssa MALU often invites research institutions to take part. Thus, NSC, AEC, WERC, HCRI, CBR-NEC, ATSRC, NCPLR often take part in the different editions with conferences, exhibitions, etc.

STIB editorial team

RÉPUBLIQUE DÉMOCRATIQUE DU CONGO  
ministères de l'Enseignement primaire, secondaire et technique,  
de l'enseignement supérieur universitaire et de la recherche scientifique et innovation technologique

L'ASBL INVESTING IN PEOPLE

Investing In People  
organisent

11  
Semaine de la  
Science et des  
Technologies

THÈME :  
**LA SCIENCE COMME  
LANGAGE COMMUN,  
ICI ET LÀ-BAS**

06-10 / 04 / 2024 RDC & BELGIQUE

## Ms Raïssa MALU, Director of Investing In People: « It's absolutely essential to promote knowledge and know-how... »

**A** In an interview conducted in Kinshasa, the "Sciences and Technological Innovations" Bulletin spoke with the Director of the ASBL Investing In People, on the occasion of the 11th edition of Science Week organized from April 6 to 10, 2024 in Kinshasa. During this interview, she demonstrated that it is absolutely important to promote knowledge and know-how. If you want the research budget to be increased, it's a good idea to share knowledge with the population about its importance," she said. people about its importance, impact, etc».

**Christian MAZONO:** Could you please introduce yourself to our readers?

**Raïssa MALU:** I'm Mrs. Raïssa MALU, Director of the ASBL Investing In People.

**Christian MAZONO:** Could you briefly describe the 11th edition of Science and Technology Week (SST 11) in the DRC?

**Raïssa MALU:** Investing In People ASBL, the Ministry of Primary, Secondary and Technical Education (PSTE) and the Ministry of Scientific Research and Technological Innovation (SRTI) organized the 11th (SST11) from April 6 to 10, 2024 in Kinshasa and in several provinces of the Democratic Republic of Congo (DRC), with the aim of informing the public and private sectors and raising awareness of the importance of research in contributing to the country's development.

This edition promises to be a major milestone in the promotion of scientific and technological culture in the DRC and, more broadly, on the African continent. It will also be held in Brussels from April 27 to 29, 2024. The 11th edition of Science and Technology Week has established itself as a key event in the scientific and educational calendar in the Democratic Republic of Congo and beyond, with ambitious objectives aimed at promoting science and innovation as drivers of development and social change.

The event positions itself as a bridge between diverse scientific communities, encouraging a fertile dialogue to address and solve global challenges through the

prism of science. This year, 2024, the focus is significantly on the dynamism and impact of the network of Catalysts, those passionate young people scattered across the country whose commitment and local initiatives embody Africa's vibrant contribution to global science and innovation.

**Christian MAZONO:** what is the developed theme for SST 11?

**Raïssa MALU:** We're at the 11th edition of Science and Technology Week, whose theme is "Science as a common language here and there". This shows that science and technology are now disciplines that resemble the generation, the people, and so on.

**Christian MAZONO:** Who are the partners you work with to ensure the success of your business?

**Raïssa MALU:** ASBL Investing In People works closely with the Ministry of Primary, Secondary and Technical Education (PSTE) and the Ministry of Scientific Research and Technological Innovation (SRTI), among others.

**Christian MAZONO:** A word for NSC and the researcher?

**Raïssa MALU:** The NSC is the sole supervisory and management body for research centers and institutes in the DRC. It has several missions, in particular to deliberate on the orientations and priorities of the scientific and technological research plans and programs to be carried out in the country. I take this opportunity to ask the NSC to mobilize the



Madame Raïssa MALU  
Director of Investing In People ASBL

Research Centers and Institutes to participate massively in the 11th edition of Science and Technology Week in Kinshasa.

Researchers are called upon to improve their knowledge in various fields of research. They must publish regularly to contribute to the country's growth and development.

**Christian MAZONO:** How can Investing In People contribute to the development of science in the DRC?

**Raïssa MALU:** the Investing In People ASBL issues opinions and makes research proposals that can decision-makers to make the right decisions about science.

**Christian MAZONO:** what are your final words?

**Raïssa MALU:** The Ministry of Scientific Research and Technological Innovation should work in synergy with other ministries, notably the Ministry of Primary, Secondary and Technical Education, to combine their efforts. This will enable us to better solve society's problems. We can't get out of underdevelopment without science and technology.

Interview realised by  
Christian MAZONO/NSC



# Science and Technology Week in pictures



Several partners were delighted to support this scientific event



Pupils enthusiasm at the NCRS stand during the 11th Science and Technology Week.



PCA journalist Serge NKASA comes to find out more about the event from the Director of the NGO Investing People Madame, Raissa MALU and the President of the NSC Prof. Pius MPIANA TSHIMANKINDA.



The NCPLR devoted a stand to the 11th Science and Technology Week.



Pupils turned out in droves to visit the various stands at the 11th Science and Technology Week on April 10, 2024.

## GTD: the new license plates link each vehicle to a unique tax number.



**F**inance Minister Nicolas KAZADI has announced a major reform of the vehicle registration system, aimed at modernizing and securing the process in response to the security challenges posed by the old system. According to the national treasurer, the old license plates have become obsolete and insecure, and can even be purchased on international platforms such as Alibaba, facilitating their fraudulent use across borders and beyond.

In response to this situation, the Government of the Republic has finalized the process of transition to a new system where plates will be distributed by selected companies who are currently installing their equipment in the DRC.

In parallel with the introduction of new plates, the government has implemented a system of digital registration certificates, or car registration documents, which must now be obtained online.

This change is designed to reduce fraud and improve control over plate numbers

and vehicle owners.

Each vehicle will be linked to a unique tax identification number (NIF) to ensure precise tax traceability of owners.

This digitalization initiative, which recently earned KAZADI an award from the National Digital Agency, now enables online validation of tax identification numbers, simplifying and securing the registration process.

tax identification numbers, simplifying and securing the registration process. The system has been well received by the public,

with a current average of 100 plates issued per day, and projections of 150 daily plates.

Since March 1, 2024, all registration procedures, including payments, have been carried out online. The General Tax Directorate (GTD) is also offering free registration cards to all owners who have never received them, to ease the transition to the new system.

It's worth noting that many companies are now digitalizing their operations.

[lamiao.cd](http://lamiao.cd)

## Reflections of our researchers

### Professor NGBOLUA KOTO-TE-NYIWA: Transition to a sustainable climate economy in the DRC. What prospects for the Ubangi North?

**T**he DRC, abundant in natural resources, faces environmental and socio-economic challenges. Adopting a sustainable climate economy presents an opportunity to combine economic growth and environmental preservation. By responsibly exploiting its resources, such as its forests and hydroelectric and hydroelectric potential, the DRC can reduce its greenhouse gas emissions, create green jobs, boost food security and increase access to clean energy

However, this transition requires investment in sustainable infrastructure, the promotion of technological innovation and the introduction of incentive policies to encourage climate-friendly business practices.

Strong public-private partnerships and in-

ternational cooperation are also crucial to support this transition. By investing in renewable energies, sustainable agriculture and resilient infrastructure, the DRC can diversify its economy, create jobs, improve food security and reduce vulnerability to climate shocks (resilience). Adopting an

integrated approach to sustainable development will not only help mitigate the effects of climate change, but also promote a prosperous and resilient future for generations to come.

The North Ubangi Province, located in the

north-west of the DRC, is an ecoregion of significant ecological importance. Its protection according to the Community

Climate and Biodiversity (CCB) could generate direct green jobs for the local population. By preserving this region, which is rich in biodiversity, notably its tropical forests, waterways and unique ecosystems, we're helping to create jobs in sectors such as ecotourism, sustainable natural resource management conservation and ecosystem restoration.

These green jobs offer economic opportunities while helping to protect the environment and mitigate climate change.

North Ubangi offers promising prospects

for the future if it succeeds in implementing environmental preservation and sustainable development policies.

It also offers promising prospects for the future if it succeeds in implementing policies of environmental preservation and sustainable development. By capitalizing on its rich biodiversity and unique ecosystems, the region can develop industries such as ecotourism, sustainable natural resource management and biodiversity conservation. These sectors could create green jobs and economic opportunities while preserving the environment.

Furthermore, by investing in resilient infrastructure and sustainable technologies, North Ubangi can strengthen its capacity to face future environmental and climate challenges. Finally, close collaboration between local players, businesses, international organizations and governments is essential to support the region's sustainable development and ensure a prosperous future for its inhabitants.

*Professor NGBOLUA KOTO-TE-NYIWA, PhD*

*Scientific Advisor (NSC/MSRTI)*

## The role of the Convention on Biological Diversity in the use of phytomedicines and traditional practices >>.

**O**n April 19, 2024 in Kinshasa, Professor NGBOLUA KOTO-TE-NYIWA published his research paper entitled: **"The synergy between biodiversity and medicine: The role of the Convention on Biological Diversity in the use of phytomedicines and traditional practices >>.**

In his view, the Convention on Biological Diversity (CBD) provides a crucial platform for addressing the relationship between biodiversity, traditional medicine and phytomedicines. By recognizing the value of traditional knowledge and biodiversity in medical research, the CBD encourages a more holistic approach to health and conservation.

It points out that traditional medicine, often based on ancestral practices, benefits from biological diversity for its remedies, underlining the importance of preserving ecosystems to maintain sustainable access to these medicinal resources. In addition, integrating traditional medicine into modern healthcare systems can offer complementary and accessible solutions, particularly in regions where access to conventional healthcare is limited.

Professor NGBOLUA KOTO-TE-NYIWA reveals that phytomedicines, derived from plants, represent a booming field of research, offering natural alternatives to synthetic pharmaceuticals. Biodiversity, with its wealth of unique chemical compounds, is an invaluable source for the discovery of new medicines. However, the overuse and over-exploitation of medicinal plants can threaten biodiversity and traditional knowledge, underlining the need for sustainable and ethical resource management.

He concludes that the CBD provides an essential framework for exploring the links between biodiversity, traditional medicine and phytomedicines, by promoting the conservation of biological diversity and respect for indigenous knowledge. It thus paves the way for a balanced and respectful approach to health and development.

Access and benefit sharing (ABS) are crucial to ensuring a fair distribution of the benefits arising from the use of genetic resources, often involving agreements between the parties concerned, such as holders of traditional knowledge and researchers, to ensure equitable and respectful collaboration.

*Professor NGBOLUA KOTO-TE-NYIWA, PhD*  
*Scientific Advisor (NSC/MSRTI)*



## Peanuts: benefits, calories and allergies

**P**eanuts are very popular all over the world, whether natural, roasted or as a spread. Peanuts are often thought of as nuts, but in fact they are legumes in the same way as beans. Peanuts are also an excellent source of vegetable protein, although they are less complete than animal protein.

It is rich in unsaturated fatty acids, a source of vegetable protein and high in calories. It also protects the cardiovascular system and contains allergenic substances.

### Nutritional and calorific values of peanuts



What's a "portion" of peanuts worth?			
Weight/volume	Peanuts, dry roasted, 37g	Roasted peanuts in oil, 34 g	Natural peanut butter, 32g
Calories	217	196	184
Proteins	8,8 g	8,9 g	7,5 g
Glucides	8,0 g	6,4 g	6,8 g
Lipids	18,4 g	16,6 g	15,6 g
Saturated	2,6 g	2,3 g	2,2 g
Monounsaturated	9,1 g	8,3 g	7,8 g
-polyunsaturated	5,8 g	5,3 g	4,9 g
-omega-3	0 g	0 g	0 g
Cholesterol	0 mg	0 mg	0 mg
Food fibers	3,0 g	2,5 g	2,5 g

Peanuts are a veritable cocktail of vitamins and minerals essential to the body's functioning. Among the nutrients that characterize it, we can cite the following:

**Zinc:** oil-roasted peanuts are an excellent source of zinc for women and a good source for men, as their needs are different. Dry-roasted peanuts are also a good source. Zinc is involved in immune reactions, the manufacture of genetic material, taste perception, wound healing and fetal development. It also interacts with sex and thyroid hormones. In the pancreas, it is involved in the synthesis (manufacture), storage and release of insulin;

**Manganese:** Peanuts are an excellent source of manganese. Manganese acts as a cofactor for several enzymes that facilitate a dozen different metabolic processes. It also helps prevent damage caused by free radicals;

**Copper:** peanuts are an excellent source of copper. As a constituent of several enzymes, copper is necessary for the formation of hemoglobin and collagen (a protein used for tissue structure and repair) in the body.

Several copper-containing enzymes also contribute to

the body's defense against free radicals;

**Vitamin B3:** Peanuts are an excellent source of vitamin B3. Also known as niacin, this vitamin is involved in numerous metabolic reactions, and particularly contributes to the production of energy from the carbohydrates, lipids, proteins and alcohol we ingest. It is also involved in the DNA formation process, enabling normal growth and development;

**Phosphorus:** peanuts are a good source of phosphorus. Phosphorus is the body's second most abundant mineral in the body after calcium. It plays an essential role in the formation and maintenance of healthy bones and teeth. It is also involved in tissue growth and regeneration, and helps maintain normal blood pH levels. Finally, phosphorus is a constituent of cell membranes;

**Magnesium:** dry-roasted peanuts are a good source of magnesium. Oil-roasted peanuts are a good source for women and a good source for men, as their needs are different.

Magnesium is involved in bone development, protein construction, enzyme action, muscle contraction, dental health and immune system function. It also plays a role in energy metabolism and the transmission of nerve impulses; It also helps prevent damage caused by free radicals;

**Copper:** peanuts are an excellent source of copper. As a constituent of several enzymes, copper is necessary for the formation of hemoglobin and collagen (a protein used for tissue structure and repair) in the body.

Several copper-containing enzymes also contribute to the body's defense against free radicals;

**Vitamin B3:** Peanuts are an excellent source of vitamin B3. Also known as niacin, this vitamin is involved in a number of metabolic reactions, and particularly contributes to the production of energy from the carbohydrates, lipids, proteins and alcohol we ingest. It is also involved in the DNA formation process, enabling normal growth and development;

**Phosphorus:** peanuts are a good source of phosphorus. Phosphorus is the body's second most abundant mineral in the body after calcium. It plays an essential role in the formation and maintenance of healthy bones and teeth. It is also involved in tissue growth and regeneration, and helps maintain normal blood pH levels. Finally, phospho-

rus is a constituent of cell membranes;

**Magnesium:** dry-roasted peanuts are a good source of magnesium. Oil-roasted peanuts are a good source for women and a good source for men, as their needs are different.

Magnesium is involved in bone development, protein construction, enzyme action, muscle contraction, dental health and immune system function. It also plays a role in energy metabolism and the transmission of nerve impulses;

**Vitamin E:** dry-roasted peanuts are a good source of vitamin E. A major antioxidant, vitamin E protects the membrane surrounding the body's cells, especially red and white blood cells (immune system cells);

**Potassium:** dry-roasted peanuts are a source of potassium. In the body, it balances blood pH and stimulates the stomach's production of hydrochloric acid, thus aiding digestion. It also facilitates muscle contraction, including the heart, and helps transmit nerve impulses;

**Iron:** peanuts are a source of iron for humans. Every cell in the body contains iron. This mineral is essential for oxygen transport and the formation of red blood cells. It also plays a role in the manufacture of new cells, hormones and neurotransmitters (messengers in nerve impulses);

**Selenium:** dry-roasted peanuts are a source of selenium. This mineral works with one of the main antioxidant enzymes, preventing the formation of free radicals in the body. It also helps convert thyroid hormones into their active form;

**Vitamin B1:** Peanuts are a source of vitamin B1. Also known as thiamine, this vitamin is part of a coenzyme needed to produce energy, mainly from the carbohydrates we ingest. It is also involved in the transmission of nerve impulses and promotes normal growth;

**Pantothenic acid:** peanuts are a source of pantothenic acid. Also known as vitamin B5, pantothenic acid is part of a key coenzyme that enables us to make proper use of the energy present in the foods we eat. It is also involved in several stages of the synthesis of steroid hormones, neurotransmitters and hemoglobin;

**Vitamin B6:** Peanuts are a source of vitamin B6. This vitamin, also known as pyridoxine, is one of the coenzymes involved in protein and fatty acid metabolism, as well as neurotransmitter synthesis.

It is also involved in the production of red blood cells, enabling them to carry more oxygen.

Pyridoxine is also necessary for the conversion of glycogen into glucose, and contributes to the proper functioning of the immune system. Finally, this vitamin plays a role in the formation of certain nerve cell components and in the modulation of hormone receptors;

**Folate:** peanuts are a source of folate. Folate (vitamin B9) is involved in the manufacture of all the body's cells, including red blood cells. This vitamin plays an essential role in the production of genetic material (DNA, RNA), in the functioning of the nervous and immune systems, and in the development of the immune system.

and immune systems, as well as in wound healing. As it is production of new cells, adequate consumption is essential during periods of growth and fetal development;

**Dietary fiber:** peanuts are a source of fiber. Found only in plant products, dietary fiber is a group of substances that are not digested by the body. In addition to preventing constipation and reducing the risk of colon cancer, a high-fiber diet can help prevent cardiovascular disease, control type 2 diabetes and improve appetite. It is recommended to consume 25 g of fiber per day for women aged 19 to 50, and 38 g per day for men in the same age group.

**Peanuts and weight gain: a myth denied**

Many people tend to limit their consumption of peanuts for fear that their high caloric content could lead to weight gain. However, studies have shown that incorporating regular consumption of peanuts into the usual diet entails relatively little risk of weight gain.

This could be explained by a feeling of satiety and an increase in metabolism following peanut consumption.

In addition, a diet containing peanuts could lead to additional excretion of fats in the stool. In fact, up to 20% of fatty acids from a nut-containing diet would be excreted in the stool and not absorbed.

**Health passport**

## PUBLIC-SECTOR RESEARCH CENTERS AND INSTITUTES IN THE D.R. CONGO

### RIHS (Research Institute in Health Science)

Objective: To improve the state of health of the population through research in the following fields: pharmaceutical, medical, anthropological, psychological or socio-cultural.

Address: 9, Av. Lukusa C/Gombe; E-mail: dnyembo@gmail.com; Tel: 0824580211

### ATSRC (Applied and Technologic Sciences Research Center)

Objectif: Mettre au point des matériaux, des appareils, des méthodes ou procédés Objective: To develop materials, equipment, methods or processes with a view to finding solutions to the population's urgent problems in various fields: housing, rural development and the modernization of the society.

Address: 106, Blvd du 30 Juin, C/Gombe; E-mail: Jeannoel.mputu@gmail.com; Tel: 0821138261

### RGHS (Research Center in Human Sciences)

Objective: To ensure the human development of the Congolese people through the study of its social, economic and political dimensions with a view to identifying the factors that have a positive or negative influence on its development.

Address: 33, Av. comité urbain C/ Gombe; E-mail: mingashang@yahoo.fr; Tel: 0819377821

### RCMT (Research Center in Mathematics Teaching)

Objective: To carry out research in the field of mathematics teaching with a view to improving quality.

Address: 84, Av. des Ambassadeurs C/ Gombe; E-mail: mabelamatendorostin@gmail.com; Tel: 0815031877

### GRC (Geophysical Research Center)

Objective: To provide the country with a national geophysical observation network, for the global study of the internal behavior of the earth in the DRC.

Address: 44, Av. de la démocratie, C/ Gombe (within GMRC); E-mail: tondozi@gmail.com; Tel: 0854426228

### AIPS (African Institute of Prospective Studies)

Objective: To carry out forward-looking studies in order to propose solutions to crises and problems linked to the evolution of African societies.

Address: Av. Cardinal Malula, C/ Lemba; E-mail: mgrtarcbangu@yahoo.fr; Tel: 0996658741

### MDRC (Multidisciplinary Development Research Center/Matadi)

Objective: To carry out operational research in central Congo in the field of applied linguistics of African cultures and applied sciences

Address: Hôtel de la porte Matadi; E-mail: Mwanzanicolas5@gmail.com; Tel: 0815037949

### NCPLR (National Committee for the Protection of ionizing Radiation)

Objective: - Regulatory authority for protection against the dangers of ionizing radiation in the DRC management of radioactive sources of radioactive materials such as uranium.

Address: 4675, Av. Colonel Ebeya, Immeuble Quitus 2ème niveau; Email: Flory1963@gmail.com; Tel: 0816684665

### AEC (French Atomic Energy Commission)

Objective: To carry out, promote and coordinate scientific and technical research in various fields of science and industry, concerning the use of atomic energy and space research.

Address: UNIKIN building; E-mail: Steve.muanza.kamunga@gmail.com; Tel: 0808643248

### CGI (Congo Geographic Institute)

Objective: Production of the base map of the DRC at a scale of 1/50,000 and its derivatives.

Address: 106, Blvd du 30 Juin, C/Gombe; E-mail: Fidele.balibuno@unikin.ac.cd; Tel: 0974449240

### GMRC (Geologic and Mining Research Center)

Objective: To carry out studies and analyses to improve knowledge of the soil and sub-soil of the national territory.

Address: 44, Av. de la démocratie, C/ Gombe; E-mail: rolandkakule@gmail.com; Tel: 0851506161

### NIASR (National Institute for Agronomic Study and Research)

Objective: To promote the development of agriculture in the Congo. To maintain varieties, multi-local trials, and its farmers, management and conservation of germplasm. Set up a program to monitor and evaluate research activities.

To disseminate new varieties. Give the emerging technical department its reason for being, with a view to producing basic and pre-basic seed. Resume publication of the agricultural magazine to disseminate research results.

Address: 13, Av. des Cliniques, BP :2037 KINSHASA, C/Gombe; E-mail: domikankonde@yahoo.fr; Tel: 0818248620

### RCALC (Research Center into African Language and Culture)

Objective: To coordinate and carry out all research projects concerning African languages and cultures.

Address: 53 C, Av. Makiso, blvd du 30 juin, Kisangani/ Tshopo. Tel: 0851934320

### AFRC (Agro-Food Research Centre/Lubumbashi)

Objective: To identify processes for processing and preserving basic local agricultural products. To improve the quality of imported or locally produced foodstuffs by applying approved standards and quality control.

Help the technological development of the existing agro-industry by providing them with technical assistance wherever possible.

Address: 1, Av. Président ILEO, Q/CRAA, C/Lubumbashi; E-mail: Julesnkulu@gmail.com; Tel: 0997131002

### SSRC (Social Science Research Center / Bandunduville)

Objective: to carry out practical scientific research into major socio-economic and cultural issues.

To promote sustainable aquatic development.

Address: 29, Av. de la mission, Q/Salongo, C/Basoko. BANDUNDUVILLE, BP. 223; E-mail: akuzituka@gmail.com; Tel: 0815898971

### FERC (Forest Ecology Research Center /Mabali)

Objective: Scientific research on plants, aquatic species and animal species.

Address: D.S/MBANDAKA D.S/MBANDAKA/PROVINCE OF ECUADOR; E-mail: bosom-boependi2@gmail.com; Tel: 0825241704

### NDRC (Nutritional Diseases Research Center/Gemena)

Objective: Research into diseases linked to malnutrition, such as related diseases by isolating certain molecules, such as SYZYSIUM GUINESIE to combat amoebic yeasts and diarrhea in South Ubangi.

Address: Mobutu n° 220/A. GEMENA/ SOUTH UBANGI PROVINCE; E-mail: cherusangi@yahoo.fr; 0992416091

### NSRC (Natural Sciences Research Center /Lwiro)

Objective: To carry out, promote and coordinate research in the fields of science, technology and industry throughout the DRC.

Address: LWIRO LWIRO, TERRITORY OF KABARE/SUD KIVU; E-mail: robert.kasisi@umontreal.com; Tel: 0996806699.

### MDRC (Multidisciplinary Development Research Center /Bunia)

Objective: To carry out operational research in the north-east of the DRC in the fields of applied linguistics, African cultures and applied sciences.

Study of nature, fauna, flora and protection of endangered species.

Address: BUNIA/ITURI; E-mail: Kermwathomas@gmail.com; Tel: 0997717070

### HRC (Hydrobiology Research Center in Uvira)

Objective: To program, coordinate and monitor research activities in hydrobiology, limnology and hydrology.

hydrobiology, limnology and fisheries in all ecosystems.

Address: 115, Av. du Congo, Q/Kimanga, C/Kalundu, UVIRA / SUD KIVU; E-mail: bida-kamuhaza@gmail.com; Tel: 0997716307.

### CoE/CBRNEC (Chemical, Biological, Radiological and Nuclear Excellence Center)

Objective: To contribute to the mitigation of chemical, biological, radiological and nuclear risks.

Address: 106, Blvd du 30 Juin, C/Gombe; E-mail: Odette.kabena@gmail.com; Tel: 0816904370.

### GVO (Goma Volcanological Observatory)

Objective: Prevention of volcanic risks by monitoring volcanoes and Lake Kivu. Kivu; Management of natural risks; scientific research.

Address: 142, Avenue Du Rond Point ; Quartier Les Volcans ; Commune de Goma ; Ville Goma; North-Kivu; E-mail: mavotulu@gmail.com; Tel: 0998584734

### WERC (Water and Environment Research Center)

Objective: To serve as a training and research center focusing on water and environmental management.

To propose solutions to problems that could arise around water. Create a national network of Congolese scientists and researchers to analyze and disseminate information on the impact of climate change in the DRC. Promote education and the right to the environment.

Address: 44, Comité Urbain C/ GOMBE; E-mail: ngelipatience@gmail.com; Tel: 0818105625.

### RCSARP (Research Center for the Selection and Adaptation of Ruminants and Pigs)

Objective: To carry out studies and research in the field of ruminant and pig breeding

Address: 45, Av. Lumumba, Q/de la gare, LUPUTA/ KASAI-ORIENTAL; E-mail: tshamalagabriel@gmail.com; Tel: 0851817370

### NCRS (National Center for Remote Sensing)

Objective: Research in remote sensing.

Address: PLACE ROYAL IMMEUBLE PLACE ROYAL IMMEUBLE KASA; E-mail: davidngin-dub@gmail.com; Tel: 0815103502.

### NCROS (National Center for Research in Oral Science)

Objective: To carry out studies and research in the field of oral health.

Address: 13, 10ème Rue, Industriel Quarter, C/Limete; E-mail: Cnrsbd.rdc@gmail.com; Tel: 0822244152; 0811835159; 0840922982

### CAS (Congoese Academy of Sciences)

Objective: Promotion and dissemination of science, technology, arts and letters. Support for inventive initiatives.

Address: Sciences Faculty/ UNIKIN local 28; E-mail: jjmuyembet@gmail.com; Tel: 0813330242

### MIPRC (Matadi Interdisciplinary Pedagogical Research Center)

Objective: -Information science.

Address: The buildings of the Matadi Higher Pedagogical Institute; Tel: 0896501462



**CONGOLESE REVIEW  
OF SCIENCES AND  
TECHNOLOGIES**

Published by the National Scientific  
Council Ministry of Scientific Research  
and Technological Innovation  
Democratic Republic of Congo

ISSN (Online): 2959-202X ISSN Print) :2960-2629 DOI: 10.59228 rcst  
**www.csnrdc.net**

Our review is indexed in the following platforms:



Subscription conditions

**The National Scientific Council (NSC) is the sole supervisory and decision-making body for all research centers and institutes in the DR Congo**

In accordance with article 24 of Ordinance-Law n°82-040 of 5 November 1982 on the organization of scientific and technical research, the National Scientific Council is responsible for:

1. to deliberate on the guidelines and priorities of the scientific and technological research plans and programs to be carried out in the country ;
2. to deliberate on the allocation of resources from the State budget to scientific and technological activities;
3. supervising the financial management of research centers and institutes
4. approving the budgets of the Research Institutes and Centers and submitting them to the Minister for Scientific Research for approval
5. approving the organic regulations of the Research Institutes and Centers;
6. proposing to the Minister for Scientific Research the appointment and promotion of scientific and administrative personnel.

Ordinary: \$15  
Support: \$30  
Honor: \$50

Printed on xx May 2024

For advertisements and partnerships contact us