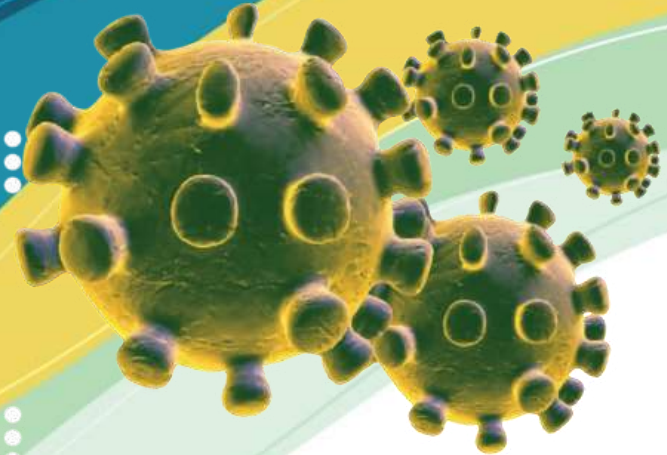


# CREPPAT Laboratories Sarl

Prise en charge des maladies chroniques et des pathologies émergentes au moyen des médicaments de la gamme CREPPAT:  
Evidences de la recherche fondamentale



**Constantin Bashengezi Mihigo**  
**Chief scientist / CREPPAT Laboratories Sarl,**  
**Democratic Republic of Congo**

# OUTLINES

## ❖ Introduction

## ❖ Methods

- Chemistry
- Pharmacological Trials
  - Efficacy trials
  - Toxicology trials
- Prospective Open Clinical Trials
  - Selection criteria
  - Dosage
  - Classification of patients
- Randomized, controlled Clinical Trail

## ❖ Results

- Chemistry

# OUTLINES (continued)

## ❖ Results (continued)

- Toxicity trials
  - In vitro toxicity trials
  - In vivo toxicity trials
- Prospective Open Clinical trials
  - Cohort Evolution
  - Safety and compliance
  - Quality of life
- Randomized, controlled clinical trials

## ❖ Discussion

## ❖ Challenges

## ❖ Recommendations

# INTRODUCTION

/KANY/  
REPUBLIQUE DU ZAIRE  
MINISTRE DE L'EDUCATION NATIONALE.  
SECRETARIAT GENERAL DE L'ENSEIGNEMENT  
SUPERIEUR ET UNIVERSITAIRE.

ORDRE DE MISSION N° EDM/ESU/SG/160/01/0890 /1992.-

Monsieur : BASHENGEZI MIHIGO  
Grade : CHEF DE TRAVAUX  
Matricule : 1751  
Fonction : ENSEIGNANT  
En Service de : UNIVERSITE DE KINSHASA/EDUCATION NATIONALE.  
Est désigné pour effectuer une mission sur demande :  
Pays : U.S.A.  
Durée : DEUX MOIS  
Départ le : 04 JANVIER 1993  
Retour le : 31 MARS 1993  
Objet de la mission : ETUDES  
Itinéraire : KIN-BRUXELLES-NEW YORK-KINSHASA.  
Mode de transport : AVION  
Frais à charge de : C.S.S.A.H.A. Inc. (Organisme Américain)

Fait à Kinshasa, le 31 / 12 /1992.

LE SECRETAIRE GENERAL,

= ZUSHI MUPIEMINA =

Chevalier de l'Ordre National du Léopard.



**C.S.S.A.H.A. INC.**

1507 E. 53RD ST., SUITE 288, CHICAGO, IL 60615

FAX (312) 288-3174

PHONE (312) 854-5964

Chef des travaux  
a la Faculte de Pharmacie  
Universite de Kinshasa  
Republique Du Zaire

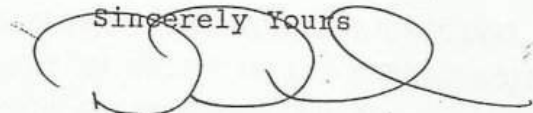
July 28, 1992

Dear Sir

It is our honor to sponsor the visit of Mr. Bashengezi Mihigo to the United States of America. The purpose of his visit is to promote and advance his studies and do some practical work in his field of research.

C.S.S.A.H.A. Inc. will provide transportation, lodging, meals, research facilities and other necessities to adequately accommodate Mr. Bashengezi for approximately 8 weeks beginning on or about September 14, 1992.

Sincerely Yours



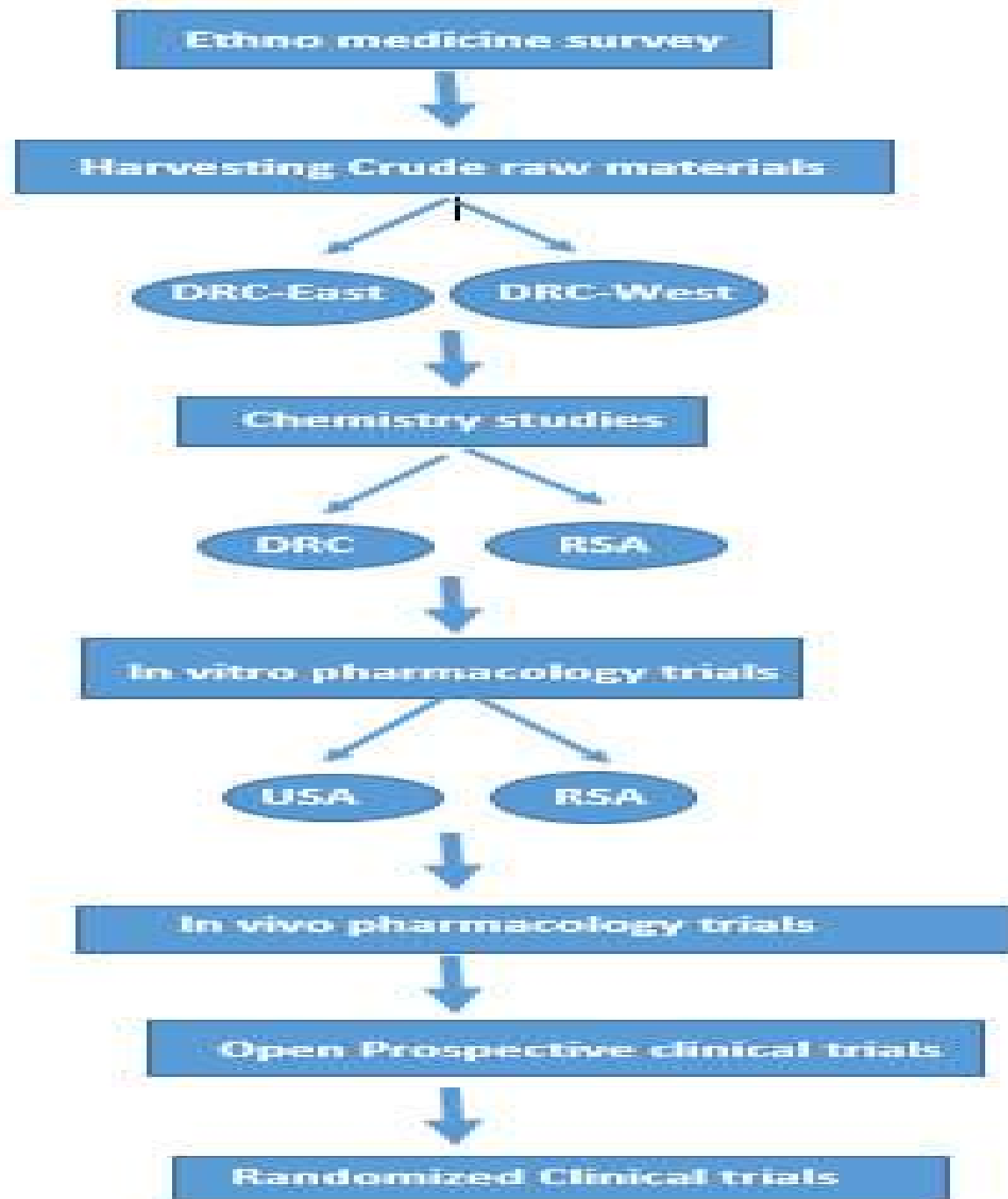
Don D. Wilson  
President

# INTRODUCTION

# METHODS

## Ethomedecine studies

- **Ethnomedecine survey:**
  - Vernacular name
  - Traditional therapeutic indication
  - Part of the plant
  - Preparation mode
  - Administration route
  - Administration dosage
  - Probable side effects or risks
- **Taxonomic study :**
  - Species specifications
  - Biotope
  - Taxonomic name
- **Domestication mode**



# Harvesting Crude Raw materials



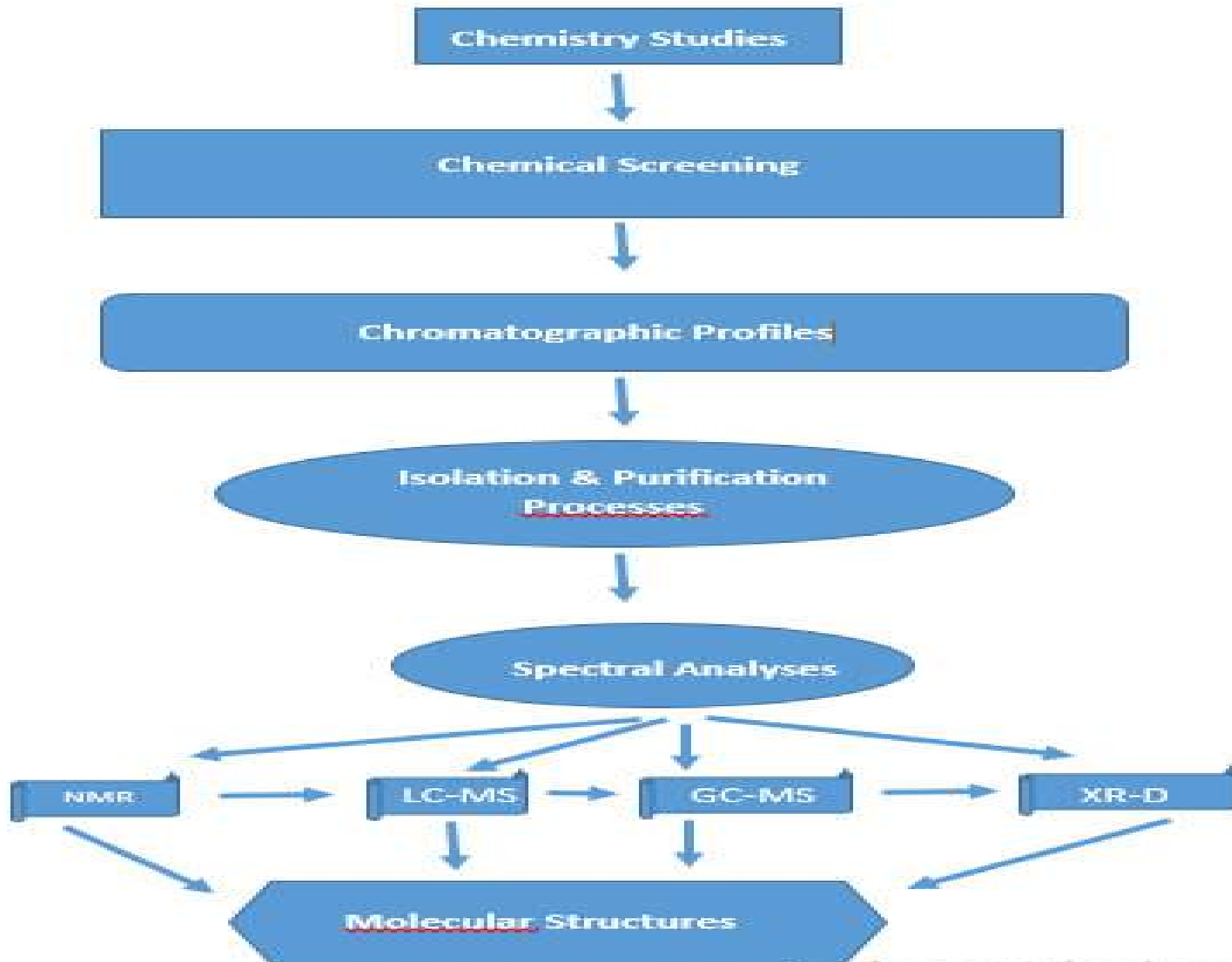


# METHODS

Chemistry trials

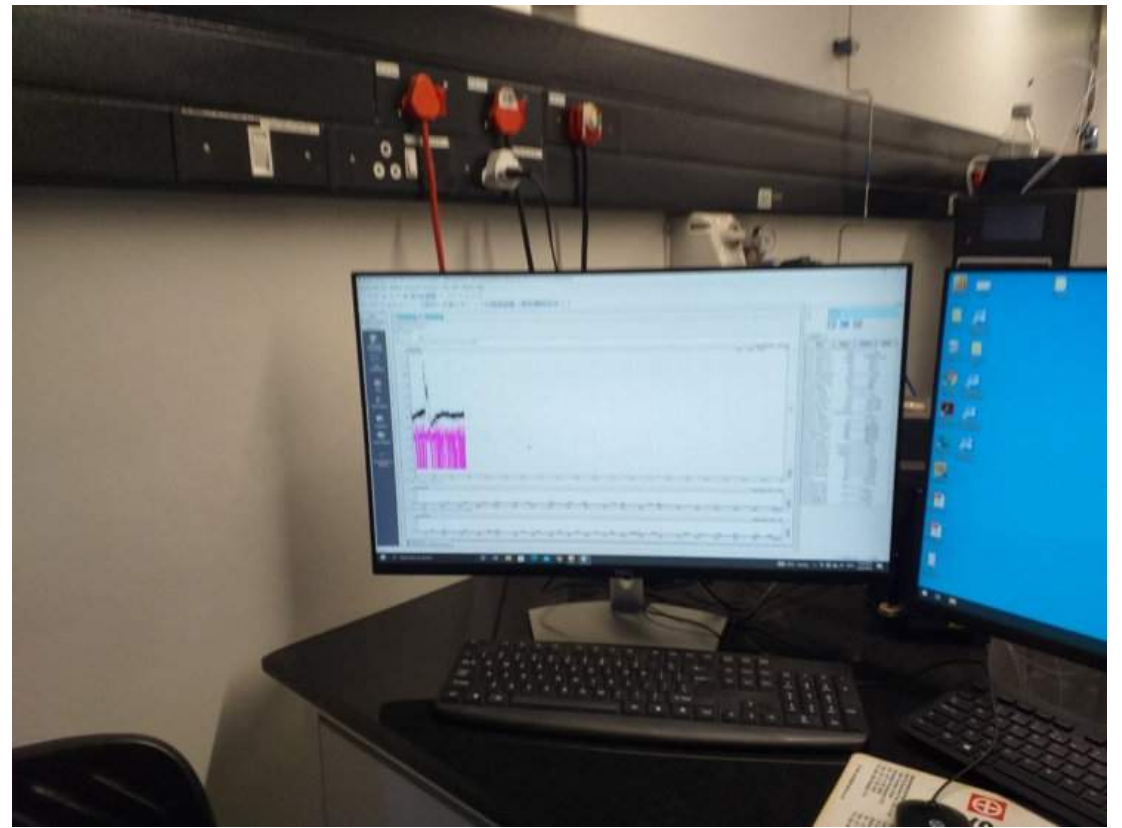
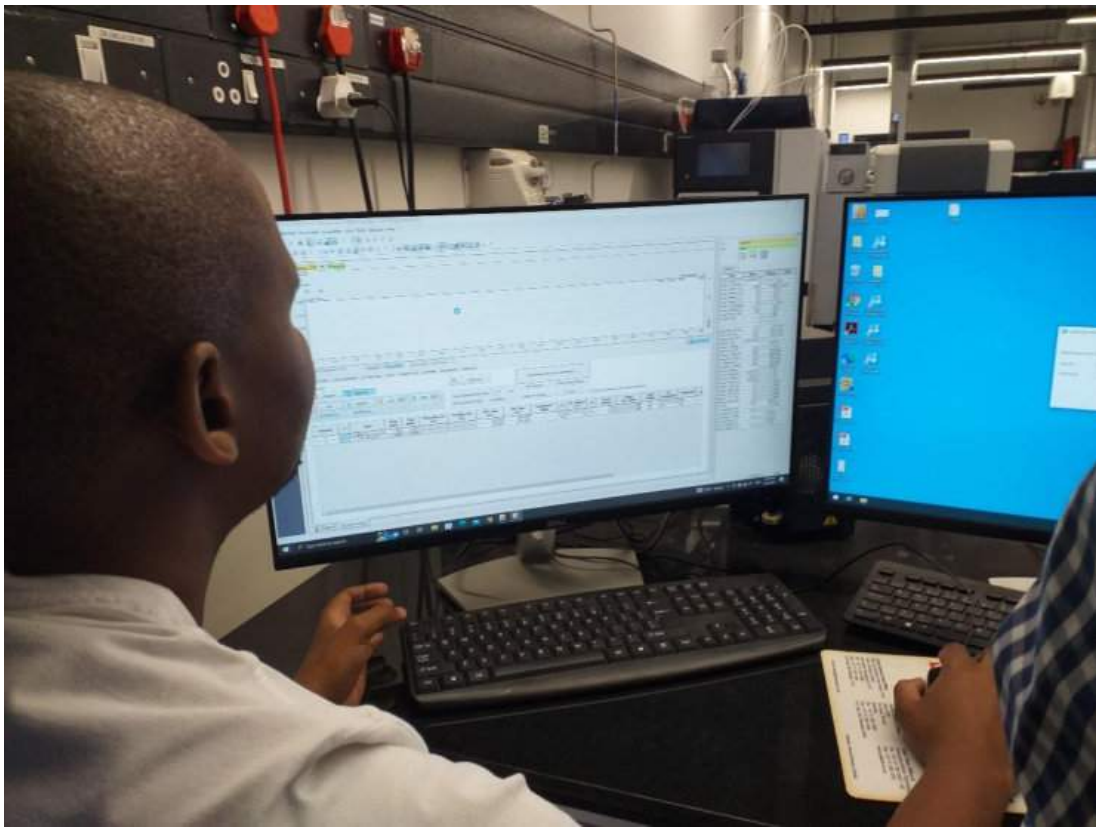
Pharmacology Trials

- **Chemistry studies:**
  - 5 active principles found in ROUB extract.
  - 3 active principles found in LEHM extract
- **In vitro trials:**
  - In vitro Activity trials
    - ROUB extract
      - HIV trials
      - Cytotoxicity trials (13 malignant cell lines)
    - LEHM extract
      - HIV trials
- **In vitro toxicity trials**
  - ROUB extract
  - LEHM extract
- **In vivo Acute toxicity trials**
  - ROUB extract
  - ROUB – LEHM extract

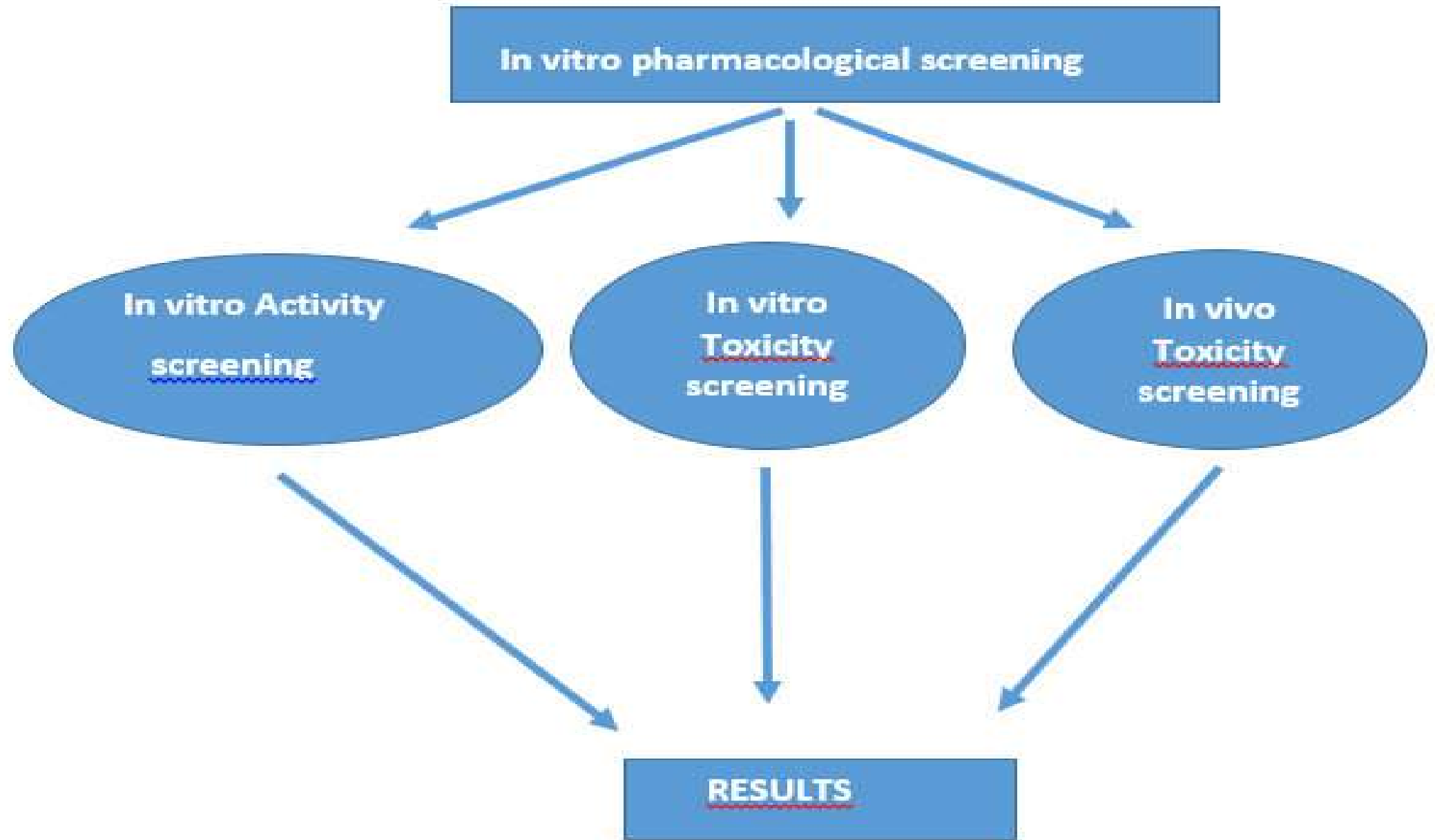


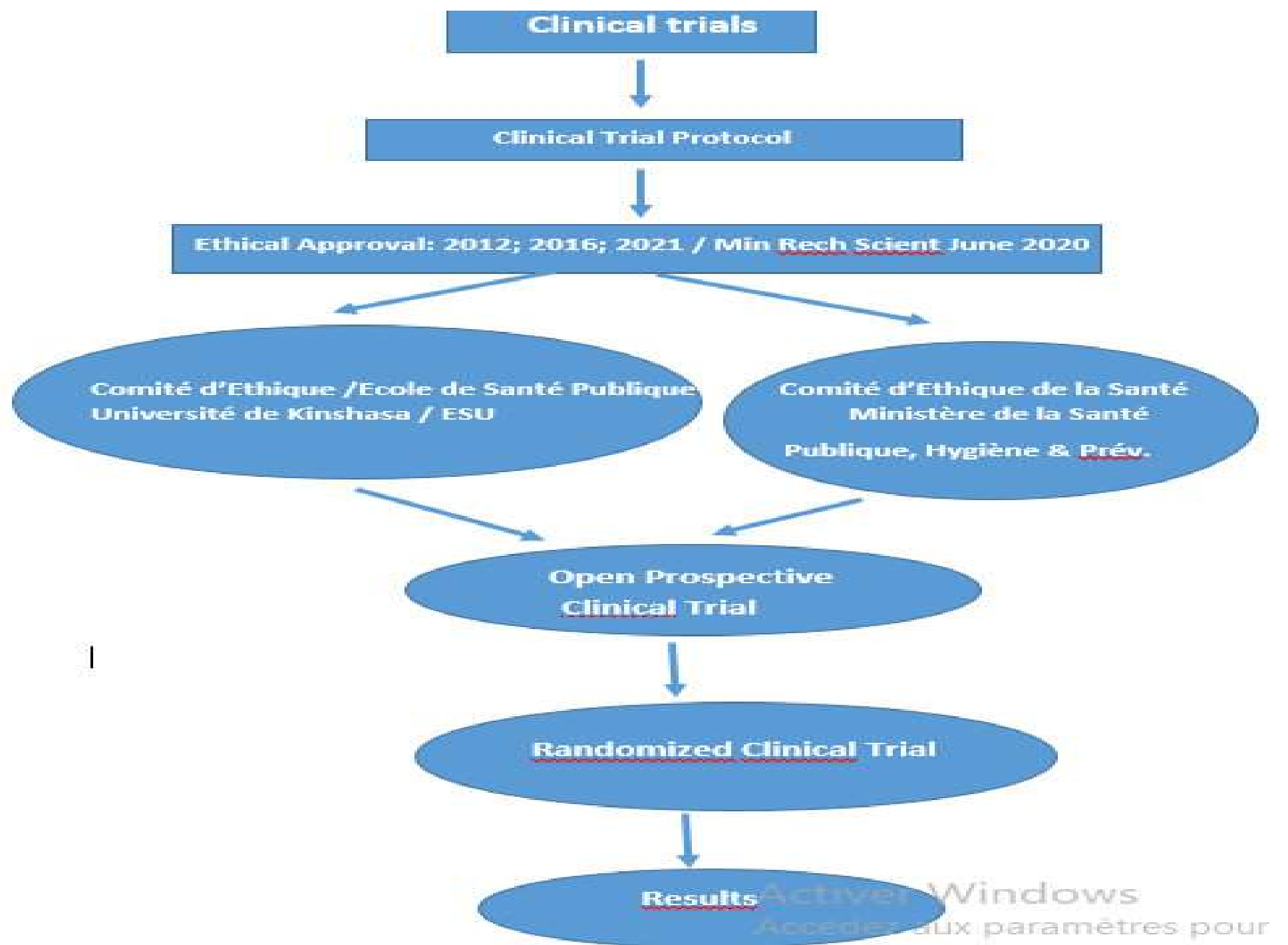












# METHODS

(continued)

## Clinical Trials

**Doubase C<sup>TM</sup>**

- A prospective open clinical study of Doubase C<sup>TM</sup> **for the treatment of HIV/AIDS;**
- A prospective open clinical study of Doubase C<sup>TM</sup> **for the treatment of hepatitis B virus and hepatitis C virus infections;**
- A prospective open clinical study in order to demonstrate the value of Doubase C<sup>TM</sup> **for the treatment of SARS-COV-2 infection and the medical management of COVID-19 pandemic;**
- An Open-label, Randomized, Controlled Adaptative Study to Evaluate the Efficacy and Safety of Doubase C<sup>TM</sup> **for the treatment of SARS-COV-2 infection and the medical management of COVID-19 pandemic;;**

# METHODS

(continued)

## Clinical Trials

**Cancure™**

- A prospective open clinical study of Cancure™ **for the treatment of:**
  - **diverse benign tumours**
  - **Diverse malignancies;**



# METHODS

(continued)

## Clinical Trials

**Gastro-c™**

- A prospective open clinical study of Gastro-C™ **for the treatment of:**
  - **gastritis**
  - **Gastric ulcers;**
  - **Cutaneo-muqueous ulcers**
  - **Helicobacter pylori infection**

# METHODS

(continued)

## Clinical Trials

**Capy-c™**

- A prospective open clinical study of Capy-C™ **for the treatment of:**
- **Alopecia**

# RESULTS

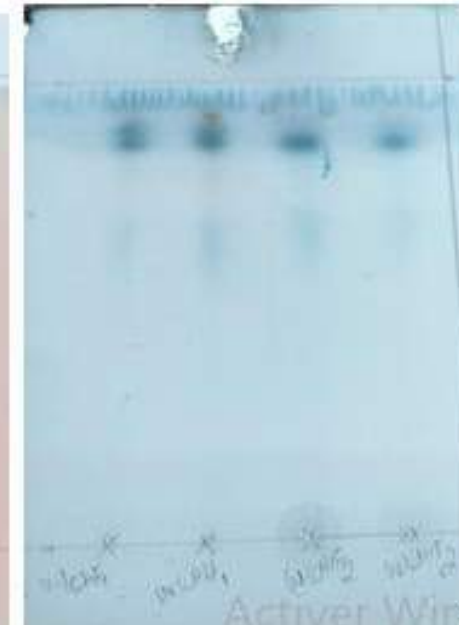
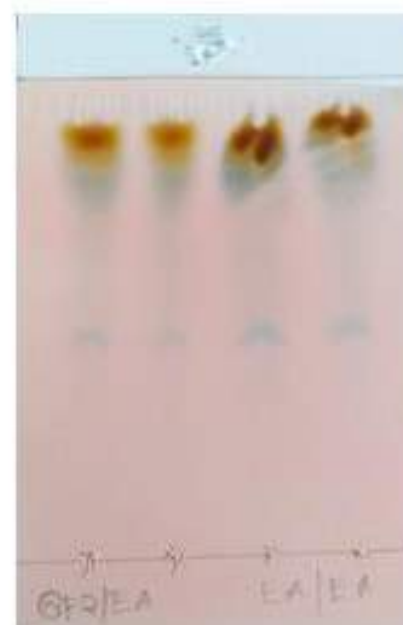
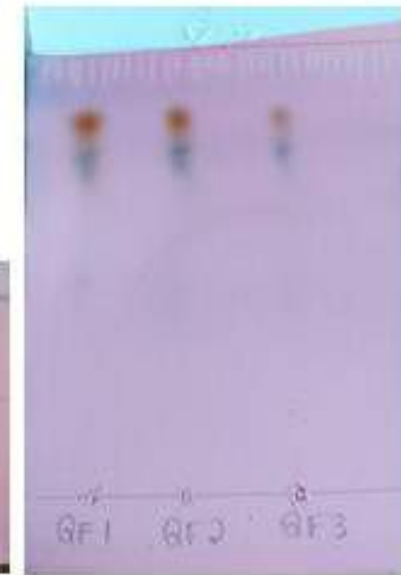
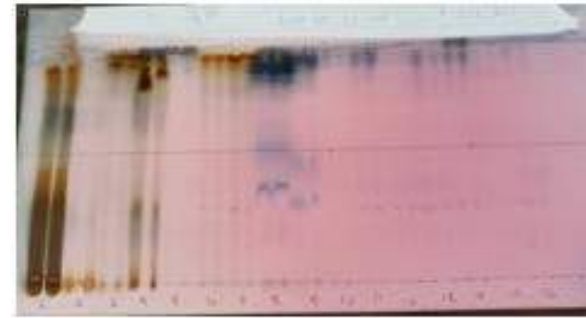
## Chemistry

### Active principles

ROUB Extract: 5

LEHM Extract: 3

TLC Profiles of ROUB molecules



# RESULTATS

## Chemistry

### Active principles

ROUB Extract: 5

LEHM Extract: 3



TLC



Column chromatography



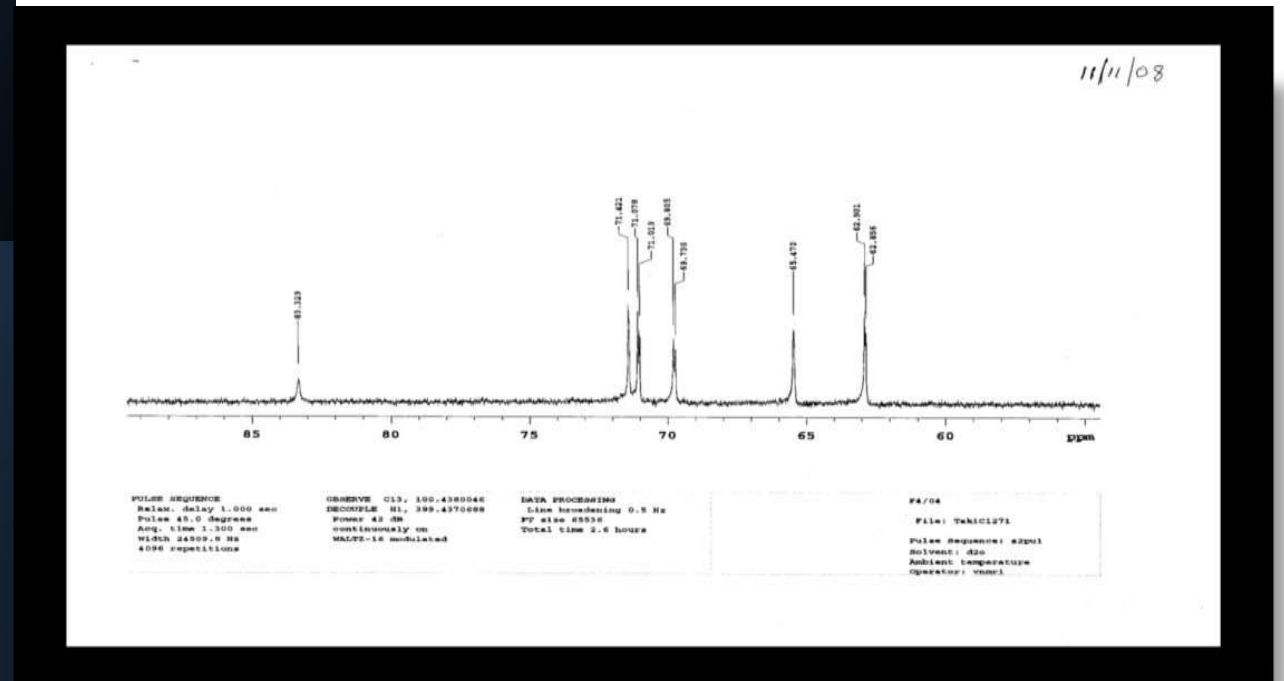
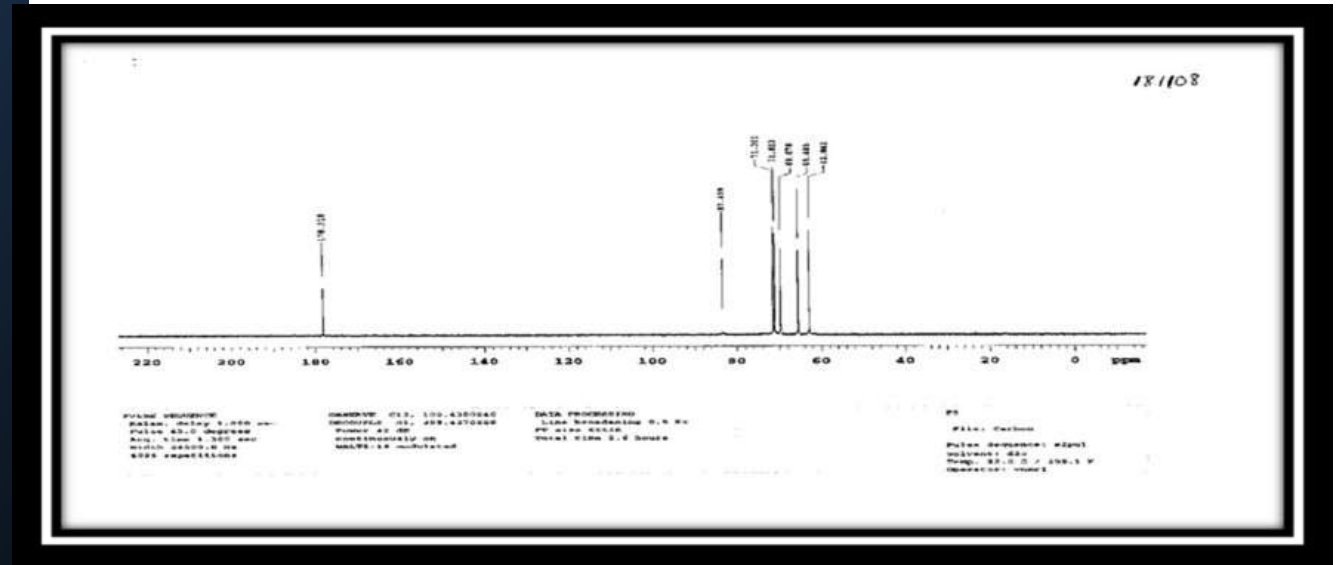
NMR



# RESULTATS

## Chemistry

5+3 Active principles



- 

# RESULTATS

## **In-vitro Activity Trials (1/3):**

**Inhibition of the HIV  
replication**

Doubase C : An antiretroviral, anti-HIV from African Herbs

141

To: Dr. N. R. Farnsworth  
From: Thitima Pengsuparp  
Date: 06/21/93

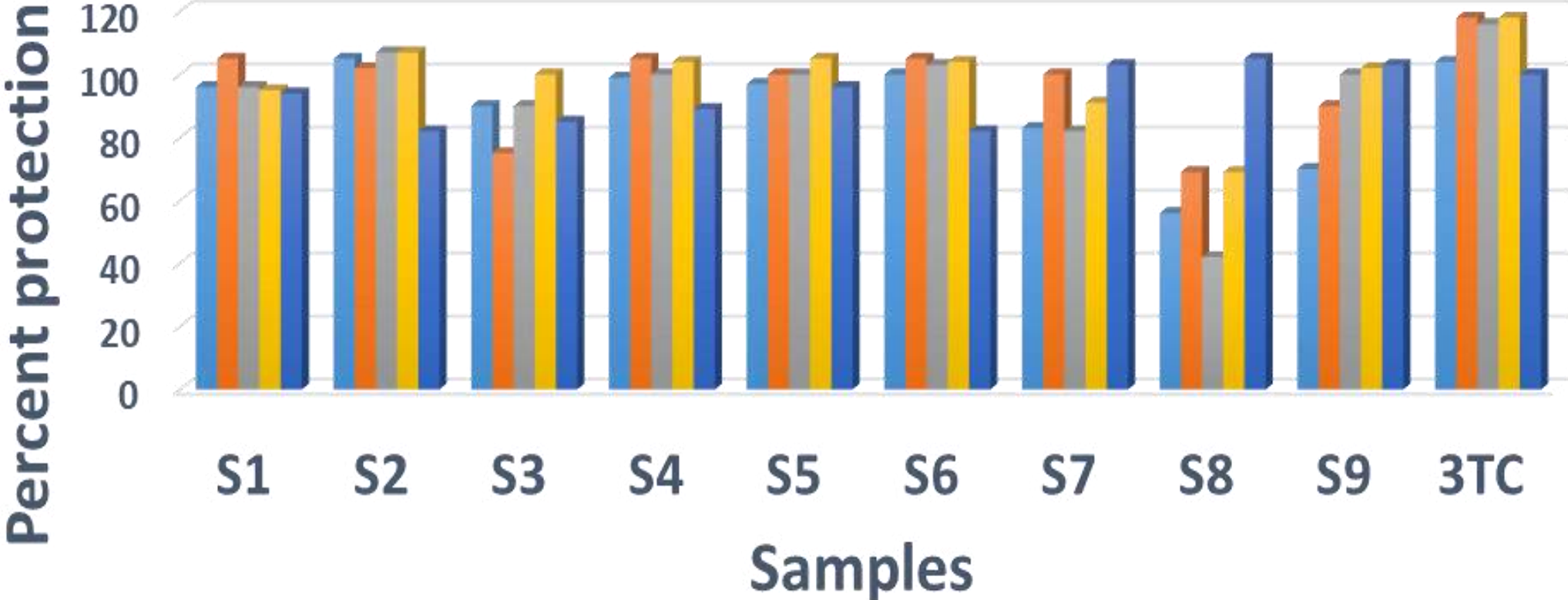
Table: Results for HIV-1 RT(p66/p51) Assay

| sample                | tannin* | % inhibition at 200 $\mu$ g/ml | activity  |
|-----------------------|---------|--------------------------------|---|
| zaire 1<br>RT         | -       | 95.1                           | moderately active<br>IC <sub>50</sub> = 64.0 $\mu$ g/ml<br>(r <sup>2</sup> = 0.898) |
| zaire 2<br>(CAPSULES) | -       | 96.7                           | moderately active<br>IC <sub>50</sub> = 68.9 $\mu$ g/ml<br>(r <sup>2</sup> = 0.898) |

Note: \* Tannin was removed by using insoluble PVP only when sample showed positive result (+) with FeCl<sub>3</sub> test.

cc: Dr. J. M. Pezzuto

# Activity screen - Doubase C Extracts



■ DU151   ■ DU179   ■ SM1   ■ SM2   ■ % Cell Viability

# RESULTATS

## **In-vitro Activity Trials**

(2/3):

**Inhibition of Cytopathic Effects**



| <b>Product</b>          | <b>Concentration (ug/ml)</b> | <b>Observation</b> | <b>P24 antigen</b> | <b>Effect</b>       |
|-------------------------|------------------------------|--------------------|--------------------|---------------------|
| WB118+50TCID50/ml HIV-1 | 0.35                         | CPE                | Positive           | No antiviral effect |
| WB118+50TCID50/ml HIV-1 | 0.70                         | NO CPE             | Positive           | Partial AVE         |
| WB118+50TCID50/ml HIV-1 | 1.40                         | NO CPE             | Positive           | Partial AVE         |
| WB118+50TCID50/ml HIV-1 | 2.00                         | NO CPE             | Positive           | Partial AVE         |
| WB118+50TCID50/ml HIV-1 | 3.00                         | NO CPE             | Positive           | Partial AVE         |
| WB118+50TCID50/ml HIV-1 | 4.00                         | LD                 | Negative           | Toxic               |

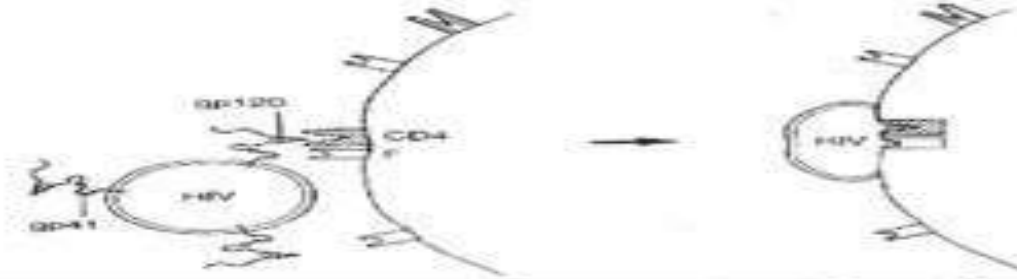
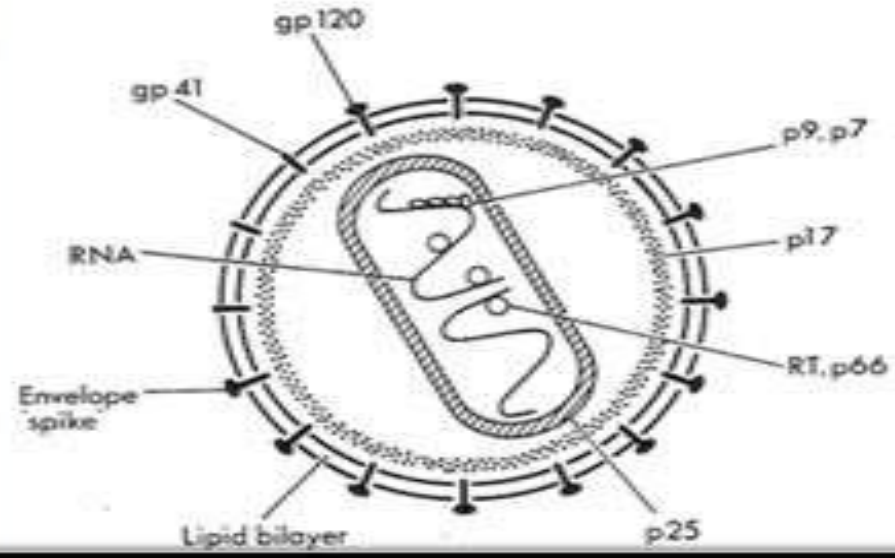
# RESULTATS

## **In-vitro Activity Trials (3/3):**

### **Lysis of HIV Glycoproteins**

FEATURES OF HIV AND THE HOST RESPONSE

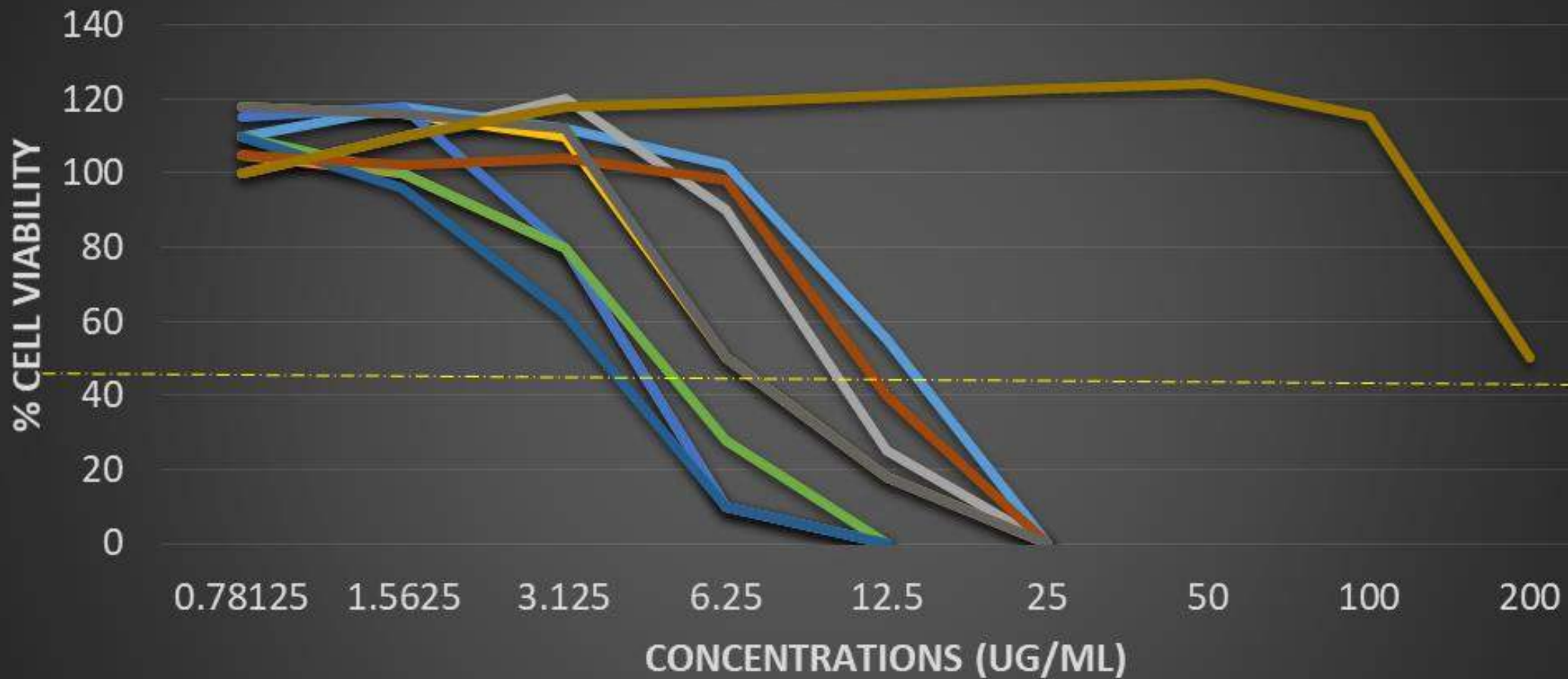
25



# RESULTATS

## **In-vitro Toxicity Trials**

# Toxicity screen - Doubase C™ Extracts



— S1 — S2 — S3 — S4 — S5 — S6 — S7 — S8 — S9 — DMSO



## **% de Viabilité des cellules vs concentration des extraits**

| <b>Sample</b> | <b>Concentration<br/>µg/ml</b> | <b>% Viability</b> |
|---------------|--------------------------------|--------------------|
| 1             | 6                              | 93.3               |
| 2             | 2                              | 85.4               |
| 3             | 2                              | 86.6               |
| 4             | 2                              | 88.4               |
| 5             | 2                              | 95.4               |
| 6             | 6                              | 81.1               |
| 7             | 6                              | 103.5              |
| 8             | 2                              | 107.1              |
| 9             | 25                             | 105.1              |

# RESULTATS

## **In-vivo Toxicity Trials:**

**Sub-acute Toxicity**

**ROUB**

**ROUB+LEHM**



REPUBLIQUE DEMOCRATIQUE DU CONGO  
Ministère de la Santé  
*Institut National de Recherche Biomédicale*

**BULLETIN D'ANALYSE TOXICOLOGIQUE**

**I.- Référence de l'échantillon**

1. **Nature** : Un récipient en verre contenant un extrait liquide d'une plante codifiée **ROUB (A)** de couleur noir brunâtre  
**Etiquette** : Concentration indiquée : 15, 77 mg/ml
2. **Origine de l'échantillon** : Laboratoire GREPPAT de Kinshasa/Kingabwa
3. **Objectif** : Déterminer la toxicité de l'échantillon

**II.- Essais effectués :**

Un groupe de trois souris d'âge et poids approximatifs ont été soumises au gavage de cet échantillon (A) de l'extrait de la plante ROUB à raison de 0,5 ml par jour, soit 7,88 mg par jour et durant sept jours successifs : soit au total 55,16 gr/17 gr de poids corporel d'extrait A ou 3,244 g/Kg d'extrait/Kg de poids corporel par semaine. Le poids moyen du groupe étant de 17 gr.

Le relevé journalier du poids a montré une augmentation régulière sous leur régime alimentaire habituel sans mortalité ni constatation de comportement anormal.

**Conclusion** : Il n'y a point de toxicité dans cet échantillon ROUB du récipient A

Fait à Kinshasa, le 15 AOUT 2011

POUR LE LABORATOIRE DE TOXICOLOGIE

*Mungitshi Tshilembi*  
MUNGITSHI TSHILEMBI  
Pharmacien d'Industrie  
CNOP N° 571/74



REPUBLIQUE DEMOCRATIQUE DU CONGO  
Ministère de la Santé  
*Institut National de Recherche Biomédicale*

BULLETIN D'ANALYSE TOXICOLOGIQUE

**I.- Référence de l'échantillon**

1. **Nature** : Un extrait liquide de couleur noir brunâtre d'une plante codifiée **ROUB/LEHM** (B) contenu dans un récipient en verre  
**Etiquette** : mentionne une concentration de 5 mg/ml pour un ratio respectif p/p de 5/1
2. **Origine de l'échantillon** : Laboratoire GREPPAT de Kinshasa/Kingabwa
3. **Objectif** : Déterminer la toxicité de l'échantillon

**II.- Essais effectués :**

Un groupe de trois souris d'âge et poids approximatifs, pesant en moyenne 17 gr ont été soumises au gavage journalier de l'extrait durant 7 jours. Soit 5,0 mg d'extrait par jour ; soit  $5 \text{ mg} \times 7 = 35 \text{ mg}/17 \text{ gr}$  de poids corporel par semaine. Précisément 2,058 gr d'extrait par kg de poids corporel.

**Conclusion** : En absence d'aucun comportement anormal durant les sept jours, vu que le poids de chaque souris n'a fait qu'augmenter très régulièrement, il y a lieu de conclure que l'extrait **ROUB/LEHM** fait montre de nulle toxicité.

Fait à Kinshasa, le 15 AOUT 2017

POUR LE LABORATOIRE DE TOXICOLOGIE

MUNGITSHI TSHILEMBI  
Pharmacien d'Industrie  
ENOP N° 571/74

# SUMMARY

## Doubase C

Activity screening  
vs HIV

Doubase C - Activity effect against HIV

Inhibition of the RT

Inhibition of the virus replication

Inhibition of the cell nuclei colonization

Lysis of the glycoproteins

Prevention of the cell penetration

Inhibition of the cytopathic effects

Prevention of the syncytia formation

Prevention of the inflammatory syndrome

Prevention of the immune system depletion



# SUMMARY

Doubase C

**HIV Activity screening report  
(USA)**

Mr. Paul Ruhanya  
Direction Afrique & M.O  
Ministère des Affaires Etrangères  
B.P. 7100  
Kinshasa / Gombe  
Democratic Republic Of Congo

Don Wilson  
9055 S. Luella  
Chicago IL 606

September 12, 1997

Dear Paul

I received your letter yesterday and was very pleased to hear from you. I waited anxiously to learn of the welfare of you and your family. The news media carried extensive coverage of Mr. Kabila as he captured the former Zaire.

Mr. Bashengezi contacted me via the Red Cross several months ago. He and his family escaped to Kisangani through equatorial rain forest on foot. Lt. Kany was with them.

I am saddened to learn that Mr. Birindwa will not be in Kinshasa when I return. Please get me his address in Italy so I can write to him. It is important for him to keep up with our progress. We will need his air plane to ship equipment and medicine in the near future.

There is good news and great news. First, the good news. On March 4, 1997, Mr Bashengezi was awarded his United States Patent. However, there are several typographical errors which have been submitted for correction. The great news is on August 8, compound analysis have revealed several active compounds in the pure extract. These compounds are non-toxic, therefore they can be administered at high dosages which could facilitate the total elimination of the illness. We are in the process of negotiating an agreement for the structure elucidation of these compounds. Hopefully, we will have their identification before the end of the year. Please keep this information TOP SECRET until we can patent the structures of the active compounds. If possible, forward this information on to Mr. Bashengezi.

# SUMMARY

## Doubase C

- **Clinical Trials:**

**Antiretroviral activity**

Patiënt : ██████████  
 Echtgenoot : ██████████  
 Adres : SINT BERNARDSESTEENW. 639  
 2660 HOBOKEN  
 Geb. Datum : ██████████ 25 J Sex: M

Dokter Van Offel Dirk  
 Wetstraat 82  
 2060 ANTWERPEN

Staal ontvangen : 16.10.01 13h18 Ambulant  
 Patiëntnummer : ██████████

Referentie- Datum  
 waarden Aanvraagnr. : 16.10.01 9.11.00

Klinische gegevens

b1  
 Na kuur Doubase C' (produkt uit Congo)

HEMATOLOGIE

|                           |      |            |      |      |
|---------------------------|------|------------|------|------|
| Hemoglobine               | 110  | g/dl       | 40,8 | 45,4 |
| Hematocriet               | 35,0 | %          | 4,76 | 5,29 |
| Rode bloedcellen telling  | 4.10 | milj./cmm  | 85,8 | 85,8 |
| MCV                       | 80,0 | fL         | 30,2 | 30,3 |
| MCH                       | 26,0 | Pg         | 35,0 | 35,3 |
| MCHC                      | 31,0 | g/dl       | 12,3 | 12,4 |
| RDW                       | 11,0 | %          | 4,2  | 5,2  |
| Witte bloedcellen telling | 3,7  | x 1000/cmm |      |      |
| Formule                   |      |            |      |      |
| segmentkernigen           | 40,0 | %          | 45,4 | 49,2 |
| lymfocyten                | 16,0 | %          | 35,1 | 36,7 |
| monocyten                 | 1,0  | %          | 10,0 | 6,8  |
| basofielen                | 0    | %          | 0,6  | 0,7  |
| eosinofielen              | 0    | %          | 9,0  | 6,6  |
| Sedimentatie na 1 uur     | 0    | mm         | 12   | 9    |
| T en B lymfocyten         |      |            |      |      |
| lymfocyten                | 4070 | /ul        | 1110 | 1770 |
| lymfocyten                | 18,0 | %          | 58,5 | 42,9 |
| B-lymfocyten              | 1200 | /ul        | 1819 | 1609 |
| B-lymfocyten (CD19)       | < 15 | %          | 10   | 9    |
| CD4 helper/inducer lymf   | > 70 | %          | 80   | 90   |
| CD4 helper/inducer        | 35   | %          | 37   | 35   |
| CD8 suppressor lymf       | 436  | /ul        | 673  | 611  |
| CD8 suppressor lymf       | 20   | %          | 4    | 4    |
| CD4/CD8 verhouding        | 166  | /ul        | 746  | 644  |
| Beoordeling:              | 1,00 |            | 0,90 | 0,95 |
|                           |      |            | okla | okla |

BIOCHEMIE

|              |      |       |      |      |
|--------------|------|-------|------|------|
| Transferrine | 158  | µg/dl | 94   | 145  |
| % saturatie  | 20   | mg/dl | 295  |      |
|              | 20   | %     | 25   |      |
| Ureum        | 3,00 | mg/dl | 2,80 | 1,28 |
| Ureum        | 0,0  | mg/dl | 0,7  | 1,1  |



Instituut voor Tropische Geneeskunde  
Institut de Médecine Tropicale  
Stichting van Openbaar Nut | 0410.057.701



AIDS Referentie Laboratorium (ARL)  
Nationalestraat 155  
B-2000 ANTWERPEN

Nr 147-MED

8 11704 89 163

30.12.08

Ref: 8121975/86707

Datum voorschrift: 22.05.08

Dokter APERS LUDWIG

Datum ontvangst : 23.12.08 12h12

ITG

ITG, KRONENBURGSTRAT 43/  
2000 ANTWERPEN

Patient :  37

Geslacht : Man  
Geboortedatum : 14.12.1964 44 J  
Referentie :  
Druk : DRUK/VOLLEDIG

Voorschrijver : Dokter APERS LUDWIG

Pag. 1

ANALYSE

RESULTAAT

MOLECULAIRE BIOLOGIE:

HIV Virale lading 264 copies/ml plasm  
2,42 logs  
Gebruikte test:  
Cobas AmpliPrep/Cobas Amplicor HIV-1 Monitor  
TM Test van ROCHE. (S.D.: 0.2 log)  
(ultra-gevoelig)  
(Versie 1.5)

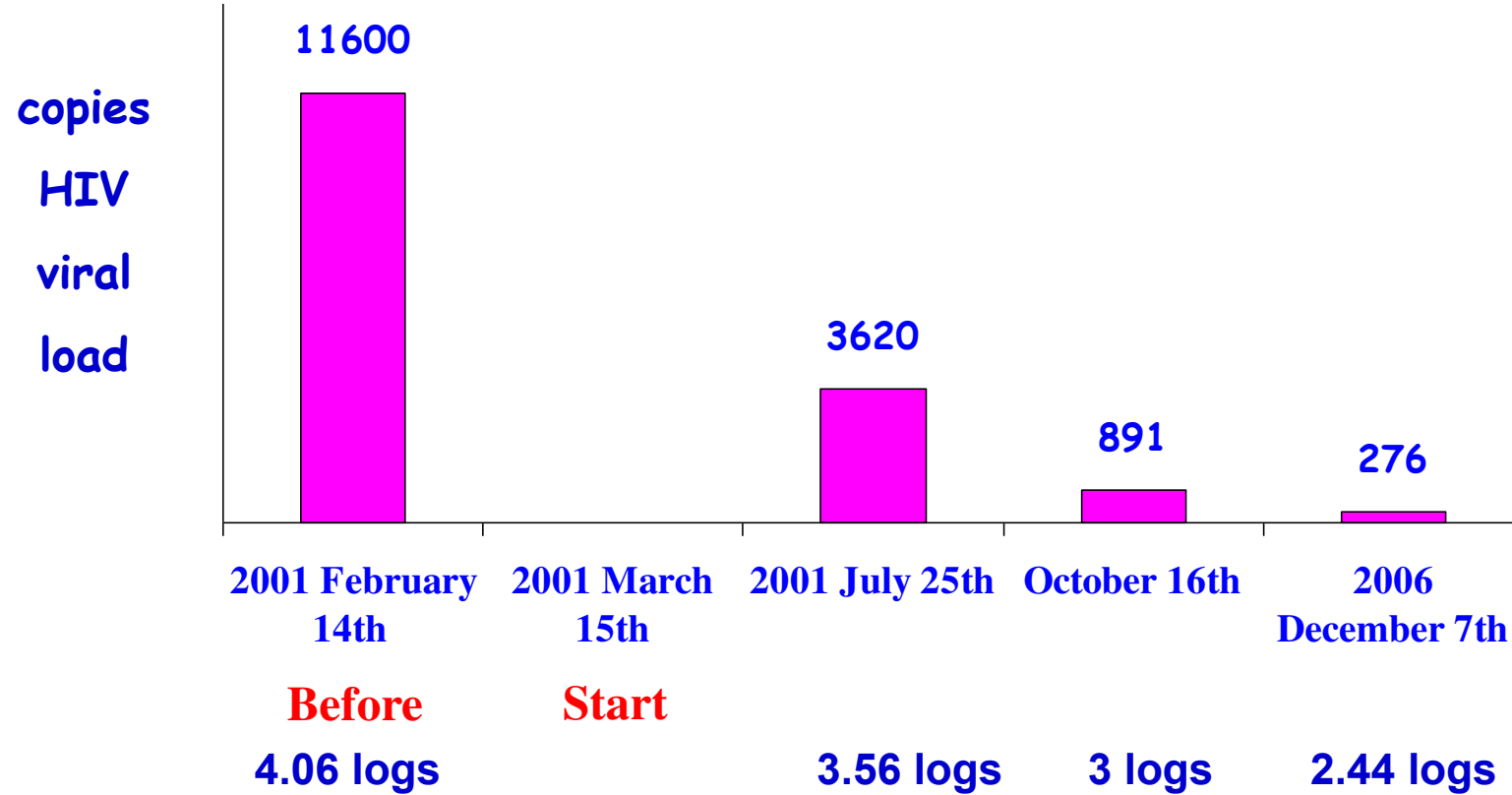
Met beleefde groeten,

Gevalideerd door T. Crucitti - Klinische biologie  
M. Van Esbroeck - Klinische biologie

K. Fransen - Directeur ARL



# Patient TDB (37 Y, M) Evolution of Viral load profile

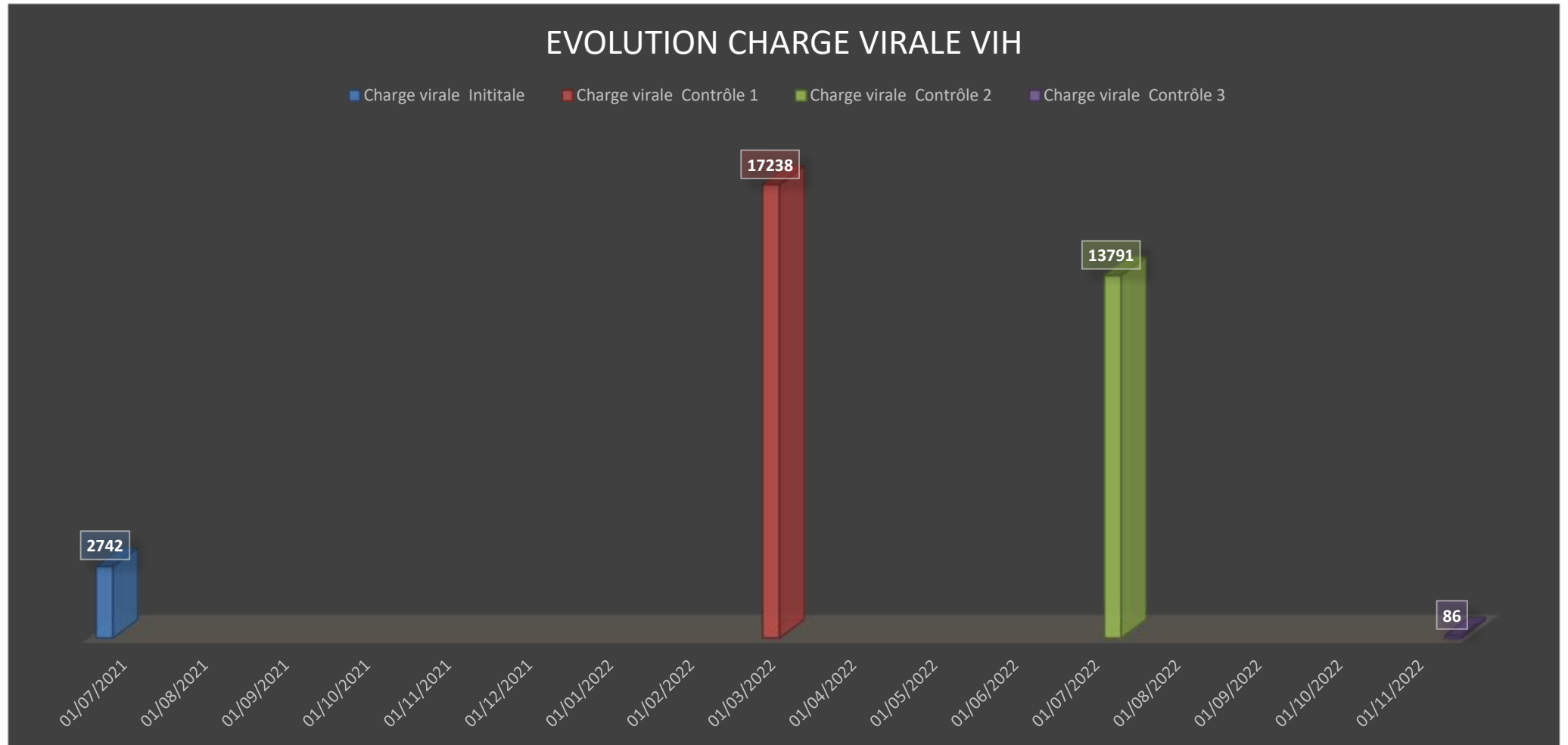


## Patient BAFDFAB (37 Y, M)

### Evolution of Viral load profile

| Date              | Code           | Tests          |                         |              |                         |                 |
|-------------------|----------------|----------------|-------------------------|--------------|-------------------------|-----------------|
|                   |                | Elisa (Behr)   | Test rapide (Determine) | Elisa (Behr) | Test rapide (Determine) | Xpert HIV Viral |
| <b>21/09/2022</b> | <b>BAFDFAB</b> | <b>Positif</b> | <b>Positif</b>          |              |                         |                 |
| 08/01/2022        |                |                |                         |              |                         | Non détecté     |
| 05/02/2022        |                |                |                         | Négatif      | Négatif                 |                 |

# Patient MUKMAR (VIH/SIDA)



Doubase C

**Clinical Trials:**

**Anti-COVID-19 activity**

# Doubase C

## Anti-Coronavirus, Anti-COVID-19



**LUTTE CONTRE LA COVID-19 en RDC**



Etude adaptative contrôlée, randomisée à étiquette ouverte pour évaluer l'efficacité et la sûreté des thérapies d'enquête pour le traitement des patients atteints de COVID-19 aux stades léger et modéré à Kinshasa, en République Démocratique du Congo

**Titre abrégé: Essai clinique Doubase C  
Protocole : UNIKIN COVID 001**

**Rapport des Investigateurs**

19/01/2023



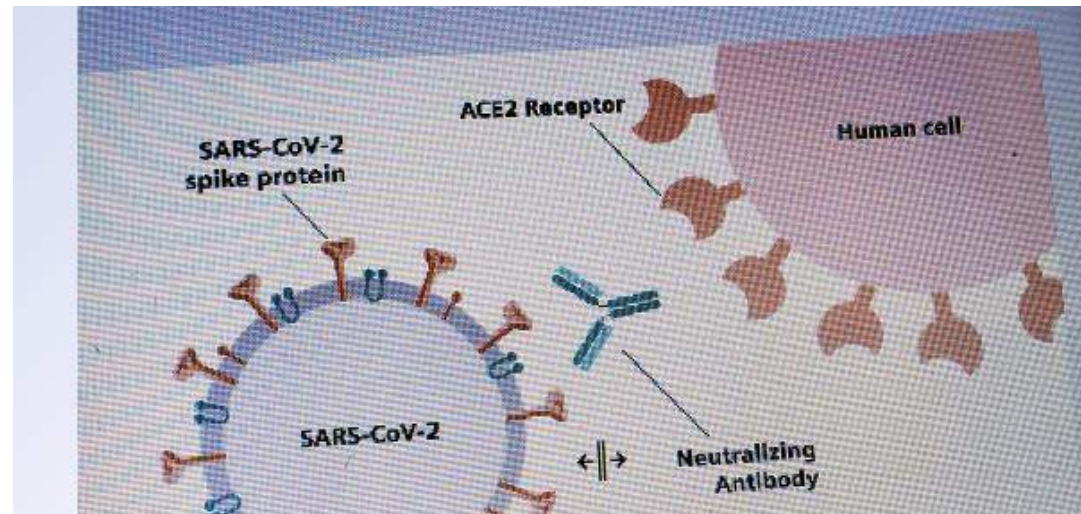
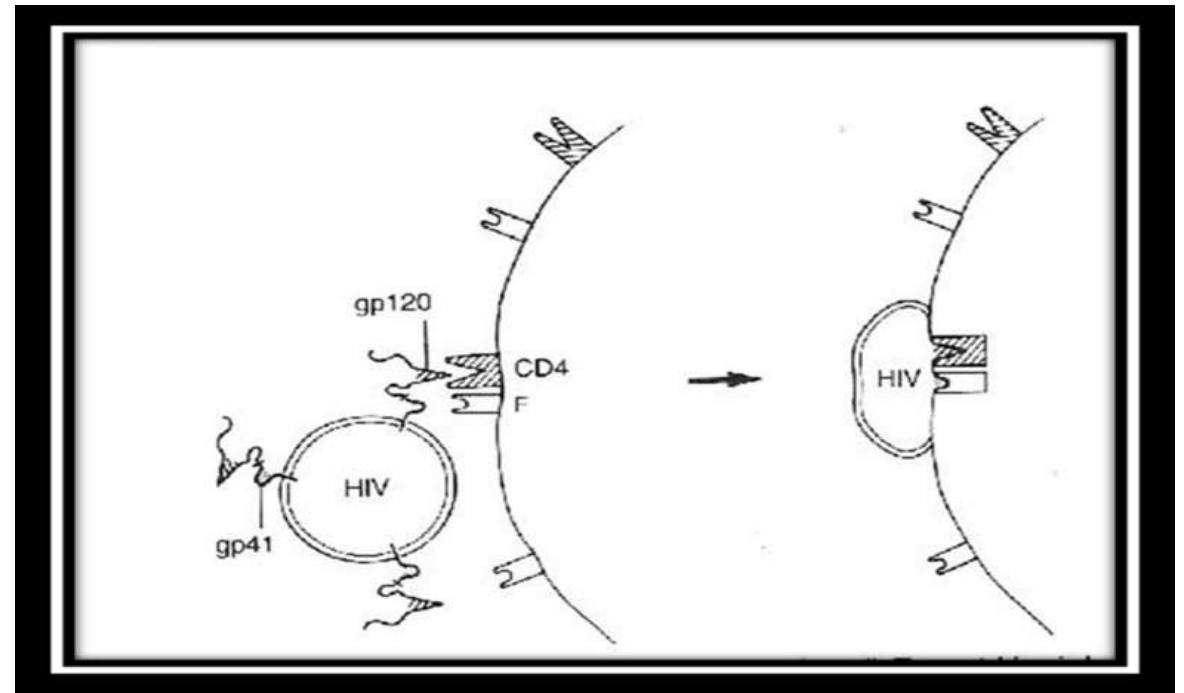
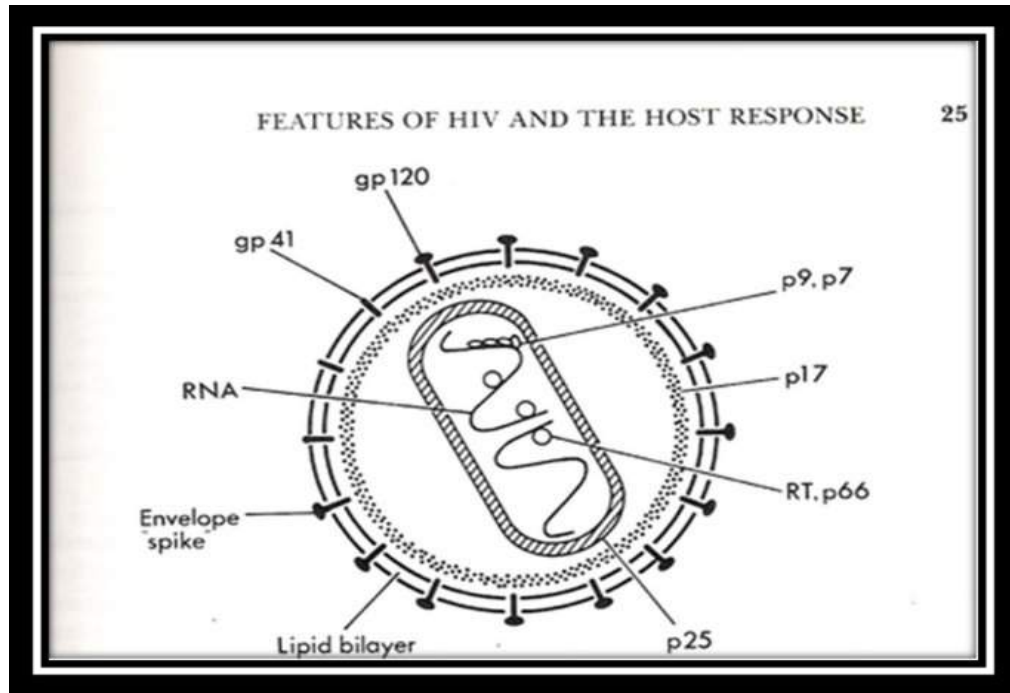
# Doubase C

## Anti-Coronavirus, Anti-COVID-19

- Doubase C™, in addition to its activity against HIV, Herpes virus, Hepatitis Viruses B and C and against Influenzaviruses, has demonstrated an incisive action against SARS-COV-2 infection that enables a prompt and efficient management of the COVID-19 pandemic. That corroborates its reputation for a broad antiviral activity spectrum.
- As for the HIV, similarities related to the mechanism of replication and mechanism of infection seem to be the key-factors that justify the antiviral effect onto the SARS-COV-2: Inhibition of the Transcriptases (polymerases), breaking down the polymerase-dependant replication, lysis of core and envelope viral glycoproteins that interact with the host cell receptors.

# VIH et SARS-COV-2:

## Similarité de structures et de mécanismes d'infection




# VIH et SARS-COV-2:

## Essai clinique randomisé, contrôlé de Doubase C – UNIKIN, May 2021- Jan 2022

République Démocratique du Congo  
Université de Kinshasa

Kinshasa, le 13/04/2022

  
FACULTE DE MEDECINE  
B.P. 834 KINSHASA XI  
Cabinet du Doyen

Ref: DO/RMM/2021/MCL/2022

Transmis copie pour information aux :

- A Son Excellence Monsieur le Ministre de la Santé Publique Hygiène et Prévention
- A Son Excellence Monsieur le Ministre de la Recherche Scientifique et Innovation Technologique
- A Monsieur le Secrétaire Général de la Santé Publique, Hygiène et Prévention
- A Monsieur le Secrétaire Général de la Recherche Scientifique et Innovation Technologique
- A Monsieur le Recteur de l'Université de Kinshasa
- Aux Membres du Bureau Décanal de la Faculté de Médecine
- A Monsieur l'Incident Manager du Secrétariat Technique de la lutte contre la Covid-19 en RDC
- Au Secrétaire Chargé de la Prise en Charge, Secrétariat Technique de la lutte contre la Covid-19/RDC
- ✓ A Monsieur le Directeur Général de CREPPAT Laboratoire

Tous à Kinshasa XI

Objet : Transmission Rapport Essai Clinique Doubase-C vs Hydroxycloquine-Azithromycine

A Monsieur le Coordonnateur du Comité National Multisectoriel de la Lutte Contre la Covid-19 en RDC  
Kinshasa XI

Monsieur le Coordonnateur,

Par la présente, nous avons l'avantage de vous transmettre le rapport de l'Essai Clinique Doubase-C vs Hydroxycloquine-Azithromycine.

Le Laboratoire Creppat créé et dirigé par des fils du Pays avait pris contact avec la Faculté de Médecine de l'Université de Kinshasa pour solliciter la conduite d'un essai clinique pour un produit qu'il a mis au point à base des plantes et qui s'appelle DOUBASE C.

Téléphone : +243 85 492 8636  
Email : [infos@facmed.unikin.net](mailto:infos@facmed.unikin.net)  
Site Web : [www.facmed.unikin.net](http://www.facmed.unikin.net)  
Comptes Raw-Bank : USD 01006829932-31 ; CDF : 01006829943-95

# VIH et SARS-COV-2:

## Essai clinique randomisé, contrôlé de Doubase C – UNIKIN May 2021-Jan 2022

2

Les données d'analyse du laboratoire Creppat confèrent à Doubase C des effets antiviraux particulièrement contre le SARS COV 2, agent causal de la COVID 19.

La Faculté de Médecine de l'Université de Kinshasa a accepté cette offre et a réuni les différentes équipes à savoir le service de la pharmacologie clinique, le centre de traitement de la covid 19 (CTCO), l'équipe d'éthique médicale de l'Ecole de santé publique (ESP) et la Direction des CUK.

L'équipe de pharmaco clinique a élaboré un protocole rigoureux selon le modèle standard recommandé par l'OMS, l'équipe d'éthique a analysé le protocole, a donné son quitus à la réalisation de l'étude et suivi le déroulement de l'essai en insistant sur le respect de différentes étapes. Le CTCO sous la direction des investigateurs principal et son adjoint ont conduit l'essai dans le strict respect des normes édictées par l'OMS en matière d'essai clinique.

Les données obtenues ont été analysées par une équipe indépendante des spécialistes en bio statistique et épidémiologie de l'ESP.

Cet essai clinique a inclus des patients présentant les formes légères et modérées de Covid 19 dans les deux bras de l'étude : Doubase C et l'association Hydroxychloroquine avec Azithromycine.

A l'issue de l'étude, le Doubase C s'est montré efficace en empêchant le passage des malades de forme légère et modérée à la forme grave, une bonne tolérance et un manque de toxicité sur tous les organes vitaux. De ce point de vue le Doubase C se présente donc comme une bonne alternative pour traiter les formes légères et modérées de la Covid 19.

Le rapport en annexe, a été discuté avec les experts de l'OMS le jeudi et vendredi 24 et 25 mars 2022 qui ont fait des recommandations sur la poursuite des essais multicentriques afin de consolider la force des résultats déjà trouvés.

L'équipe de recherche sollicite des autorités compétentes le positionnement officiel de Doubase C dans l'arsenal thérapeutique contre la Covid 19.

Veillez agréer, Monsieur le Coordonnateur, l'expression de notre considération.

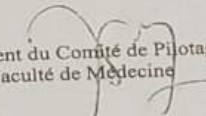
**Prof Dr MAKULO RISSASY Jean -Robert**

Investigateur Principal & Médecin Directeur  
Des Cliniques Universitaires de Kinshasa



**Prof Dr MBUNGU MWIMBA**

Président du Comité de Pilotage & Doyen  
de la Faculté de Médecine



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Comptes Raw-Bank : USD 01006829932-31 ; CDF : 01006829943-95



## VIH et SARS-COV-2:

### Essai clinique randomisé, contrôlé de Doubase C – OMS-UA-CDC Afrique

**L'équipe conjointe d'experts (OMS, UA, CDC Afrique) salue les efforts de la République Démocratique du Congo en matière de recherche sur les traitements traditionnels de COVID19**

Kinshasa, 31 mars 2022.

La mission conjointe du comité consultatif régional d'experts (OMS/CDC Afrique/Commission de l'UA) sur les médicaments issus de la pharmacopée traditionnelle proposés pour le coronavirus, COVID-19 en République démocratique du Congo a salué les efforts du pays en matière de recherche sur les traitements traditionnels du SARS-CoV-2, au terme d'une visite de 11 jours à Kinshasa – du 21 au 31 mars 2022.



Les experts ont fait la restitution des résultats de leur mission jeudi 31 mars dans la capitale de la RDC, à la fois chez le ministre de la santé publique, hygiène et prévention, puis devant les autres parties-prenantes, en soulignant le "grand intérêt des enseignements tirés de cette visite qui pourraient être utilisés pour améliorer la recherche sur les essais cliniques dans la perspective des prochaines vagues de COVID-19".



# Doubase C

- **Clinical Trials:**

**Anti-enteroviruses activity**

**Hepatitis B**

**Hepatitis C**

Doubase C™

# Contre les Hépatites virales B et C



**What's the  
Difference:  
*Hepatitis B*  
*vs Hepatitis C***

 HEPATITIS B  
FOUNDATION

# Contre les Hépatites virales B et C

## What is Hepatitis?

Hepatitis means “inflammation of the liver”.

A liver can become inflamed for many reasons, such as too much alcohol, physical injury, autoimmune response, or a reaction to bacteria or a virus.

The five most common hepatitis viruses are A, B, C, D, and E.

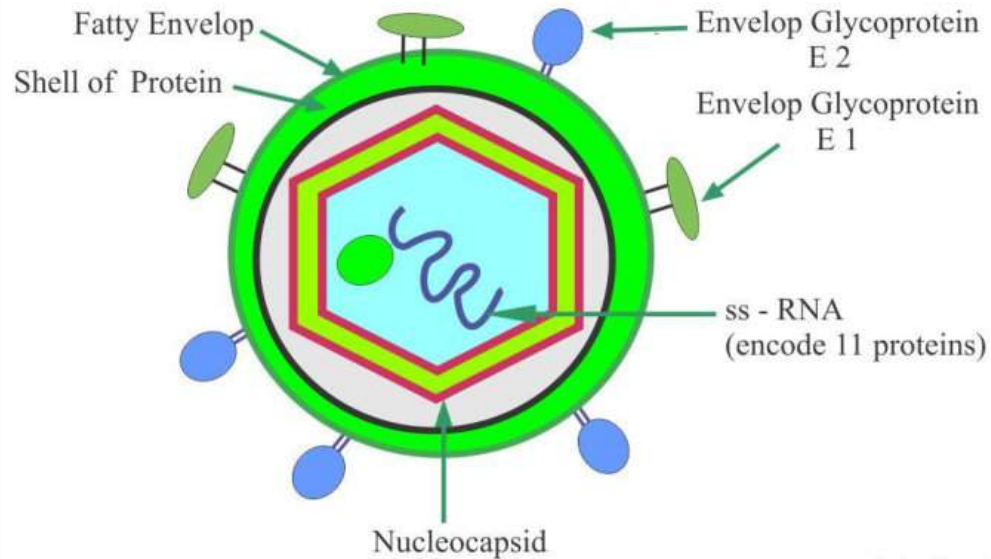
Some hepatitis viruses can lead to fibrosis, cirrhosis, liver failure, or even liver cancer.

Damage to the liver reduces its ability to function and makes it harder for your body to filter out toxins.

# Contre les Hépatites virales B et C

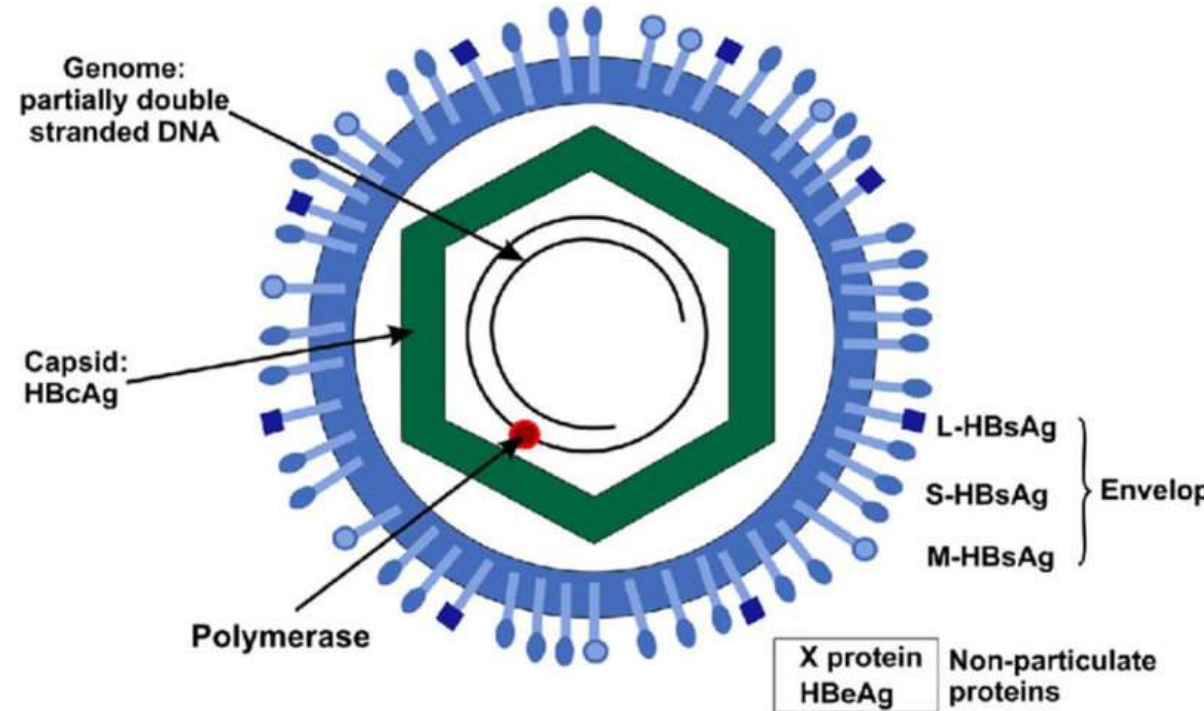


Hepatitis C Virus Structure



Labpedia.net

Hepatitis B Virus structure



# Contre les Hépatites virales B et C



Both hepatitis B and C are **blood-borne pathogens**, which means that their primary mode of transmission is through direct **blood-to-blood** contact with an infected person.

Also, both hepatitis B and C can cause **chronic, lifelong infections** that can lead to serious liver disease.

Hepatitis B is most commonly spread from **mother-to-child** during birth while hepatitis C is more commonly spread through the **use of unclean needles** used to inject drugs.



# Contre les Hépatites virales B et C



## Hepatitis B vs Hepatitis C

Despite having an effective [vaccine](#), **hepatitis B is the world's most common liver infection**; over 292 million people around the world are estimated to be living with chronic hepatitis B.

While hepatitis C tends to get more attention and research funding, **hepatitis B is considerably more common and causes more liver-related cancer and death worldwide** than hepatitis C.

Combined, **chronic hepatitis B and C account for [approximately 80%](#) of the world's liver cancer cases**.

However, [studies](#) show that **those with chronic hepatitis B are more likely to die from liver-related complications** than those who are infected with hepatitis C.

With hepatitis C, **most people develop cirrhosis, or scarring of the liver, before liver cancer**.

**In certain cases of hepatitis B, liver cancer can develop *without* any signs of cirrhosis**, which makes it extremely difficult to predict the virus' impacts on the body, and makes screening for liver cancer more complicated.

# Contre les Hépatites virales B et C



**The hepatitis B virus is also approximately 5-10 times more infectious than hepatitis C**, and far **more stable**. It can survive – and **remain highly contagious – on surfaces outside of the body for up to 7 days** if it is not properly cleaned with a disinfectant or a simple bleach solution.

A new [study](#) suggests that **the hepatitis B virus has the ability to survive in extreme temperatures**, whereas the hepatitis C virus has been known to survive outside of the body for **a [short period](#)** of time on room-temperature surfaces.

**Another major difference between the two forms of hepatitis is how the virus attacks a cell.**

The hepatitis C virus operates like other viruses;

**it enters a healthy cell and produces copies of itself that go on to infect other healthy cells**

The hepatitis B virus reproduces in a **similar fashion**, but with one large difference – **[covalently closed circular DNA](#)**.

# Contre les Hépatites virales B et C



Covalently closed circular DNA (cccDNA) is a structure that is unique to only a few viruses.

Unlike a typical virus, **hepatitis B's cccDNA permanently integrates itself into a healthy cell's DNA – a component of the cell that allows it to function properly and produce more healthy cells.**

The cccDNA resides within an essential area of the cell called the **nucleus and can remain there even if an infected person's hepatitis B surface antigen (HBsAg) levels are undetectable.**

Its presence means that a **person with chronic hepatitis B may have a risk of reactivation even if the HBsAg levels have been undetectable for a long period of time.**

**The cccDNA's location inside of the nucleus is especially troublesome because it makes it difficult to isolate and destroy the cccDNA without harming the rest of the cell.**

# Contre les Hépatites virales B et C



**People living with chronic hepatitis B are susceptible to hepatitis Delta.**

**Only people with hepatitis B can contract hepatitis D as well.**

**Hepatitis Delta is considered to be the most severe form of hepatitis because of its potential to quickly lead to more serious liver disease than hepatitis B alone.**

Of the 292 million people living with chronic hepatitis B, approximately 15-20 million are also living with hepatitis D.

Unlike HIV and hepatitis C coinfections, **there are currently no FDA approved treatments for hepatitis Delta.**

# Contre les Hépatites virales B et C



## Hepatitis B/C Coinfection

**It is possible to have both hepatitis B and C at the same time. The hepatitis C virus may appear more dominant and reduce hepatitis B to low or undetectable levels in the bloodstream.**

Prior to curative treatment for hepatitis C, it is important for people to get tested for hepatitis B using the **three-part blood test (HBsAg, anti-HBc total and anti-HBs)**.

**People currently infected with hepatitis B (HBsAg positive) or those who have recovered from past infection (HBsAg negative and anti-HBc positive) should be carefully managed** according to the American Association for the Study of Liver Diseases (AASLD) [treatment guidelines](#) **in order to avoid dangerous elevation of liver enzymes resulting in liver damage.**



# Open Prospective Clinical trials



*Hepatitis B*  
**vs** *Hepatitis C*



# Contre les Hépatites virales B et C

| Patient  | Diagnostic | Date Entrée      |                  |       |       | Date contrôle       |                             |       |       |
|----------|------------|------------------|------------------|-------|-------|---------------------|-----------------------------|-------|-------|
| Code     |            |                  |                  |       |       |                     |                             |       |       |
|          |            | Test qualitatif  | Test quantitatif | SGO T | SGP T | Test qualitatif     | Test quantitatif ARN-RT-PCR | SGO T | SGP T |
|          |            | <u>Feb 2019</u>  |                  |       |       | <u>January 2022</u> |                             |       |       |
| MaM76F   | HB sAg     | P                |                  |       |       | N                   |                             |       |       |
|          | HVC        | P                |                  |       |       | N                   |                             |       |       |
| MBOM66M  |            | <u>June 2020</u> |                  |       |       | <u>July 2020</u>    |                             |       |       |
|          | HVB        | P                |                  |       |       | N                   |                             |       |       |
| LUMAT34M |            | <u>June 2020</u> |                  |       |       | <u>July 2020</u>    |                             |       |       |
|          | HVB        | P                |                  |       |       | N                   |                             |       |       |
| KUK44F   |            | <u>June 2019</u> |                  |       |       | <u>January 2020</u> |                             |       |       |
|          | HVB        | P                |                  |       |       | N                   |                             |       |       |
|          | HVC        | P                |                  |       |       | N                   |                             |       |       |
| TSDE21F  |            | <u>June 2019</u> |                  |       |       | <u>July 2019</u>    |                             |       |       |

# Contre les Hépatites virales B et C

| TSDE21F          |            |          | <u>June 2019</u>         |             |             | <u>July 2019</u>    |                    |                  |
|------------------|------------|----------|--------------------------|-------------|-------------|---------------------|--------------------|------------------|
| <b>FKTO</b>      | <b>HVC</b> | <b>P</b> | <u>Aug 2017</u>          |             |             | <b>N</b>            | <u>Dec 2017</u>    |                  |
|                  | <b>HVB</b> | <b>P</b> |                          |             |             | <b>N</b>            |                    |                  |
| <b>CISJO57 M</b> |            |          | <u>Feb 2017</u>          |             |             | <u>Apr 2017</u>     |                    |                  |
|                  | <b>HVB</b> | <b>P</b> | <b>43</b>                | <b>17.7</b> | <b>14.3</b> | <b>N</b>            | <b>0</b>           | <b>13.5 17.5</b> |
| <b>MNML60 F</b>  | <b>HCV</b> |          | <u>21 Aug 2021</u>       |             |             | <u>19-Nov-21</u>    |                    |                  |
|                  |            | <b>P</b> | <b>306</b>               | <b>47.8</b> | <b>19.8</b> | <b>N</b>            | <b>0</b>           | <b>18,9 19,1</b> |
|                  |            |          |                          |             |             |                     | <u>19 Feb 2022</u> |                  |
|                  |            |          |                          |             |             | <b>N</b>            | <b>0</b>           | <b>16.9 19.1</b> |
| <b>KGBB78 M</b>  |            |          | <u>Aug 2021</u>          |             |             | <u>Dec 2021</u>     |                    |                  |
|                  | <b>HVB</b> | <b>P</b> |                          |             |             | <b>N</b>            |                    |                  |
| <b>BKNgai</b>    | <b>HVC</b> |          | <u>15 Septembre 2022</u> |             |             | <u>12-Feb-23</u>    |                    |                  |
|                  |            | <b>P</b> | <b>108,000</b>           |             |             | <b>P</b>            | <b>52</b>          |                  |
| <b>LEOKA</b>     |            |          | <u>15 Mars 2023</u>      |             |             | <u>Juillet 2023</u> |                    |                  |
|                  | <b>HVB</b> | <b>P</b> | <b>6 450 000</b>         |             |             | <b>P</b>            | <b>2 020 000</b>   |                  |

# Contre les Hépatites virales B et C

|                      |                      |                     |                    |  |                         |  |                |  |
|----------------------|----------------------|---------------------|--------------------|--|-------------------------|--|----------------|--|
| <b>CTABMU<br/>G</b>  | <b>15 Mars 2023</b>  |                     |                    |  | <b>08 Juillet 2023</b>  |  |                |  |
|                      | <b>HVB</b>           | <b>P</b>            | <b>490 000 000</b> |  | <b>N</b>                |  | <b>0</b>       |  |
| <b><u>BasFal</u></b> | <b>16-Dec-22</b>     |                     |                    |  |                         |  |                |  |
|                      | <b>HB sAg</b>        | <b>P</b>            | <b>52.4</b>        |  |                         |  |                |  |
| <b>KABEM</b>         | <b>13 Avril 2023</b> |                     |                    |  | <b>10 novembre 2023</b> |  |                |  |
|                      | <b>HVC</b>           | <b>P</b>            | <b>312 000</b>     |  | <b>P</b>                |  | <b>20 300</b>  |  |
| <b>LINGA</b>         | <b>23-Nov-22</b>     |                     |                    |  | <b>14 juillet 2023</b>  |  |                |  |
|                      | <b>HVC</b>           | <b>P</b>            | <b>1 230 000</b>   |  | <b>P</b>                |  | <b>745 000</b> |  |
| <b><u>MBUwMB</u></b> | <b>HVC</b>           | <b>19 Janv 2023</b> |                    |  | <b>19-Oct-23</b>        |  |                |  |
|                      |                      | <b>P</b>            | <b>151,000</b>     |  | <b>P</b>                |  | <b>15,100</b>  |  |

# Doubase C™

## Packaging





Cancure 30mg  
comprimé

Activity screening

## Cancure 30 mg tablet



**Assessment of cell survival and proliferation  
and  
Assessment of product toxicity**

# Cancer: C'est quoi?

## Cancer : C'est quoi ?

Activation continue des cellules conduisant soit :

- ❖ La multiplication anarchique des cellules;
- ❖ Croissance anarchique des cellules.

# Facteurs déclencheurs et/ou favorisants

❖ Hérité

❖ Mutations génétiques

- Alimentation :
  - Nourriture : Produits surgelés importés ?
  - Boissons

# Facteurs déclencheurs et/ou favorisants

## ❖ Environnement

- Alimentation contaminée, déficiente
- Eau des rivières contaminées
- Aliments irrigués par des eaux contaminées
- Aliments contaminés par les produits polluants

## ❖ Mode et moyen de conservation

- Poissons fumés
- Chaîne de froid défectueuse
- Toitures des maisons en amiante
- Eau de consommation en sachets plastiques

# Facteurs déclencheurs et/ou favorisants

## ❖ Ondes électromagnétiques :

- Aliments chauffés aux micro-ondes
- Antennes de communication
- Téléphones cellulaires
- Services de phonie Talky-Walky

## ❖ Minerais radioactifs

- Carrés miniers : Uranium, Radium, Norbium, etc. : Kivu, Katanga vs Enfants et Femmes dans l'exploitation artisanale ;
- Entrepôts des exploitants miniers ;

## ❖ Hydrocarbures

- Pétrole
- Mazout
- Essence
- Sachets plastiques

## ❖ Solvants organiques



# Facteurs déclencheurs et/ou favorisants

## ❖ Transports routiers

- Cargaisons de minerais radioactifs  
longs courrier routier;

## ❖ Médicaments

- Hormones ou Produits à base  
d'hormones
- Métaux lourds : Plomb, Mercure,  
etc.
- Autres produits cancérigènes

## ❖ Cosmétiques

- Produits démaquillants
  - A base de métaux lourds : Mercure
  - A base d'hormones : Corticoïdes

# Anticancer drugs

Today, more than 100 different drugs have been used for chemotherapy, either alone or in combination with other treatments. For several years, the most effective drugs used in chemotherapy were considered to be DNA damaging agents [5]. These drugs can be divided into different categories based on their mechanism of action. They are summarized in Figure 1.

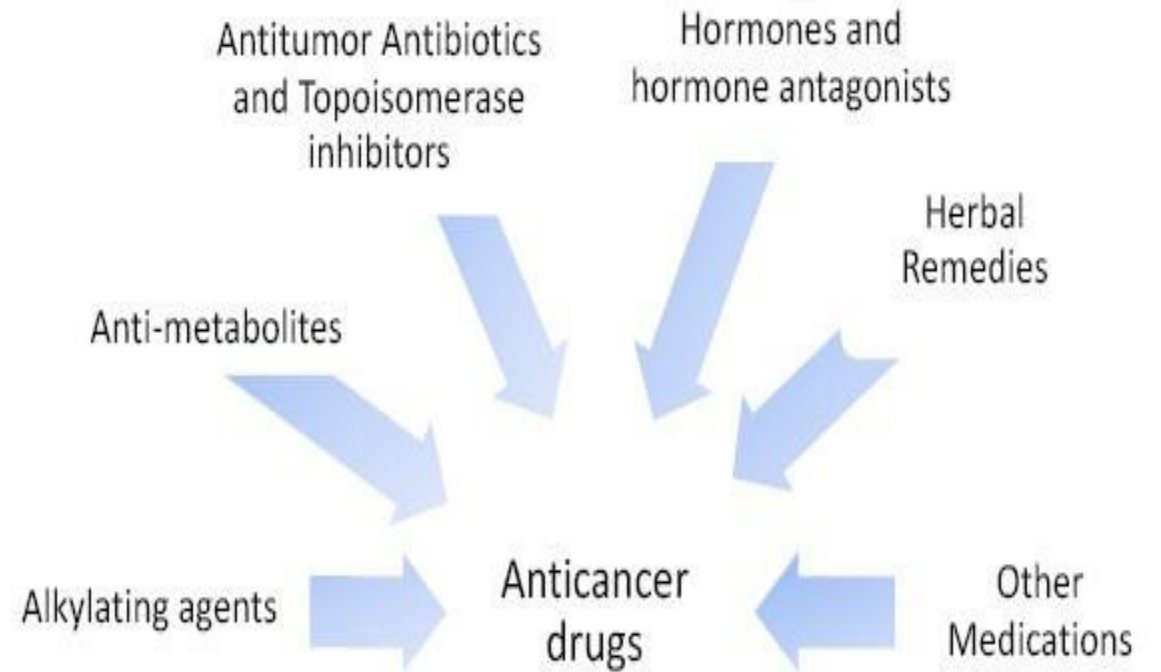


Figure 1. Classification of anticancer drugs.

## Anticancer Drugs - Alkylating Agents



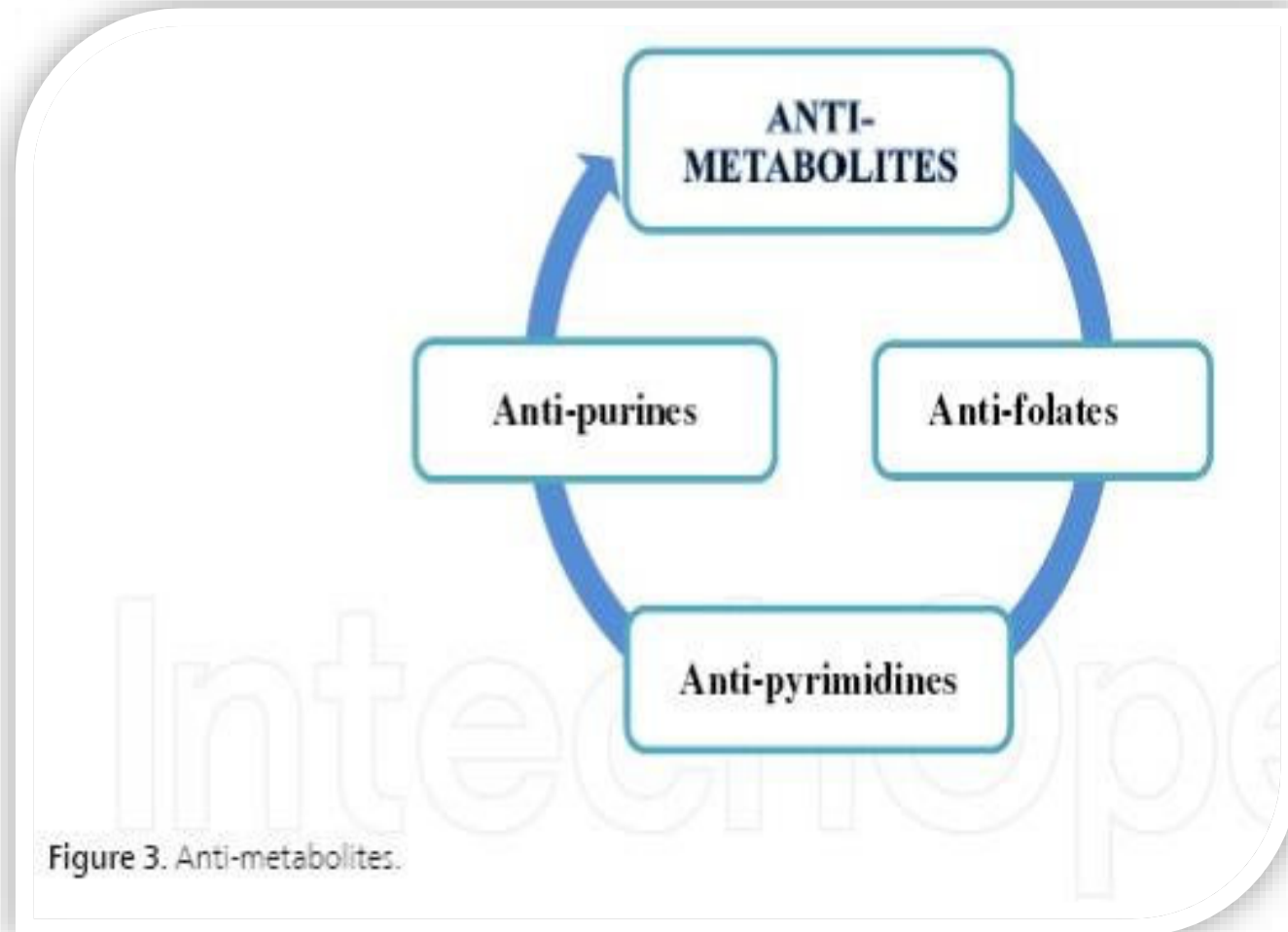
### Anticancer Drugs - Alkylating Agents

- Cyclophosphamide
- Ifosfamide
- Melphalan
- Chlorambucil

# Anticancer Drugs – Anti-metabolites Agents

## Anticancer Drugs – Anti-metabolites Agents

- **Antifolates**
  - Methotrexate, Pemetrexed
- **Antiprimidines**
  - 5-Fluoro-Uracil, Capetacitabine, Enil-Uracile, Hydro-Uree
- **Antipurines**
  - 6-Mercapto-purine, 6-Thioguanine



# Anticancer Drugs – Antibiotics Agents

## 2.3. Antitumor Antibiotics and Topoisomerase Inhibitors

Antitumor antibiotics and topoisomerase inhibitors are obtained from the cultures of various microorganisms. Examples:

- *Doxorubicin (Adriablastina),*
- *Daunorubicin (Remember Cerubi),*
- *Bleomycin (Bleoc's),*

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- *Mitomycin,*
- *Mithramycin, and*
- *Epirubicin.*

# Anticancer Drugs – Topoisomerases Inhibitors Agents

## Anticancer Drugs – Topoisomerases Inhibitors Agents

Topoisomerases Inhibitors inhibit the ability of Topoisomerases to cleave nucleic acid molecules. Therefore they are toxic. They are called Topoisomerase Poisons bcz induce DNA disruption or DNA stabilization.

- Inhibitors of Topoisomerase I
  - Camptothecin
  - Irinotecan
  - Topotecan
- Inhibitors of Topoisomerase II
  - Etoposide (VP-16)
  - Teniposide
  - Doxorubicin
  - Daunorubicin
  - Elipticin

Topoisomerase I and II regulate the changes in DNA structure, including:

- DNA replication, transcription, recombination
- Chromatin remodelling

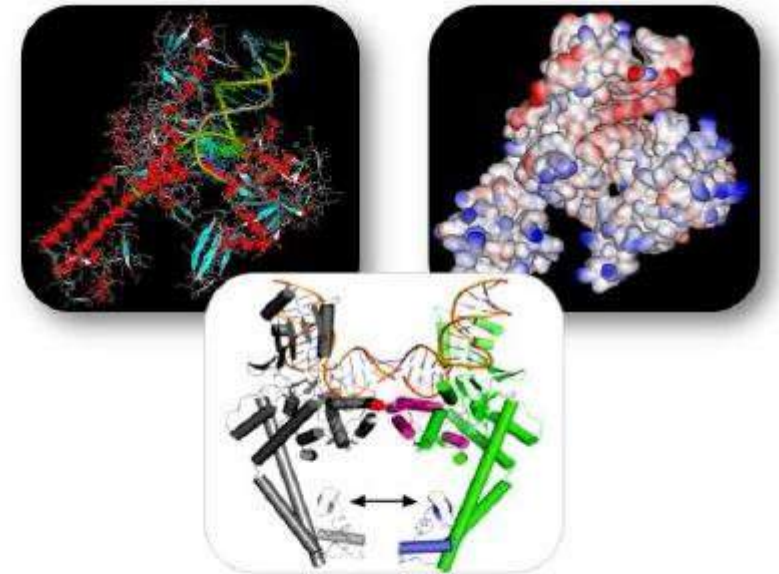


Figure 4. Structure of DNA-Topoisomerase II.



## Anticancer Drugs – Herbal Anticancer Agents

### Anticancer Drugs – Herbal anticancer Agents

- Vinblastine (Velber A)
- Vincristine (Oncosin)
- Vindesine (Eldisine)#
- Teniposide (VM26-Bristol)
- Podophyllotoxin

# Anticancer Drugs – Hormones and Hormone Antagonists Anticancer Agents

## Hormones and Hormone Antagonist Anti-cancer Agents

Hormone Antagonists are used for tumours caused by hormones or by Hormone imbalance.

Example:

- Glucocorticoid hormones
- Oestrogens

The endogenous oestrogens in women are steroid hormones. Possible consequences of lack of oestrogens in postmenopausal women include:

- Postmenopausal symptoms;
- Increased risks of osteoporosis;
- Coronary heart disease;
- Alzheimer's disease.

Also the cumulative exposure to oestrogens encourages development of female reproductive cancers, breast and uterus cancers generally occurring after hormone replacement therapy, late menopause, etc.

Medication generally used for breast and uterus cancers:

- Benzodihydro  $\alpha$ -Carbazole (BDHC).

Which targets the Human estrogen receptor (hER). But the toxicity is limitative.

## Anticancer Drugs – Toxicity and Adverse Effects

An understanding of toxicity and adverse effects of anticancer compounds is important:

- To design effective and potent drug combinations.
- To interpret toxicological profile of new compounds

Most cytotoxic anticancer agents are evaluated at the Maximal Tolerated Dose Levels.

The toxicity of these compounds is often a manifestation of their mechanism of action and their effect on growing normal cells such as hair follicle cells, gastrointestinal surface epithelial cells and stem cells.

Toxicity and side effects of anticancer drugs include:

- Bone marrow depression (due to damage of the growing stem cells, reduction of the white blood cells, platelets and red cell counts: with susceptibility to infections, bleeding, anaemia);
- Certain anticancer drugs cause unique but severe bone damage (osteonecrosis of the jaw: bisphosphonates);
- Damage to growing cells (loss of hair – alopecia, skin rashes, changes in the colour and texture, loss of fingernails and toenails);
- Surface epithelial damage to the gastrointestinal tract: ulcers, stomatitis, difficulty in swallowing (dysphagia), vulnerability to oral infections (candidiasis, changes in saliva secretion, nausea, vomiting, diarrhea, or constipation);

## Anticancer Drugs – Toxicity and Adverse Effects

- Some drug cause:
  - Kidney damage (due to extensive cell destruction, purine catabolism and disposition of urates in the renal tubules;
  - Cinnamaldehyde (Anticancer drug) induces histopathological changes of kidney (increased activity of marker enzymes, imbalance in the antioxidant status;
  - Liver damage may occur (due to large blood supply);
  - Metabolic conditions of the liver and kidney are usually monitored for possible correlation to drug levels in the blood and dosage adjustments, since these are the major drug elimination sites or the target organs of toxicity;
  - Paclitaxel and Vincristine could cause peripheral neuropathy;
  - Similarly, Anthracyclines are known for rare but severe cardiopathy;

A close attention to monitor the emergence of known side effects of Anticancer drugs, as well as those observed in the preclinical animal toxicologic studies ensure patients safety in early drug clinical trials.

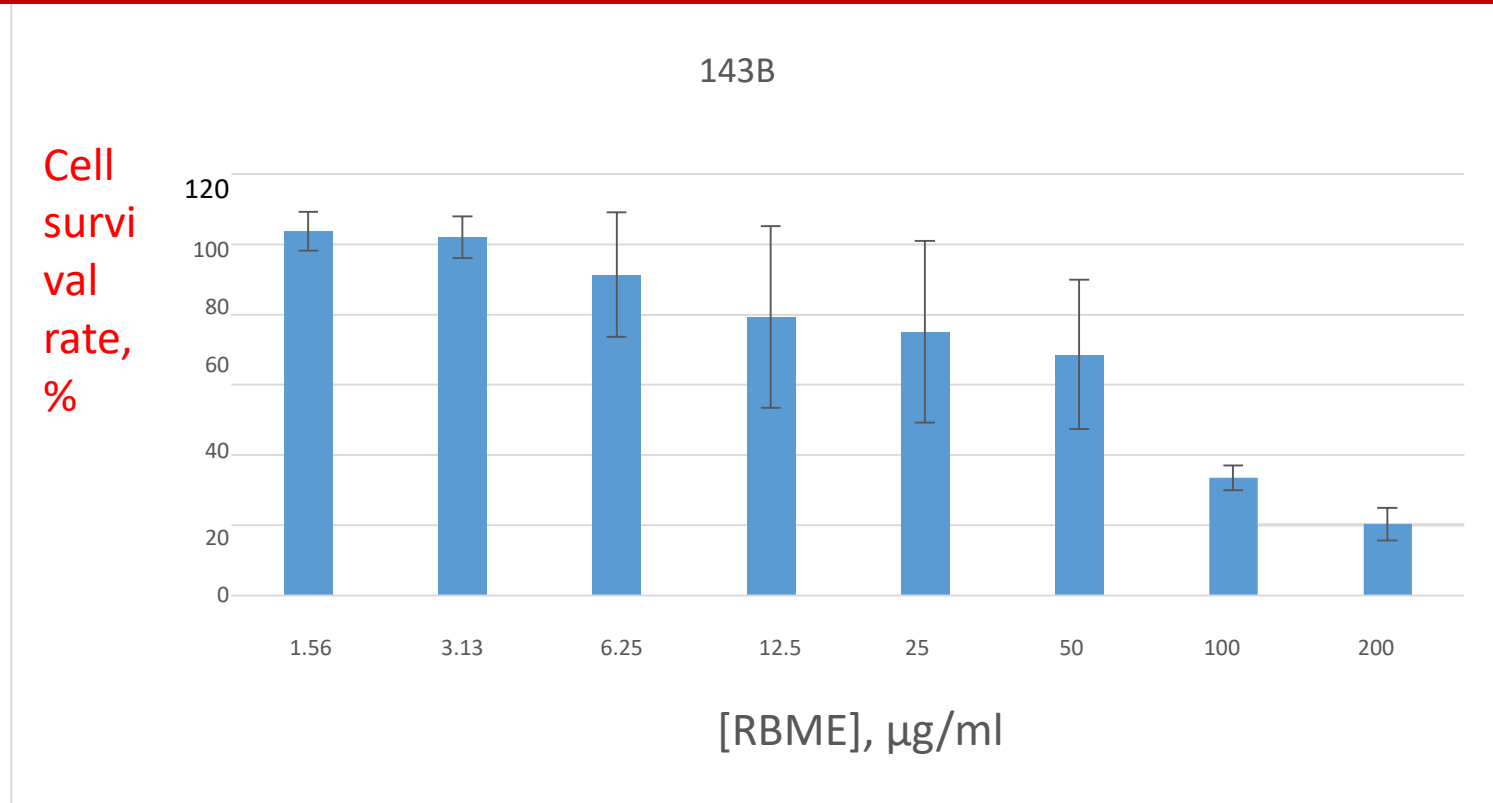
| No. | Cell line      | Cell line description   | Passageno. | Seeding density (cells/ well x 10 <sup>3</sup> ) |
|-----|----------------|---|------------|--|
| 1   | H69V           | Human small cell lung carcinoma                               | 10-17      | 8  |
| 2   | 143B           | Human bone osteosarcoma                                       | 11-25      | 4  |
| 3   | C3A            | Human hepatocellular carcinoma                                | 11-17      | 8  |
| 4   | A375           | Human skin melanoma   | 23-30      | 4  |
| 5   | HT29           | Human colon adenocarcinoma                                    | 147-149    | 10   |
| 6   | MCF7           | Human breast adenocarcinoma                                   | 8-13       | 10   |
| 7   | Vero           | African green monkey, kidney, non-cancer                      | 10-20      | 4  |
| 8a  | 84BR           | Human skin fibroblast, non-cancer                             | 5          | 10   |
| 8b  | BJ-5ta         | Human skin fibroblasts hTERTimmortalized, non-cancer          | 12-14      | 3  |
| 9   | AGS            | Human stomach adenocarcinoma                                  | 7-8        | 10   |
| 10  | Clone 15 HL-60 | Human acute promyelocytic leukemia                            | 14         | 25   |
| 11  | DU145          | Human prostate carcinoma                                      | 63-66      | 5  |
| 12  | A-704          | Kidney adenocarcinoma   | 73-77      | 6  |
| 13  | HeLa           | Cervix adenocarcinoma   |            |  |
| 13  | A549           | Human non-small cell lung carcinoma                           | 8-11       | 3  |
| 14  | K-562          | Chronic myelogenous Leukemia (CML)                            | 4-8        | 20   |
| 15  | U-87 MG        | Human Likely glioblastoma                                     | 134-138    | 8  |
| 16  | U937           | Histiocytic lymphoma  |            |  |
| 16  | BT-20          | Triple negative invasive ductal human carcinoma breast cancer | 27-29      | 6  |
| 17  | Panc 02.03     | Pancreas adenocarcinoma                                       | 26-28      | 8  |

| No. | ID       | DSMO solubility | Media solubility |
|-----|----------|-----------------|------------------|
| 1   | RBME     | Complete        | Soluble          |
| 2   | RBAC     | Complete        | Soluble          |
| 3   | RBET     | Complete        | Soluble          |
| 4   | LUENT    | Complete        | Soluble          |
| 5   | RBMW     | Complete        | Soluble          |
| 6   | YS2      | Complete        | Soluble          |
| 7   | F6A-F5ZS | Complete        | Soluble          |
| 8   | G4/MUC   | Complete        | Soluble          |
| 9   | G3W      | Complete        | Soluble          |
| 10  | MESC-INO | Complete        | Precipitate, 80% |
| 11  | YS4      | Complete        | Soluble          |
| 12  | G5/MUC   | Complete        | Soluble          |
| 13  | G1/W     | Complete        | Soluble          |
| 14  | IN1      | Complete        | Soluble          |
| 15  | YS5      | Complete        | Precipitate, 80% |
| 16  | F7NN     | Complete        | Precipitate, 80% |



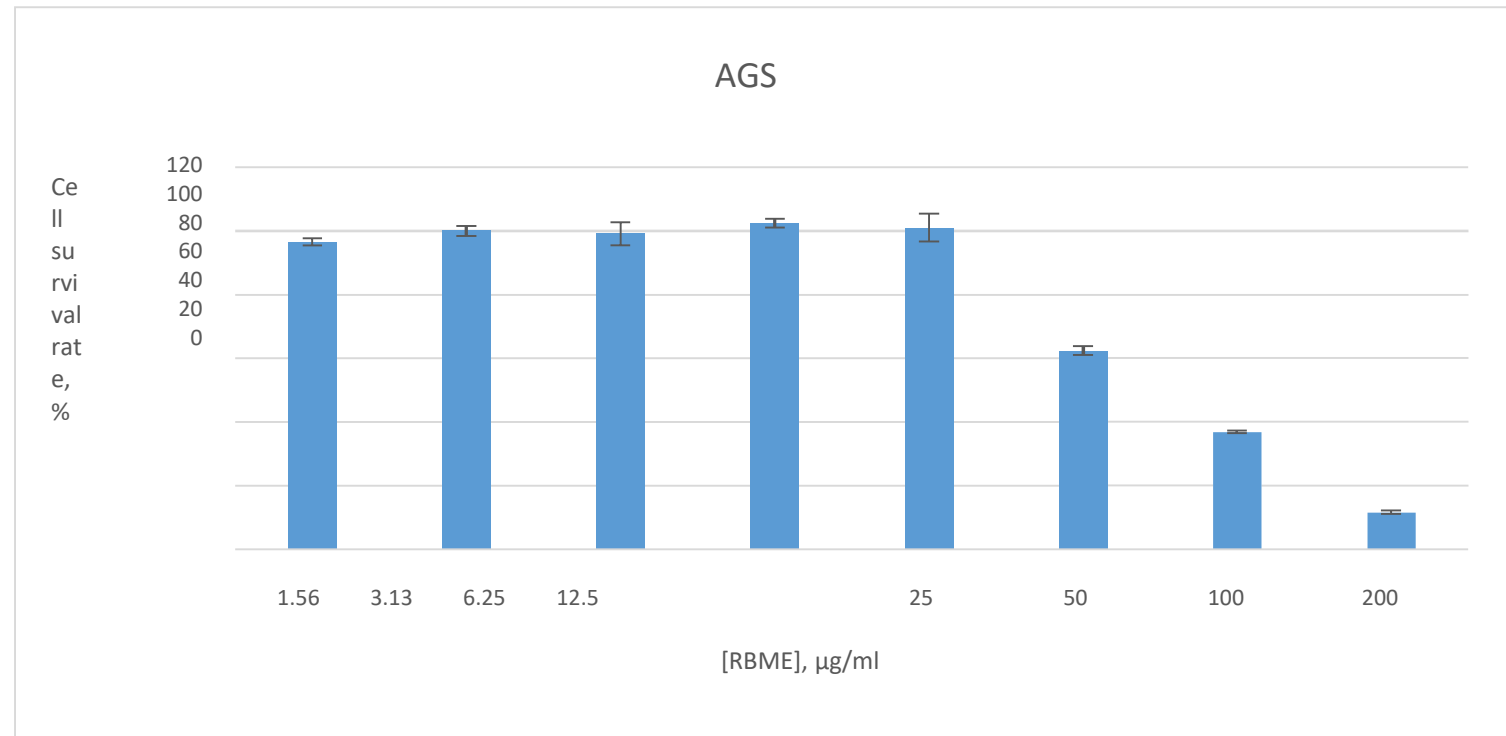
## 1.143B (Human osteosarcoma)

Figure 1.4: Cell survival following treatment 143B cells for 72 h with RBME, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).



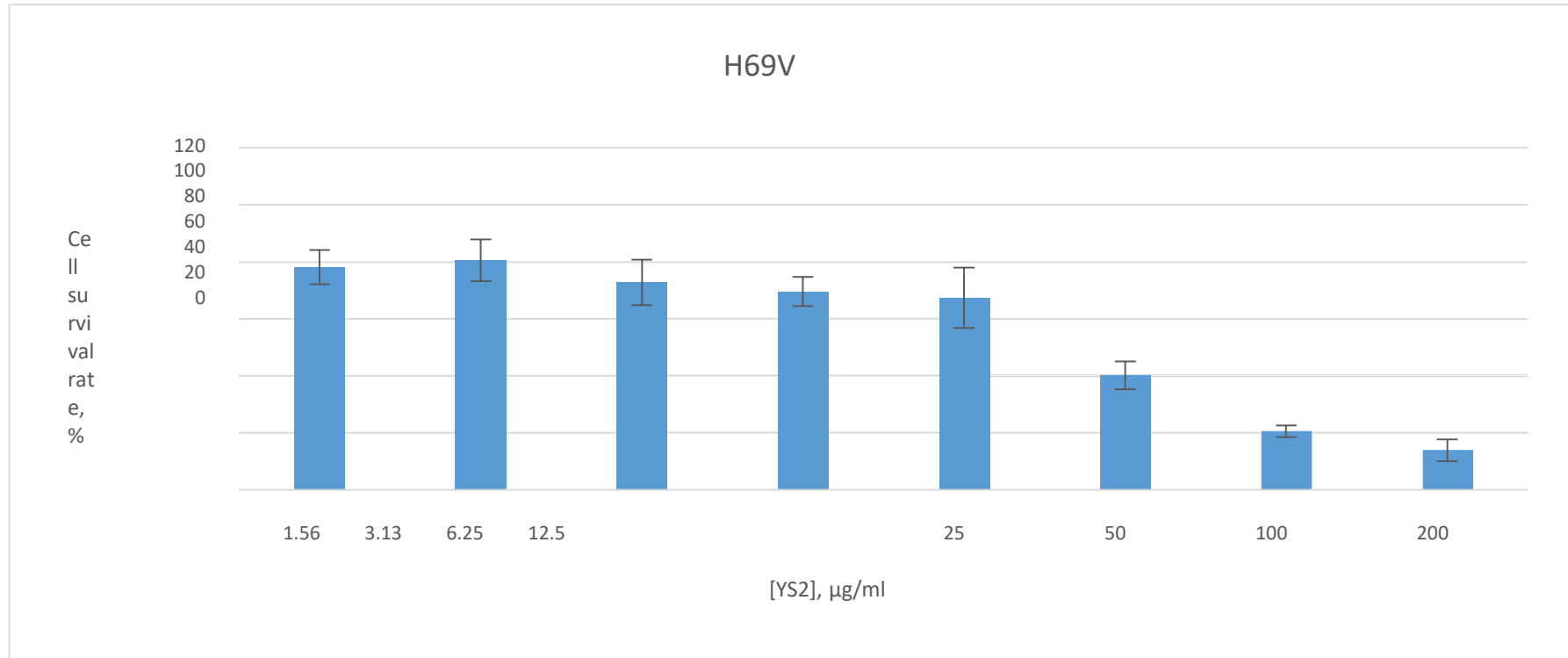
### 5.1.9 AGS (Human stomach adenocarcinoma)

Figure 1.9: Cell survival following treatment of AGS cells for 72 h with RBME, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).



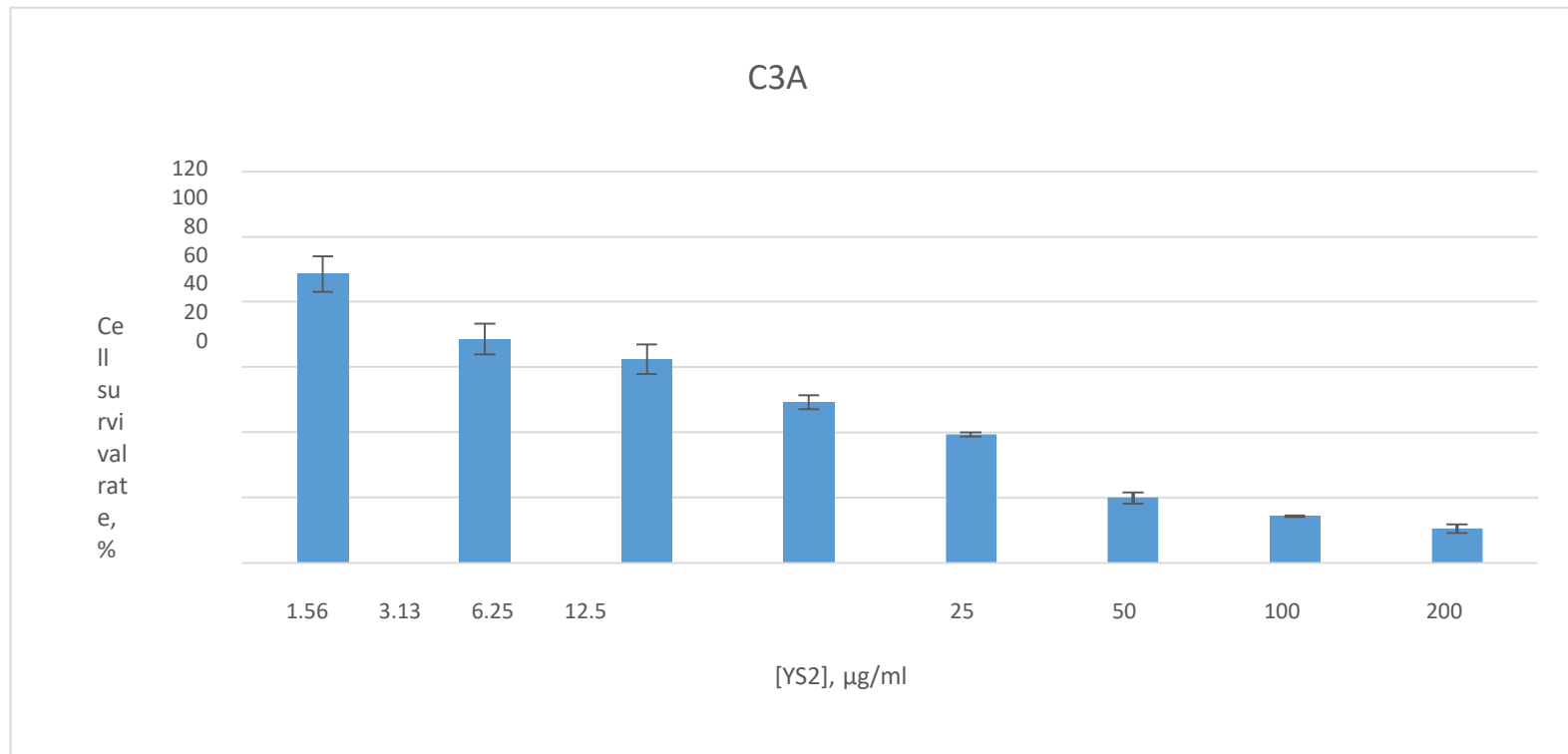
1.H69V (Human small cell lung carcinoma)

Figure 6.3: Cell survival following treatment of H69V cells for 72 h with YS2, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).



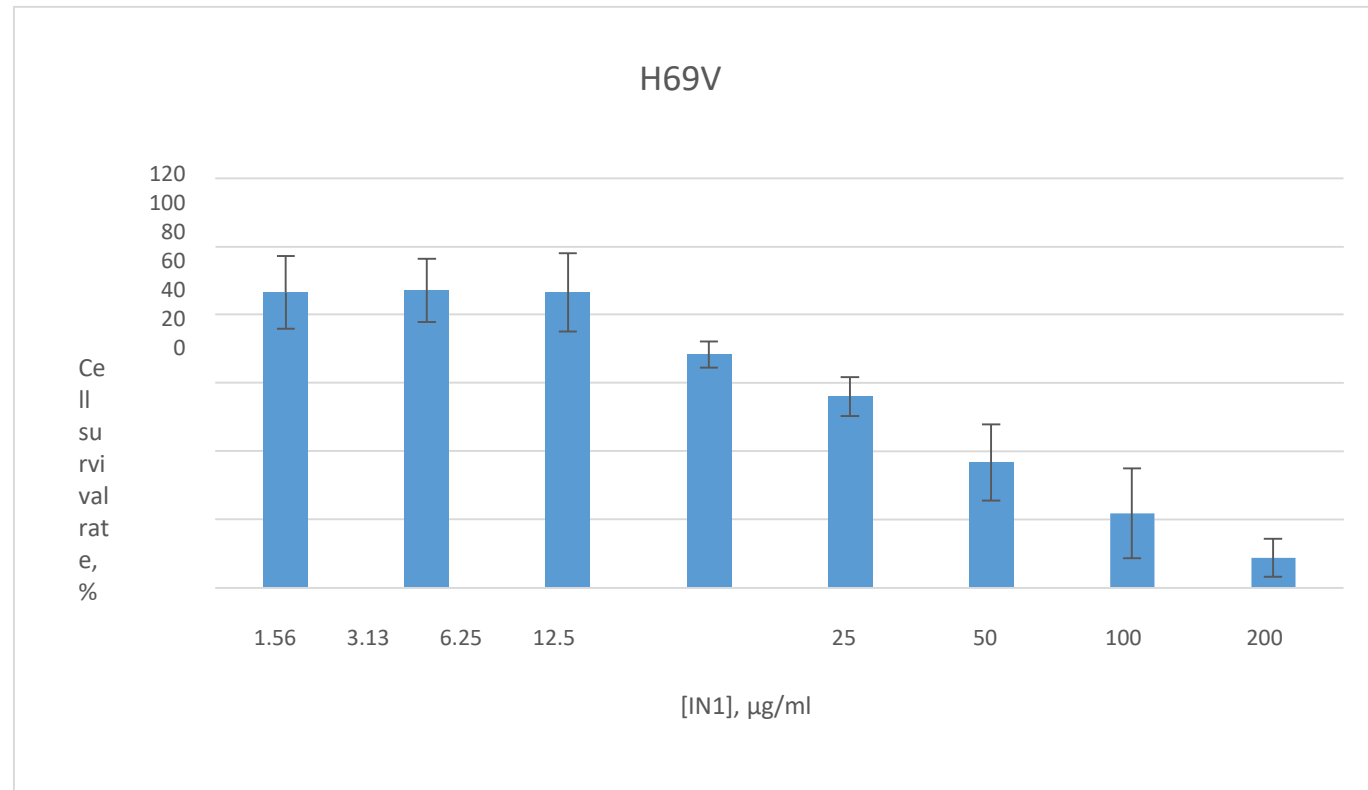
1.HepG2/C3A (Human hepatocellular carcinoma)

Figure 6.5: Cell survival following treatment of HepG2/C3A cells for 72 h with YS2, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).



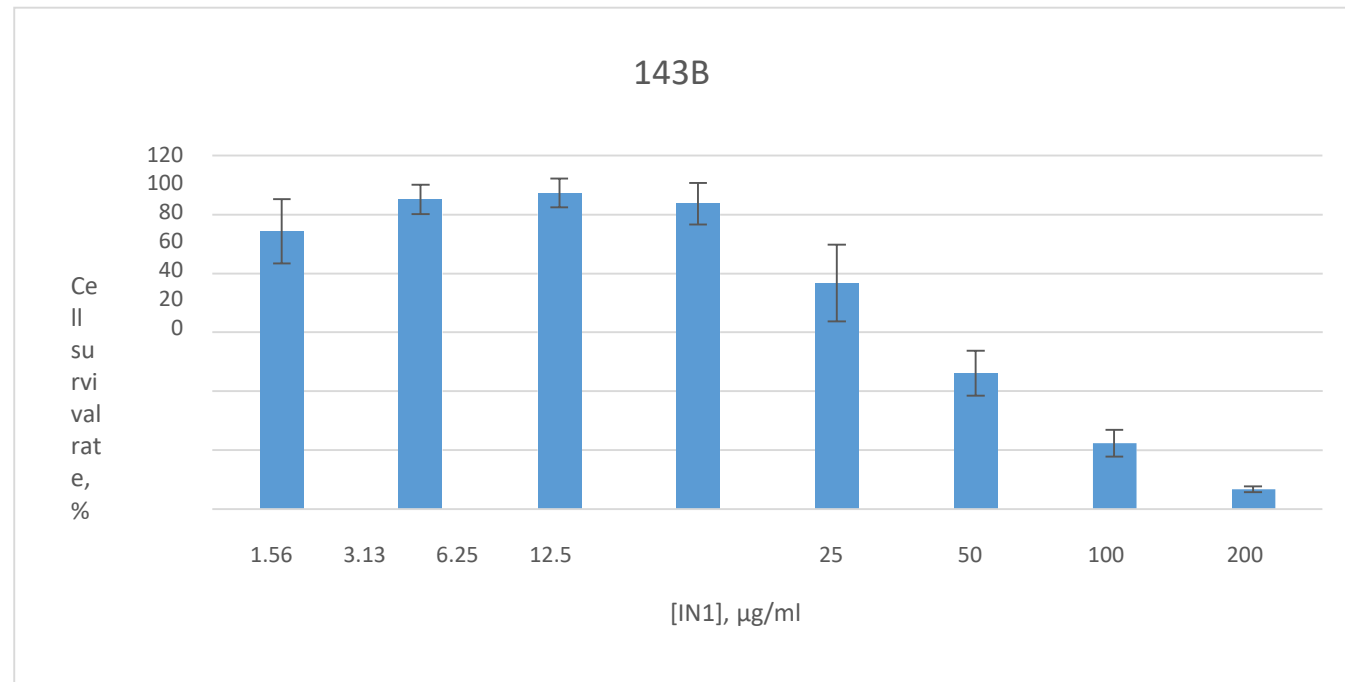
1.H69V (Human small cell lung carcinoma)

Figure 14.3: Cell survival following treatment of H69V cells for 72 h with IN1, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).



1.143B (Human osteosarcoma)

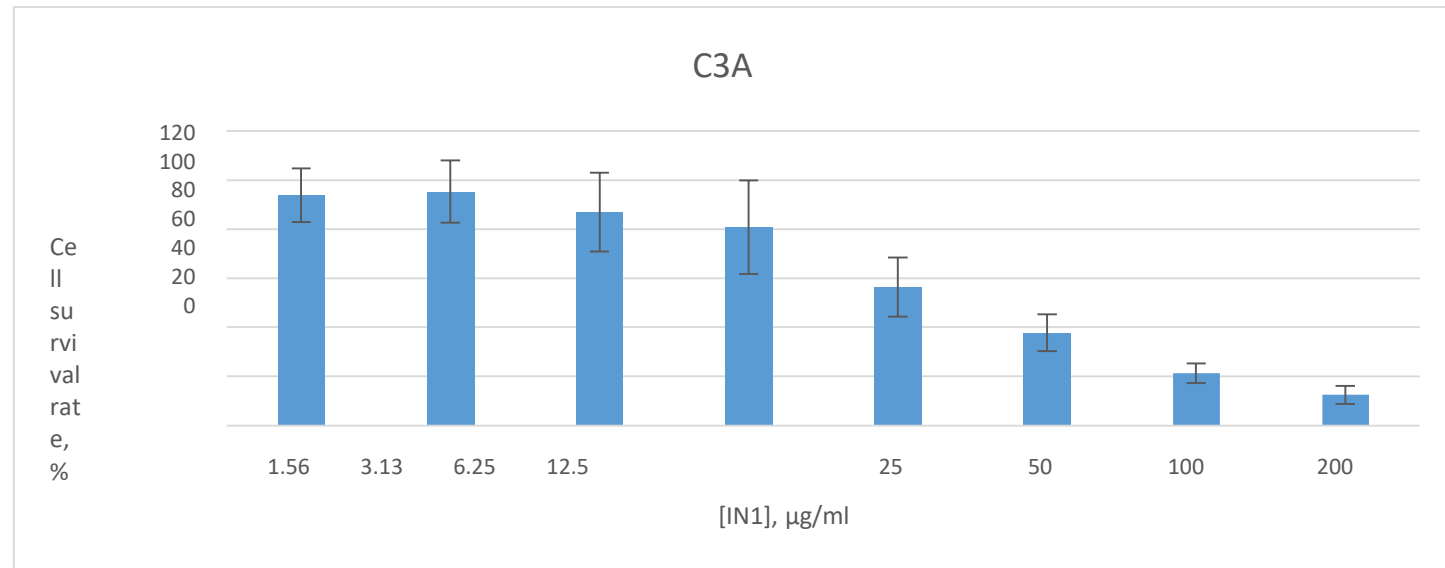
Figure 14.4: Cell survival following treatment of 143B cells for 72 h with IN1, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).





1.HepG2/C3A (Human hepatocellular carcinoma)

Figure 14.5: Cell survival following treatment of HepG2/C3A cells for 72 h with IN1, as determined with the MTT assay (error bars = standard deviation,  $n = 6$ ).



Cancure 30mg  
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Open prospective Clinical  
Trials

## Cancure 30 mg tablet



# Medical management of patients with Cancure™ for the treatment of tumours at Kinshasa Military Regional Hospital

May,2013

**Dr Francisca SAMATO ZUINA**

**Dr Francis EBOLA IYAWA**

**Dr Christian TSHIAMBU MUSHIPULA**

**Dr Henri NZUKA ENGALE**

**Dr Jérémie BODIKA MPUNGA**

**Dr Gilbert KABANDA KURHENGA**



# NEOPLASTIC SPLENOMEGALY TREATED WITH DOUBASE C™, ANTI-HIV AND ANTI-TUMORAL MEDICINE BASED ON AFRICAN TRADITIONAL PHARMACOPOEIA HERB EXTRACTS

## INTRODUCTION

In Sub-Saharan Africa, splenomegaly is fairly common and easily related to sickle cell diseases and infections, such as malaria, schistosomiasis and tropical splenomegaly. However, causes of splenomegaly are multiple. Medical doctors have to think of other infections such as infective endocarditis, portal hypertension, leukaemia, lymphoma, haemolytic anaemia, rheumatoid arthritis, myelofibrosis, kala-azar, chronic myeloid leukaemia, and systemic lupus erythematosus.

Since the advent of the HIV/AIDS pandemic, in general, massive splenomegaly in Africa is encountered more than in the past. Because of poverty, Africans are unable to afford the cost of evaluation and treatment of massive splenomegaly. Even for affluent Africans, complete clinical investigations are not feasible locally.

We describe a 38-year old black Congolese woman, a dental surgeon native Congolese referred to South Africa without obvious cause of massive splenomegaly. She was treated with Doubase C™, an anti-HIV, anti-tumoral Medicine Based on African Traditional Pharmacopoeia Herb Extracts (1).

Difficulties in defining the histological nature of this neoplastic splenomegaly and the improvement of hematological disturbances when giving Doubase C and performing splenectomy are discussed.

## CASE REPORT

A 38-year old black female with massive splenomegaly presented on January 9/2002 with following symptoms: weight loss, night sweating, asthenia and exertional dyspnea.

Family and personal medical histories were virgin. She was noted to be anemic with a hematocrit of 26 %, weighing 58 kg for a height of 1.63 m (BMI=21.8 kg/m<sup>2</sup>).

Physical examination showed that the patient had hepatomegaly and massive splenomegaly. Her cardiovascular system was normal.

Clinical investigations revealed the following features:

- Cutaneous (PPD intradermoreaction) of 10 mm diameter;
- Chest X-ray showing an interstitial pneumonopathy;
- Analysis of peripheral blood revealing 3950 white cells/mm<sup>3</sup> 12% of neutrophils, 88% of lymphocytes, and 20 mm<sup>3</sup>/hour of ESR;
- Elisa serology anti-HIV after counseling being negative;
- Abdominal ultrasound study showing splenomegaly which reached the hypogastric region.

Thus, a probabilistic diagnosis of spleen tuberculosis was treated with Rifampicin, Ethambutol, Isoniazid and Pyrazinamide during a 6-month period with a worsening general state. A lymphoproliferative process of spleen was suspected in July 2002, and treated with Doubase C™.

This medicine is a mixture of total aqueous extracts of roots and leaves from two plants currently used in the Congolese traditional Pharmacopoeia. The raw materials, one harvested, dried, grinded and then submitted to water extraction, according to pharmaceutical art rules, had been mixed according to a galenic formulation previously described (2).

Thanks to the anti-HIV properties and lack of cytotoxicity demonstrated in vitro and in vivo both by Congolese and US teams, US Patent n°E 5,607,673 and Global Patent n°E PCT/US96/12769 were granted to this pharmacological product (1). General state was stabilized with Doubase C™.

The patient was referred from the DRC to the Department of Surgery of Prof.E.L. Mazwai, Umtata, South Africa (SA), for total splenectomy and pathologic study of spleen biopsies. Laboratory results of peripheral blood performed on November 27, 2002 in Eastern Cape, SA, concluded as follows:

White Cell Differential count:

White cell count: 19.2.10<sup>9</sup>/L; neutrophils : 6 %; Lymphocytes: 90% Platelet count: 39.1 0<sup>9</sup>/L;

Splenic marginal zone B-cell lymphoma, target cells and rouleaux formation noted, no tear drop poikilocytes noted, lymphocytosis present, atypical Lymphocytes noted, thrombocytopenia without platelet clumping on slides.

A bone marrow evaluation was then suggested to exclude bone marrow infiltrations.

Bone marrow biopsy was not performed, as patient refused to have that investigation.

## MACROSCOPY

On November 30<sup>th</sup> 2002, splenectomy and excision of spleniculus were performed. The nature of the first specimen (I) consisted of brownish tissue sized 2.5x2x0.7 cm. The second specimen (II) consisted of a spleen measuring 24x18x11 cm with total weight of 293.2 grams - see macro photograph Figure 1. Fibre fatty tissue was attached to the serosal surface of the spleen in one area measuring 12x8x0.3 cm. Circumscribed hemorrhagic areas were noted in the substance of the spleen, the largest 5.5 cm in diameter.



FIG 1.



FIG 2



FIG 3

Table 1. IMMUNOHISTOCHEMICAL IIA

| LABELLED                         | SARNOI | 2/02/02 | 25/04/01 | 09/06/02 |
|----------------------------------|--------|---------|----------|----------|
| White cell count                 | 12.4   | 19.2    | 19.2     | 9.1      |
| Neutrophils %                    | 12     | 18      | 91.9     | 14       |
| Lymphocytes %                    | 83     | 78      | 91.9     | 84       |
| Hemocytes %                      | 0.13   | 0.01    | 0.18     | 0.18     |
| Platelet count x 10 <sup>9</sup> | 178    | 362     | 100      | 142      |
| Antibiotics                      | -      | ++      | ++       | ++       |
| Ab Phosphatase                   | 100    | 100     | 100      | 100      |
| Gamma Gt U/L                     |        | 119     |          |          |
| ALT (SGPT) U/L                   |        | 37      |          |          |
| AST (SGOT) U/L                   |        | 39      |          |          |
| LDH U/L                          |        | 126     |          |          |

Table 2. EVOLUTION OF BLOOD ANALYSIS

| CHARACTERISTIC | %  |
|----------------|----|
| Viability      | 99 |
| CD45           | 94 |
| CD20           | 10 |
| CD19           | 4  |
| CD22           | 17 |
| FMc-7          | 81 |
| CD13           | 40 |
| CD22           | 72 |
| CD103          | 72 |
| CD116          | 72 |
| CD119          | 24 |
| CD1            | 17 |
| CD8            | 6  |
| HLA-DR         | 74 |
| CD2            | 92 |
| CD28           | 16 |
| CD44           | 2  |
| CD45RO         | 8  |
| CD45R1         | 98 |
| CD4 and CD19   | 17 |
| CD45RO         | 6  |
| CD45R1         | 98 |
| CD45RO         | 6  |
| CD45R1         | 98 |

## WHITE CELL DIFFERENTIAL COUNT

### COLLECTED 28/10/02

|                     |         |                             |
|---------------------|---------|-----------------------------|
| White cell count    | *L 2.0  | 4.0-10.0 10 <sup>9</sup> /L |
| Neutrophils %       | 18.0    | %                           |
| Neutrophils abs     | *L 0.36 | 1.90-7.4010 <sup>9</sup> /L |
| Lymphocytes %       | 80.0    | %                           |
| Lymphocytes abs     | 1.60    | 1.00-4.5010 <sup>9</sup> /L |
| Monocytes %         | 2.0     | %                           |
| Monocytes abs       | L 0.04  | 0.20-1.0010 <sup>9</sup> /L |
| Nucleated red cells | H* 28.0 | 0-1.100WBC                  |
| Platelet count      | *L 24   | 140-450 10 <sup>9</sup> /L  |

FBC Comment: Causes of a pancytopenia include aplastic anemia, bone marrow infiltration (eg. Carcinoma lymphoma, leukemia), hyperparathyroidism, myelodysplasia and megaloblastic anemia. Bone marrow examination is usually indicated. If clinically indicated, a serum B12 level may be considered.

### COLLECTED 27/02/03

|                  |         |                             |
|------------------|---------|-----------------------------|
| White cell count | H 19.3  | 4.0-10.0 10 <sup>9</sup> /L |
| Neutrophils %    | 18.0    | %                           |
| Neutrophils abs  | L 3.47  | 1.90-7.4010 <sup>9</sup> /L |
| Lymphocytes %    | 78.0    | %                           |
| Lymphocytes abs  | H 11.19 | 1.00-4.5010 <sup>9</sup> /L |
| Monocytes %      | 24.0    | %                           |
| Monocytes abs    | *H 4.63 | 0.20-1.0010 <sup>9</sup> /L |
| Platelet count   | 162     | 140-450 10 <sup>9</sup> /L  |

FBC Comment: Slide submitted for further comment: Lymphocytes resemble those of a "Hairy Cell Leukemia". As patient refused to have a Bone Marrow biopsy, flow cytometry is suggested to confirm Hairy Cell. Platelet count 2 x Heparin blood samples for flow cytometry.

### COLLECTED 09/06/03

|                  |        |                             |
|------------------|--------|-----------------------------|
| White cell count | 9.1    | 4.0-10.0 10 <sup>9</sup> /L |
| Neutrophils %    | 14.0   | %                           |
| Neutrophils abs  | L 1.27 | 1.90-7.4010 <sup>9</sup> /L |
| Lymphocytes %    | 84.0   | %                           |
| Lymphocytes abs  | H 7.64 | 1.00-4.5010 <sup>9</sup> /L |
| Monocytes %      | 2.0    | %                           |
| Monocytes abs    | L 0.18 | 0.20-1.0010 <sup>9</sup> /L |

FBC Comment: Reactive lymphocytes present.

## HISTOLOGY

Microscopic study of both II and I was performed on October 30<sup>th</sup> 2002. Sections of both the spleniculus (I) and the spleen (II) showed expansion of the marginal zone. Medium sized cells with irregular hyper chromatic nuclei populated this zone. A more diffuse infiltrate of atypical lymphoid cells was noted in the spleen. Marked congestion of the spleen was noted.

These changes (Figure 2) suggested a possible neoplastic expansion of the marginal zone of the spleen (splenic marginal zone lymphoma?). A small piece of pancreatic tissue had been observed in the splenic hilus. Immunohistochemical stains were necessary then to investigate a possible neoplastic lesion. Immunophenotypic analysis of the selected population was performed on March 11<sup>th</sup> 2003, using Flow cytometry. Table 1 summarizes the results of this Immunohistochemical study.

## OUTCOME

Table 2 presents the post-operatively and Doubase CJ treatment evolution of selected blood investigations. As general state and quality of life were fine, chemotherapy had not been administered.

## DISCUSSION

Several interesting observations are evident in this patient referred to South Africa with modern and sophisticated facilities in clinical investigations. Clinical history of this patient was faced with idiopathic splenomegaly with hypersplenism. But the microscopic changes suggested a possible neoplastic expansion of the marginal zone of the spleen in terms of a splenic marginal zone lymphoma.

With HIV/AIDS pandemic spreading, lymphomas are actually increasing in Sub-Saharan Africa. As the patient was not infected by HIV, the diagnosis of lymphoma had not been retained. Lymphocytes of peripheral blood resembled those of Hairy Cell Leukaemia.

As patient refused to have a Bone Marrow biopsy, flow cytometry was suggested to confirm Hairy Cell. Immunophenotypic analysis of this peripheral blood sample revealed 66 % monoclonal (malignant) B-cells showing partial dim CD5 and C19 co-expression, expressing HLA-DR, CD22, FMC-7, partial dim CD23, bright CD20, bright CD52, CD25, CD103 and bright CD11C with moderate Lambda light chain restriction. These findings were in keeping with B-cell lymphoproliferative disease, best fitting a Hairy Cell Leukaemia.

This is a neoplastic and monoclonal proliferation of well-differentiated lymphocytes. In this chronic lymphocytic leukaemia, they are almost always 99 % B cells in male patients over 40 (3). This patient was a 38-year old woman. The present high count of lymphocytes might be interpreted as a reactive lymphocytes process of monoclonal syndrome with transient alteration of Ab. Phosphatase, ALT, AST, and monocytes. Possible causes are malaria, toxoplasma, cytomegalovirus, Hepatitis virus B, syphilis, blood transfusions. Herpes virus, post-operatively process, autoimmune diseases, HIV virus (4).

Natural history of this Hairy Cell Leukaemia is characterized by a young woman who remains in status quo for years without enlarged nodes and complications such as autoimmune haemolysis, bacterial infection of the respiratory tract, and Bone marrow failure (2).

We are thinking to start with chemotherapy in order to reduce lymphocyte count. As prognosis is good for this young patient with excellent quality of life, Doubase C™ is being given till now in place of chemotherapy. Indeed, chemotherapy is not always needed, but may postpone marrow failure (2). Radiotherapy was not used in absence of lymphadenopathy and spleen. Supportive care (transfusions, prophylactic antibiotics, IV human immunoglobulin) was not necessary.

In conclusion, it appears that Hairy Cell Leukaemia had been confused with splenic marginal zone lymphoma. It is timely for Sub-Saharan Medical Centers to implement laboratories with immunophenotypic analysis facilities: the best tool of diagnosis of Hairy Cell Leukaemia. When chemotherapy is not needed, Doubase C™, extracted from African herbs, without toxicity, could be used.

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4. BORDESQUELE D. Syndrome monoclone des IgG. Orientation diagnostique. La Revue du Praticien 2002; 52: 2178-2183.

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- 4 Université de Kinshasa, Faculté de Médecine, Cliniques Universitaires de Kinshasa, M. 1. / Service de Médecine Aérospatiale.

## **7. Patient KAK, 33 years, male**

- ❖ **Diagnosis:** Rhabdomyosarcoma at the parietal region.
  
- ❖ **Symptoms:**
  - ❑ Large painful tumefaction at the parietal region of 20cm of large diameter and 18cm of small diameter, circumscribed, of irregular surface and firm consistency, sensible to palpation.
  - ❑ Migraine and headaches
  
- ❖ **Evaluation:** The ultra sound scan performed in March 2013 showed a Rhabdomyosarcoma.











# **13. Patient MBB, 33ans, male**

## ❖ Diagnostic:

- Burgeoning mass of malignant tendency, located on the left side; pending precision.
- Operated previously 8 times for the same tumour mass.

## ❖ Symptoms:

- Burgeoning mass, very bloody upon contact, located on the left side and at the lumbar pit, stinking, with some necrotic crusts.
- The mass is hot, firm, fibrous, sensitive around the healthy skin and adhering to the deep layer.
- Moreover, an inguinal and axial polyadenopathy is noted.





## 15. Patient Anm, 75 years, female

### ❖ Diagnosis:

- Cervix neoplasia, stage 4a;
- Arterial hypertension, Grade 2;
- Non tolerated anaemia;

### ❖ Symptoms:

- Genital haemorrhage upon contact;
- Lumbar-sacrum pain;
- Myctalgia

### ❖ Evaluation:

- Speculum: burgeoning cervix with active haemorrhage;
- Vaginal touch: infiltration of the 1/3 proximal vagina, cataclysmic haemorrhage.

| On admission<br>January 2012   | Follow up<br>March 2012   | Follow up<br>March 2012   | Follow up<br>March 2012   |
|--|---|---|---|
| <ul style="list-style-type: none"> <li>▪ Genital haemorrhage &amp; Myctalgia;</li> <li>▪ Speculum: burgeoning cervix, bleeding upon little contact;</li> <li>▪ Vaginal Touch: Hardening of the 2/3 upper vaginal wall, haemorrhage with fresh blood;</li> <li>▪ Ultra sound scan: swollen cervix 67x66x46mm; haematometra of about 15ml.</li> </ul> <p>☐ Conclusion: <b>Cervix neoplasy, stage 4a.</b></p> | <ul style="list-style-type: none"> <li>▪ Cessation of the genital haemorrhage;</li> <li>▪ Presence of hydrorrhea;</li> <li>▪ Follow up radiotherapy ongoing.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Cessation of the hydrorrhea;</li> <li>▪ Speculum: presence of some hyperaemia zones;</li> <li>▪ Vaginal Touch: Smooth vaginal walls; No more haemorrhage upon contact.</li> </ul> <p>☐ conclusion: <b>Cervix neoplasy, stage 2b.</b></p> | <ul style="list-style-type: none"> <li>▪ Speculum: healthy cervix with some hyperaemia zones inside the channel bottom;</li> <li>▪ Mont Venus tumefaction;</li> <li>▪ Vaginal Touch: sensation of a renitent mass at the FID;</li> <li>▪ No suspicious looses;</li> <li>▪ Ultra sound scan: Col of 42x33x35mm in diameter, with regular outlines, with heterogeneous echostructure, with 2.5 ml haematometra.</li> </ul> <p>☐ Conclusion: <b>Cervic neoplasy, stage 2a.</b></p> |

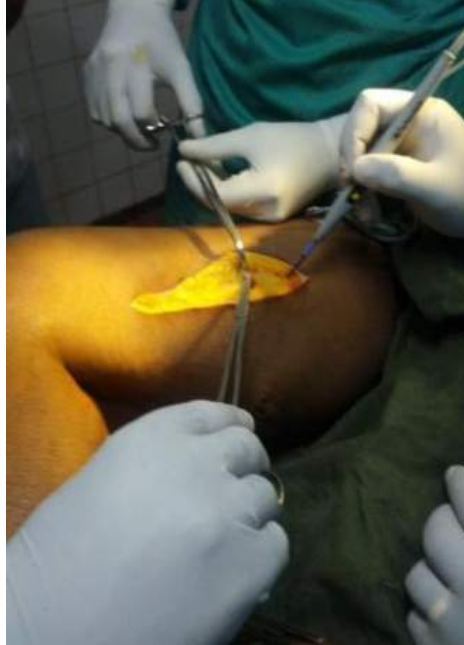






## **12. Patient NDM, 40 years, male**

- ❖ Diagnosis: Rhabdomyosarcoma of the long right thigh abductor.
- ❖ Symptoms: a painless tumefaction of firm consistency and subject to mobility superficially, and deep by nearly 15cm from the grand diameter and 12cm from the small diameter, with a collateral circulation and turgescence of vessels around the lump.
- ❖ Evaluation: Echo-doppler of the lump: big neoplastic intramuscular lump of the long right thigh abductor, recalling the **Rhabdomyosarcoma diagnosis with deep and superficial varicose veins of traumatic origin.**



# Patient DNJ-CT 44 Female

- **(B) RIGHT OVARY CYSTECTOMY AND SALPINGECTOMY:**
- - Cortical inclusion cysts with follicle cyst and cyst follicles
- - Corpus luteum: haemorrhagic corpus luteum cyst present
- - Small areas of endometriosis and endosalpingiosis
- - Stromal hyperplasia and hyperthecosis
- \*\* Areas reminiscent of early serous adenofibroma
- Fallopian tube: No intraepithelial atypia



# Patient DNJ-CT 44 F



Ovarian carcinoma 22x14x18  
cm

# Breast cancer and arm tumour under Cancure



# **11. Patient Ygj, 50 years, male**

- ❖ Diagnosis: Invasive tubular carcinoma of right breast **in man**.
- ❖ Symptoms:
  - right breast pain, recurring round lump of about 6cm in diameter, smooth in surface, firm in consistency, adhering to the deep layer.
  - antecedent of a mastectomy of the same breast 2 years previously, in 2011, for the same diagnosis.







# Patient Karan, 92 ans, F

- **Treatment**
- Cancure 30 mg 3x4 cés/jour since October 2017 till Mai 2018.
- Tumor exeresis 3 months after installing Cancure therapy;
- **Evolution**
- Significant and progressive resorption of the tumoral mass 2 months on under Cancure therapy;
- Amendement of growls (grumbles), amendement of the dyspnea 3 months on after Cancure therapy;
- Exeresis of the tumoral mass 4 months on after Cancure therapy;
- Scarification in first intention;
- Body weight gain;
- Amendement of axial adenopathies;
- Good clinical evolution under Cancure therapy; no complainst, no recidive, good quality of life 11 months on hitherto.

# Breast carcinoma under Cancure treatment

## Patient Karan, 92 ans, F



# Breast carcinoma under Cancure treatment

## Patiente NatKam





# Breast carcinoma under Cancure treatment

## Patiente OrEk



# Breast carcinoma under Cancure treatment

## Patiente KaTsh





# Breast carcinoma under Cancure treatment

## Patiente KaTsh





# Adenocarcinome de la prostate Score Gleason 4-3=7, correspondant au grade 3 cfr ISUP

|  |  |  |
|--|--|--|
| Patient : P9002025229<br> | Kinshasa, Democratic Republic of Congo<br>Numero du portable : 815042384<br>Ref Doc : Dr. MILAU IBALA FANFAN | Recueilli : 24/08/2023 13:35<br>Rapporte : 28/08/2023 13:35<br>Imprimé : 05/09/2023 11:30<br> |
|--|--|--|

|               |                 |
|---------------|-----------------|
| <b>TESTER</b> | <b>RÉSULTAT</b> |
|---------------|-----------------|

|                                   |   |
|-----------------------------------|---|
| <b>NUMERO D'HISTOPATHOLOGIE :</b> | <b>H - 1416 / 23</b>  |
| <b>TYPE D'ECHANTILLON :</b>       | <b>Biopsies prostatiques.</b>   |
| <b>EXAMEN MACROSCOPIQUE :</b>     | Nous avons reçu sept carottes d'aspect gris-blanc, de consistance molle, dans un flacon portant une étiquette avec le nom du patient ainsi que la mention "Biopsie prostatique", mesurant 1,3 - 2 cm. Incluses en totalité dans une cassette.   |
| <b>EXAMEN MICROSCOPIQUE :</b>     | L'analyse microscopique des fragments tissulaires reçus laisse voir des sections d'un parenchyme prostatique siège d'un processus carcinomateux fait des structures cribriformes. Ailleurs, on note des aspects glanduliformes adossés. Le stroma renferme un infiltrat inflammatoire mononucléé sans signes de spécificité. Pas de foyer de nécrose tumorale ni d'engainement périnerveux objectivés dans les limites des fragments reçus et examinés. |
| <b>CONCLUSION :</b>               | <b>Adénocarcinome acinaire de la prostate de score architectural de Gleason 4 + 3 = 7, correspondant au grade 3 selon ISUP.</b>   |

Transcrit par le Dr. Peter BOLIKR

## Adenocarcinome de la prostate Score Gleason 4-3=7, correspondant au grade 3 cfr ISUP

Examen réalisé : **ECHOGRAPHIE RENO-VESICO-PROSTATIQUE**

Protocolé le 20/09/2023

Médecin demandeur : Dr MAVINGA MAVINGA

### COMPTE RENDU

**Indication** : bilan de retentissement.

**Techniques** : examen réalisé par voie sus pubienne.

#### **Résultats** :

Prostate majorée de taille, mesurant 110 grammes, d'échostructure hétérogène, aux contours irréguliers et mal limité.

Pas de nodule suspect visible.

Vésicules séminales d'aspect normal.

Vessie en réplétion incomplète, à paroi épaissie surtout au niveau du plancher, prenant fortement le doppler couleur, contenant un ballonnet de la sonde urinaire.

Reins modérément majoré de taille de taille normale, à cortex échogènes, dilatation des cavités pyélocalicielles.

#### **CONCLUSION :**

- **Prostate hypertrophique, de nature probablement maligne, dyséctasiente de l'ordre de 110 grammes de volume avec retentissement sur le haut appareil urinaire (hydronéphrose bilatérale).**
- **Suggestion d'un dosage de PSA.**

**Adenocarcinome de la prostate Score Gleason 4-3=7, correspondant au grade 3 cfr ISUP**

Nom et Post - Nom : NIEMBO - NIEMBO  
Prescripteur : Dr JEAN PAUL MAMPUYA

**IMMUNO - ANALYSES**

| ANALYSES  | RESULTATS     | V/REFERENCES | INTERPRETATION  |
|-----------|---------------|--------------|---|
| PSA Total | >100,0 ng/ml  | < 4 ng/ml    | PSA L/PSAT<br>> 15 % HBP Origine<br>bénigne<br>< 15 % Tumeur maligne<br>Adénocarcinomes |
| PSA Libre | >50,778 ng/ml | < 0,8 ng/ml  |   |
| Ratio     |               |              |   |

Commentaire : les résultats font état d'une élévation importante de PSA Total et de PSA Libre en faveur d'une affection évolutive de la prostate, la réalisation de l'échographie prostatique permettra de compléter la mise au point. Nous ne saurons pas calculer le ratio dans ces conditions.



# Adenocarcinome de la prostate Score Gleason 4-3=7, correspondant au grade 3 cfr ISUP

Nature de l'examen : ECHOGRAPHIE VESICO-PROSTATIQUE

Date : 29/11/2023

Demandé par : Dr MBENZA NSEKI JOEL

## COMPTE RENDU

Motif : Rétention urinaire.

### Observation

Exploration réalisée en sus pubienne.

Vessie en réplétion suffisante, à paroi épaissie, contenu anéchogène et alithiasique. VPM= 103 ml RPM (résidu post-mictionnel) non réalisé.

Prostate inhomogène, majoré de taille, mesurant **60 cc de volume**, de contours irréguliers avec discret signe d'effraction capsulaire.

Reins de taille normale au cortex iso échogène par rapport au parenchyme hépato-splénique sans perturbation cortico-médullaire évidente.

### Conclusion :

- Hypertrophie de la prostate de 60 cc de volume d'allure borderline à priori ; sans retentissement sur le haut appareil urinaire.
- Reins différenciés au stade 1 échographique de l'insuffisance rénale.
- Cystite aigue.

**Quid** : Biopsie prostatique, PSA, ECBU, Rx Bassin, Rx rachis lombaire ...

Bien cordialement,

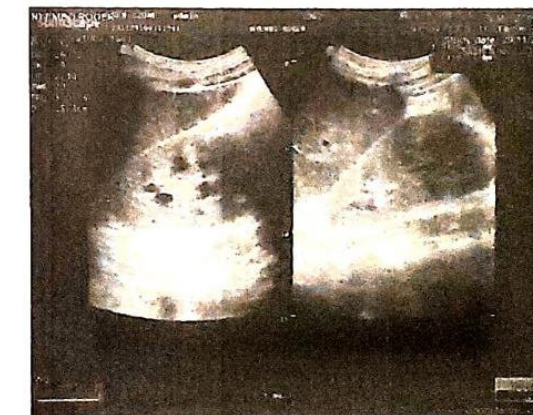
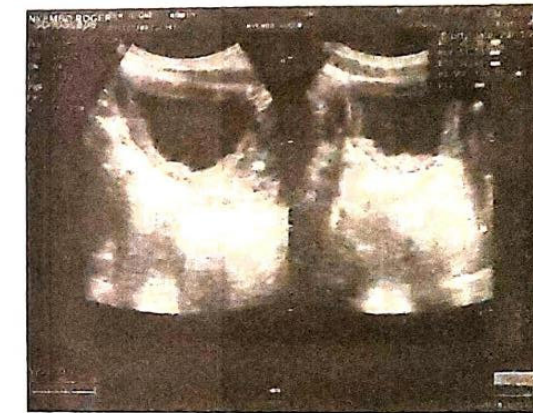
Prof Dr Jean MUKAYA

CNOM 2992

Médecins Spécialistes/Imagerie Médicale

DR MASEKO BASMAT

CNOM 14534



**Adenocarcinome de la prostate Score Gleason 4-3=7, correspondant au grade 3 cfr ISUP**

Nature de l'examen : LABORATOIRE  
Date : 29/NOV/2023  
Demandé par : Dr. MBENZI  
Adresse professionnelle :

---

**COMPTE RENDU**

**BIOCHIMIE**

- **-PSA TOTALE\_ : 2.51 ng/ml** VN 0.0-4.0
- PSA LIBRE : 0.65 ng/ml** VN 4-10
- RATIO :25.8 %**



# Cohorte de l'Hôpital Gen Prov de Ref de Bukavu

[12:38, 17/01/2023] Pour Cancure, j'ai de bons résultats. Je suis entrain de monter un nouveau protocole. Je suis entrain de voir comment booster l'effet cytoréducteur.

Vu son effet puissant sur l'index mitotique, je pense qu'on pourra avoir une fonte rapide de la masse tumorale.

Prof Dr Guy Mulinganya, MD – HGPR-Bukavu

# Case Report: Patiente avec Carcinome du sein au Burkina Faso

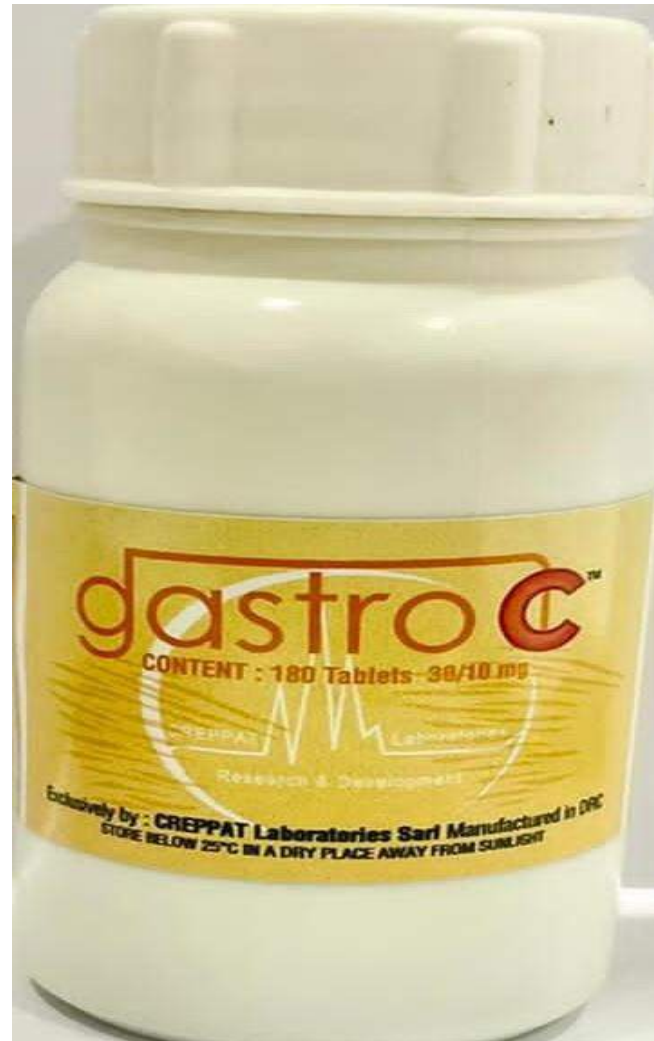
***24/12/2022 Bonjour a toutes. Hier on a fait une séance de chimio et les médecins en Oncologie m'ont convoque ce matin pour un entretien. J'en ai pas dormi. Ils m'ont annoncé que la maladie de AICHA a regressé selon les derniers résultats. Je crois que je ne pouvais rêver de meilleur cadeau pour Noel.***

***24/12/2022 Bonsoir. Voici les dernières nouvelles que j'ai reçu de la famille après ces quelques mois de traitement. Merci a vous pour ces résultats encourageants avec Cancure.***

***Je souhaiterais que vous m'envoyiez les publications scientifiques sur le produit car nous souhaitons étudier la possibilité de faire une demande d'autorisation du produit au Burkina Faso pour mener un Essai Clinique Observationnel chez les patients volontaires. Prof Dr Halidou Tinto, Burkina Faso Membre de la Commission mixte OMS-UA-CDC Afro***

# Gastro-C™

Anti-gastrite, anti-ulcère gastro-duodenal



## 12. Résistance et récurrence

Le traitement au Gastro-C™ consiste à prescrire et contrôler l'administration d'un traitement à long terme. Le médicament doit être administré à la dose thérapeutique et sans interruption. L'administration à dose sub-therapeutique pourrait induire le phénomène de résistance en cas d'infection à Helicobacter pylori.

À l'issue du traitement, est l'absence de l'évolution des paramètres cliniques et parasitologiques, sur la base desquels seul le médecin traitant peut décider de l'arrêt du traitement.

## 13. Conservation

Gastro-C™ 50/10 mg, comprimé, doit être conservé à la température de 20°C / 25°C, dans une atmosphère d'humidité relative relative < 5.

## 14. Présentation

Gastro-C™ 50/10 mg, comprimé, est conditionné dans un flacon en polyéthylène à faible densité (LDPE) blanc, opaque, muni d'un bouchon en polyéthylène à haute densité (HDPE), avec blanc opaque à fermeture, muni d'un joint de sécurité autocollant portant la mention "sealed for your security" et une étiquette verte fluorecente du logo CREPPAT en améthyste-bleu. Chaque flacon contient 180 comprimés de Gastro-C™ 50/10 mg.

Fabriqué par : CREPPAT Sarl Laboratoires, rd, 4A, Avenue des Poids Lourds, Limete, Kinshasa, RD-Congo



CREPPAT stands for **Research Centre for Phytotherapy, African Pharmacopoeia, and Pharmaceutical Technology**. Currently, the CREPPAT Laboratory has to its credit 2 approved drugs in the DRC with authorization to the market. Other molecules are still being studied in depth in the laboratory.

### Mission

To seek an African solution for the challenges facing the continent such as HIV/AIDS pandemic, cancers and other chronic deadly diseases.

### Vision

To deliver a range of products that are effective with limited side effects upon the principle of evidence-based medicine. To add value in Africa through a skills transfer process and transformation of crude raw materials into cost effective and standards respectful final products. Deliver an effective integrated disease management service.

### Human resources

CREPPAT is a multidisciplinary group of scientists (pharmacologists, pharmacists, physicians, and chemists), medical professionals, lawyers, and managers, all aware that African development on a leadership committed for a friendly mastership and implementation of science and technology knowledge and skills from endogenous African elites.

### Our publications

CREPPAT is a company registered in DR Congo  
RCCM # CD / KIN / RCCM / 14-B-5382  
Ident. Nat. # 01-822-N57330W NIF # A1008128X  
CREPPAT is also registered in South Africa  
Reg. # 2006/26071/07

### Scientific publications:

- US Patent # 5,607,673 (1997)
- Global Patent # PCT/US96/2769 (1997)
- South African Prov. Patent # 2016/06783

**Address in DRC and South Africa :** - 4A, Avenue des Poids Lourds, Kinshasa, RD-Congo  
- Gilead Farm, Meixes Hall, East London / 5201 Eastern Cape, Afrique du Sud (RSA)

**Contact:** Cell: +243 825210255 / +243 8196670300  
+ 27 45 7321 400 / + 27 43 973436200

### E-mail

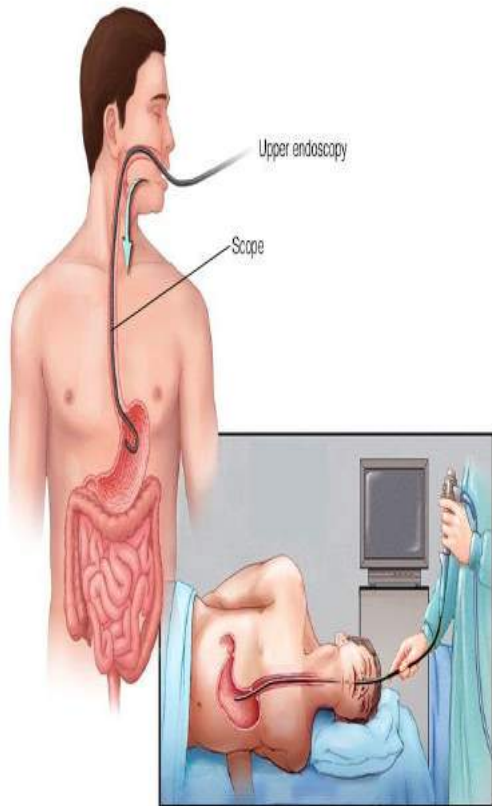
constant@creppatlab.com  
jean.yvghabiyek@creppatlab.com / bashengjob@creppatlab.com

# gastroC

## Médicament Anti-acide, anti- ulcéreux.



# Gastro-C : Anti-gastrite, anti-ulcère gastro-duodenal



[12:38, 11/05/2023] Prof MG: Pour Gastro-C, c'est impeccable

[12:38, 11/05/2023] Prof MG: Je n'ai que des bons résultats

[12:38, 11/05/2023] Prof MG: Éradication Helicobacter pylori en fin de traitement

[12:39, 11/05/2023] Prof MG: C'est juste le suivi de lésions gastriques par gastroscopie que je n'arrive pas encore à faire.

[12:39, 11/05/2023] Prof MG: Sinon c'est un succès total jusque

[12:39, 11/05/2023] Prof MG: Comme je vous avez dit, j'avais eu une chèvre de la part d'un notable de la ville qui a longtemps souffert de gastrite.

[13:43, 29/05/2023] Dr MSeI: Nous avons deux patients sous Gastro-C avec une très bonne évolution.



# Capy-C™ : Anti-alopécie et chute des phanères



**CREPPAT Laboratories**  
Research & Development

**CREPPAT Laboratories Sarl**  
4 A, Avenue des Poids Lourds  
18<sup>ème</sup> Rue Limeté  
Kinshasa, DR-Congo  
[www.creppatlab.com](http://www.creppatlab.com)

**Medico-cosmetic cream**  
**Let the Hair Grow up Anew**

**Capy-C™**

**Content :**

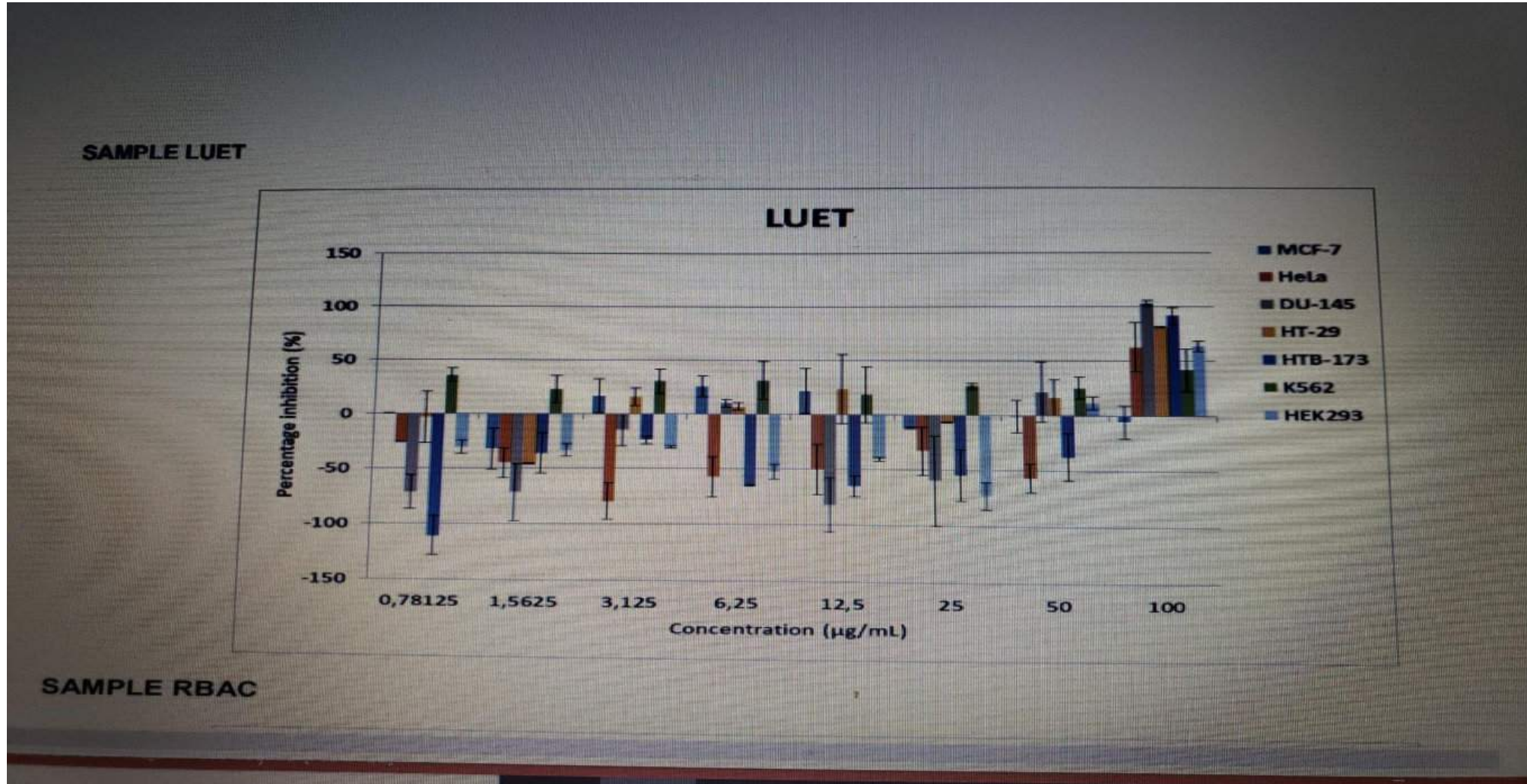
- Persea sp Extract : 10ml
- LEUB Extract : 3mg
- Cetylic Ungent : Make up to required volume of 90ml

**Batch number :**  
**Mfg date :**  
**Exp date :**

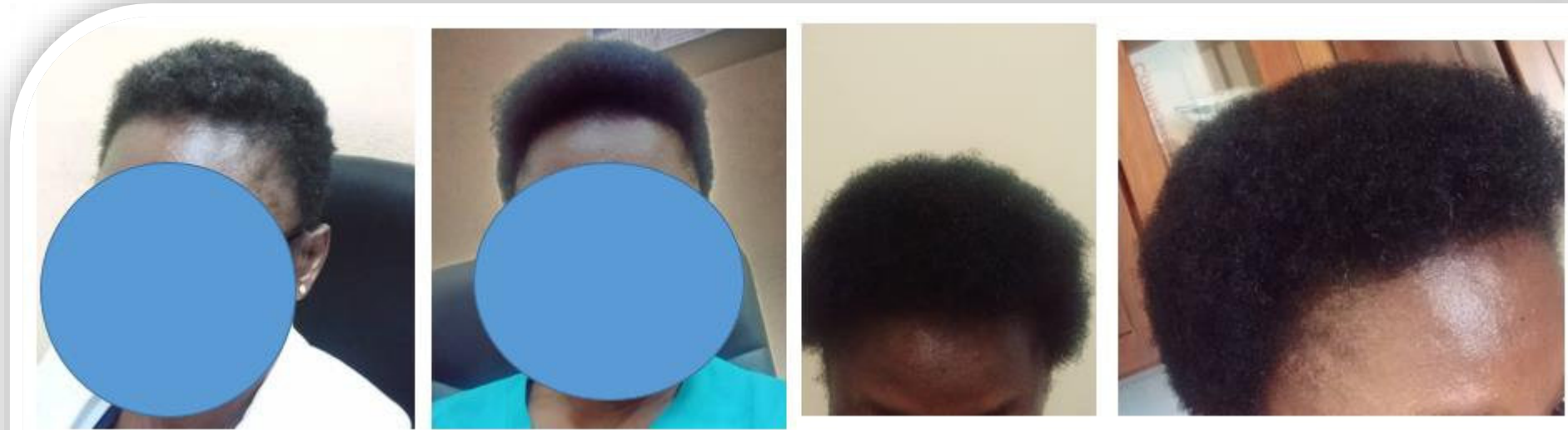
**Contact :**

- [constbash@creppatlab.com](mailto:constbash@creppatlab.com)
- [sales@creppatlab.com](mailto:sales@creppatlab.com)
- [info@creppatlab.com](mailto:info@creppatlab.com)
- +243 825 210 255 - 811 505 404

# Capy-C™ : In vitro trials



# Capy-C™ : Anti-alopecie et chute des phanères



**Je n'avais plus de cheveux, surtout sur la partie frontale et temporale. Tout était tombé par les tresses, et surtout par les mèches dont on se charge la tête. Mais, depuis que j'utilise Capy C™, les cheveux repoussent, et sur toute l'étendue de la tête. Ils sont devenus bien souples, luisants, plus longs et faciles à démêler. DDM**



# Capy-C™ : Anti-alopécie et chute des phanères



Janvier 2023 avant capv C



Février avec Capy C



Juillet



Ma chevelure présentait comme un vide, un cratère au niveau occipital du crâne. Depuis 6 mois que j'utilise Capy-C™, le cratère s'est refermé de lui-même. Les cheveux poussent maintenant de manière uniforme sur la tête. Ils sont devenus luisants, souples, plus longs et faciles à démêler et difficiles à tresser car ils glissent d'entre les mains des tresseuses. **MTM.**

Activate Windows  
Go to Settings to

# Capy-C™ : Anti-alopécie et chute des phanères



**J'avais des chutes de cheveux, sur les régions frontale et temporale. Tout était tombé du fait du port régulier des perruques. Mais, depuis que j'utilise Capy C™, les cheveux repoussent, et sur toute l'étendue de la tête. Ils sont devenus bien souples, luisants, et ne s'effilochent plus et ne sont plus cassants. PSH**



# Capy-C™ : Anti-alopécie et chute des phanères



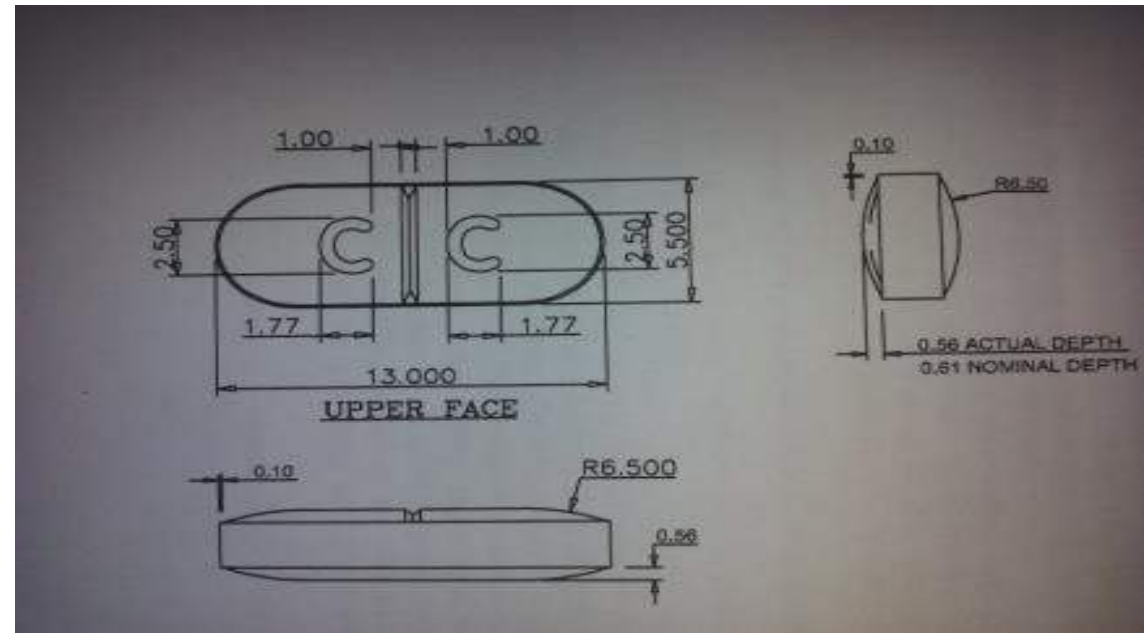
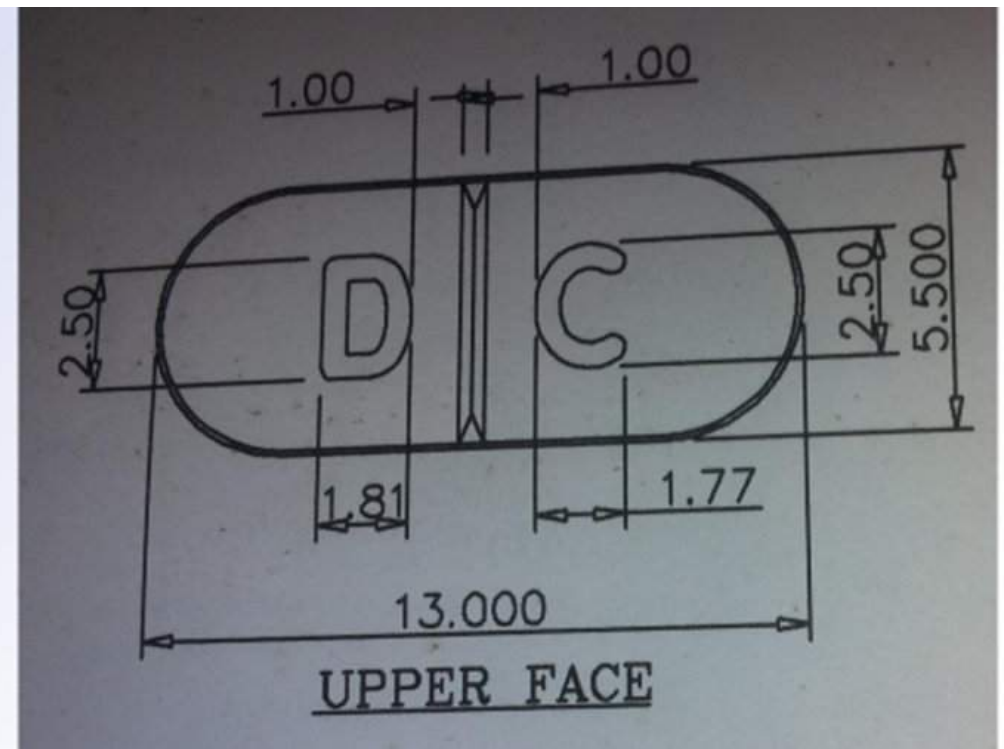
19/02/2024



Cancure Presentation at KMRH May 2013

131

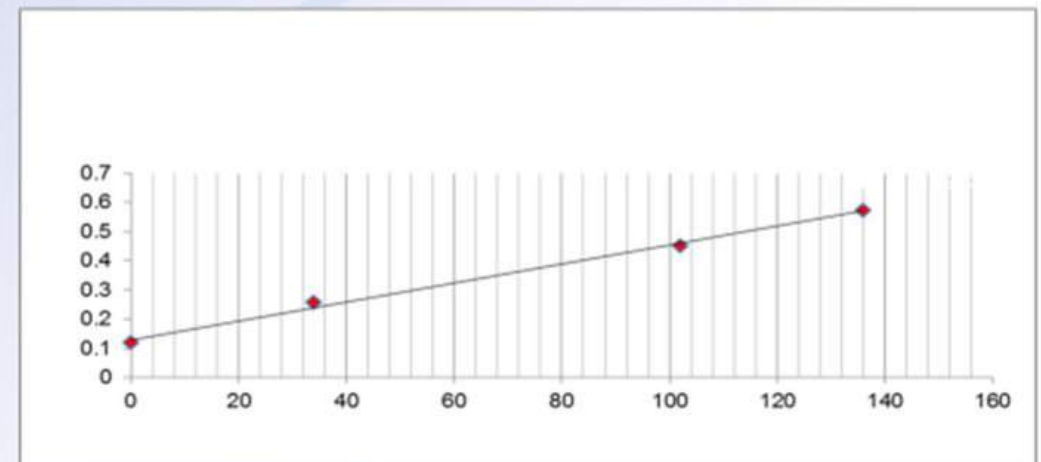
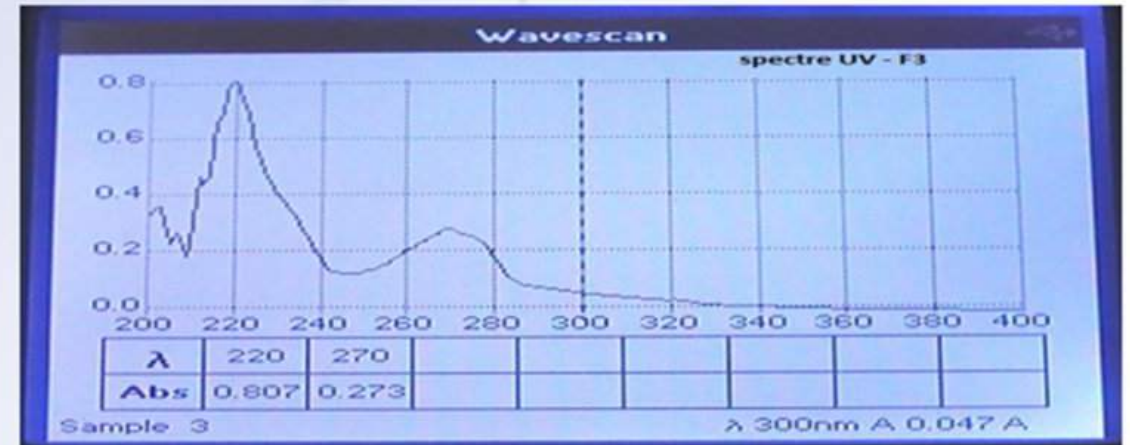
# Product Stabilisation & Standardization





# Product Standardization

Spectrophotometric analysis of the principles





# United States Patent [19]

Bashengezi

US005607673A

[11] Patent Number: 5,607,673

[45] Date of Patent: Mar. 4, 1997

[54] PURIFIED EXTRACT OF UVARIA  
BREVISTIPITATA AND A PROCESS FOR  
OBTAINING THE PURIFIED EXTRACT  
THEREFOR

[75]. Inventor: Constantin M. Bashengezi, Bukavivh,  
Zaire

[73] Assignee: C.S.S.A.H.A., Inc., Chicago, Ill.

[21] Appl. No.: 425,747

[22] Filed: Apr. 20, 1995

[51] Int. Cl.<sup>6</sup> ..... A61K 35/78

[52] U.S. CL ..... 424/195.1; 514/885; 514/894;  
514/934

[58] Field of Search ..... 424/195.1; 514/885,  
514/894, 934

## [56] References Cited

### U.S. PATENT DOCUMENTS

|           |        |                       |         |
|-----------|--------|-----------------------|---------|
| 4,721,727 | 1/1988 | Kolajczak et al. .... | 514/473 |
| 4,855,319 | 8/1989 | Kolajczak et al. .... | 514/473 |
| 5,229,419 | 7/1993 | Win et al. ....       | 514/473 |

## OTHER PUBLICATIONS

Jolad, et al, J. Org. Chem. 47:3151-3153, 1982.

Cole, et al., J. Org. Chem. 41:1852-1855, 1976.

Padmaja, et al., J. Ethnopharmacol. 40: 181-186, 1993.

Lumonadio, et al., J. Ethnopharmacol. 31:59-65, 1991.

*Primary Examiner*—John W. Rollins

## [57] ABSTRACT

In HIV infected individuals, certain clinical and biological markers are used to assess the progression or regression of the disease. From the plant, *Uvaria bevisitpitata* of the Annonaceae family, a substantially pure extract was derived. This extract was administered to 268 HIV infected patients in a clinical trail in Zaire Africa and dramatic results were obtained. The extract was also submitted to a laboratory for in vitro analysis. when tested against the HIV reverse transcriptase enzyme, the extract tested 96.7% active. In further laboratory analysis, against HIV-<sub>11B</sub>, it demonstrated efficacy at doses that showed no cytotoxic effects.

14 Claims, 1 Drawing Sheet



universitaires en Belgique, pour leur expertise professionnelle et la qualité de leurs recherches. C'est mon vif espoir que la coopération entre les chercheurs congolais et les centres universitaires et scientifiques belges puisse continuer dans les meilleurs des circonstances.

La Belgique a fait de la lutte contre le VIH/SIDA une des priorités de sa politique de développement. Nous ne pouvons accepter que la propagation rapide de cette épidémie annihile les progrès effectués en matière de qualité de vie, de soins de santé et de scolarisation.

Or, le désespoir n'est pas justifié. Notamment, l'intensification de la recherche scientifique constitue un des objectifs-clés d'une Stratégie Globale contre le SIDA. Votre rapport sur les premiers résultats des recherches de l'antirétroviral « DOUBASE Ctm » semble justifier ce sentiment plutôt optimiste.

Je vous sais gré de vous être adressé à moi sur cette importante question.

Veillez agréer, Monsieur, l'assurance de ma considération distinguée.







The image shows a presentation slide with a textured, metallic-looking background. At the top, there is a dark blue toolbar with various icons for navigation and editing. The main text is centered and reads "REPUBLIC OF SOUTH AFRICA" in a large, bold, black font, followed by "PATENT APPLICATION" in a slightly smaller, black font. In the bottom right corner, there is some faint, partially visible text that appears to say "Active" and "Access".

# REPUBLIC OF SOUTH AFRICA

## PATENT APPLICATION



**ADAMS & ADAMS**  
PRETORIA

REPUBLIC OF SOUTH AFRICA  
PATENTS ACT, 1978

**DECLARATION AND POWER OF ATTORNEY**  
(Section 30 - Regulation 8, 22(i)(c) and 33)

|                       |    |  |
|-----------------------|----|--|
| PATENT APPLICATION NO |    |  |
| 21                    | 01 |  |

A&amp;A Ref:

**P71171ZP05 LVDW/SDW**

|              |  |
|--------------|--|
| LODGING DATE |  |
| 22           |  |

|                              |   |
|------------------------------|---|
| FULL NAME(S) OF APPLICANT(S) |   |
| 71                           | <b>CREPPAT LABORATORIES PROPRIETARY LIMITED</b> |

|                             |   |
|-----------------------------|---|
| FULL NAME(S) OF INVENTOR(S) |   |
| 72                          | <b>BASHENGEZI, Constantin Mihigo Ighanz Kulimushi</b> |

| EARLIEST PRIORITY CLAIMED | COUNTRY | NUMBER | DATE |
|---------------------------|---------|--------|------|
|                           | 33      | XXX    | 31   |
|                           |         | XXX    | 32   |
|                           |         |        | XXX  |

NOTE: The country must be indicated by its International Abbreviation - see schedule 4 of the Regulations

|                    |   |
|--------------------|---|
| TITLE OF INVENTION |   |
| 54                 | <b>EXTRACTS OF SACCHARIDES FROM UVARIA BREVISTIPITATA DE WILD</b> |





Ministère de la Santé  
Secrétariat Général  
Direction de la Pharmacie  
et du Médicament  
**Division Gestion du Médicament**



## **AUTORISATION DE MISE SUR LE MARCHÉ DES MÉDICAMENTS (5 ans)**

N° MS. 1253/10/.05/047/.0.1920./2022

Le Ministère de la Santé représenté par la Direction de la Pharmacie et du Médicament, autorise en République Démocratique du Congo la mise sur le marché du médicament dont détails ci-dessous :

### **A) Dénomination, forme et conditionnement du produit :**

Cancure™ 30mg ; comprimés ; boîte 180





Ministère de la Santé  
Secrétariat Général  
Direction de la Pharmacie  
et du Médicament  
**Division Gestion du Médicament**

**AUTORISATION DE MISE SUR LE MARCHÉ DES MÉDICAMENTS  
(5 ans)**

N° MS. 1253/10/DS/0.912.1.019.88/2012

Le Ministère de la Santé représenté par la Direction de la Pharmacie et du Médicament, autorise en République Démocratique du Congo la mise sur le marché du médicament dont détails ci-dessous :

**A) Dénomination, forme et conditionnement du produit :**

Doubase C™ 30mg/6mg ; comprimés ; boîte 45





### Objectifs secondaires

- 1. Appuyer les entreprises existantes et les nouvelles entreprises de l'Union à travers le projet.
- 2. Appuyer les entreprises existantes et les nouvelles entreprises de l'Union à travers le projet.
- 3. Appuyer les entreprises existantes et les nouvelles entreprises de l'Union à travers le projet.

# Institutions & Structures de santé en collaboration

- Faculté de Médecine, Université de Kinshasa
- Cliniques Universitaires de Kinshasa;
- LOMO Médical / Prof Longo-Mbenza, Limete, Kinshasa;
- Dr Gén Nzuka Henri / Centre Médical CEBCO-Bandalungwa, Kinshasa;
- Dr Christian Tshiambu, Hôpital Militaire Central, Kinshasa
- Corps de Santé Militaire / Hôpital Militaire Central, Kinshasa
- Clinique Hello Dr / Dr Michael Selemani, Kinshasa
- Clinique Fondation Bomoko / Dr Jacques Bolangi, Kinshasa
- Centre Médical de la DGDA, Kinshasa
- Centre Médical de la DGRAD, Kinshasa
- Centre Médical de la CNSS, Kinshasa
- Centre Médical de l'OCC, Kinshasa
- Hôpital Général Provincial de Réf. de Bukavu / Prof Guy Mulinganya
- Dr Elie Bisimwa / Bureau Diocésain des Œuvres Médicales (BDOM) – Nord-Kivu, Goma
- Dr Francis Muamba / Centre Médical Rehoboth – Lubumbashi
- Centre hospitalier Espérance / Dr Anselme Lututomisa, Matadi
- Dr Rose Longo – Hôpital de Lukula, Kongo Central

# Challenges

- Funding further randomized, multicenter clinical trials;
- Large scale production of the medicine to meet global needs;
- Large scale production of crude raw materials through domestication of plant species and farming;
- Further chemical studies for isolating the remaining active compounds and investigation of their chemical synthesis routes for cost effective production purpose;
- Protection of intellectual property rights and safety.



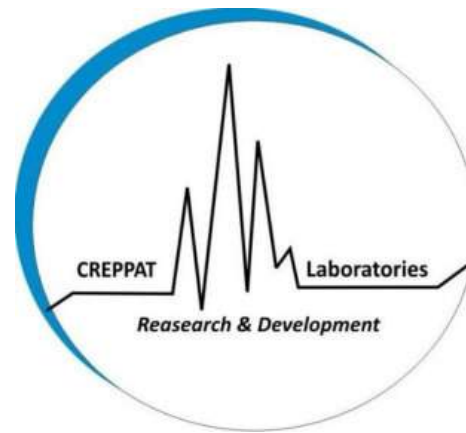
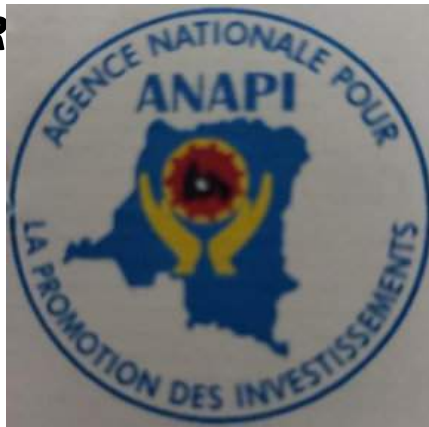
# ACKNOWLEDGMENTS

## THANK YOU

- ***CREPPAT LAB Sarl (RDC)***
- ***CREPPAT LAB (Pty) Ltd (RSA)***
- ***CSSAHA, Inc (USA)***
- ***Protechnik Laboratories / ARMSCOR/SAMHS/SANDF (RSA)***
- ***University of Pretoria (RSA)***
- ***Walter Sisulu University (RSA)***
- ***University of Kwa-Zulu Natal (RSA)***
- ***North West University (RSA)***
- ***Faculté de Médecine de l'UNIKIN, Kinshasa***
- ***Agence Nationale pour la Promotion des Investissements (ANAPI)***
- ***Fonds de Promotion de l'Industrie (FPI)***



la R





**Bienvenue à CREPPAT Laboratories Sarl**

