



Comparative analysis of the antidiabetic effect of two extracts of the leafy stem of *Chromolaena odorata* (L.) R.M. King and H. Robinson (Asteraceae) on glycemic regulation in rabbits

Koffi Stéphane DOH¹, Kwassi Dauphner Serges Sylvanus AMANI¹, Rostand M'Baï OFFOUMOU¹, N'guessan François KOUAME¹, Emma Ablan AKE-ASSI^{2,3}, Koffi N'GUESSAN²

¹UFR of Science and Technology, Department of Biosciences, Laboratory of Plant Biology and Earth Sciences, Alassane OUATTARA University of Bouaké, Côte d'Ivoire

²UFR of Biosciences, Laboratory of Natural Environments and Biodiversity, Félix HOUPHOUËT-BOIGNY University of Abidjan, Côte d'Ivoire

³National Floristics Center, Félix HOUPHOUËT-BOIGNY University of Abidjan, Côte d'Ivoire

Corresponding author: Koffi Stéphane DOH, contact: (+225) 0709110852/0103340326, BP V18 Bouaké 01, Email: dohstekoffi@gmail.com

Received: 20th August 2026; Revised: 5th September 2026; Accepted: 13th September 2026, Published: 30 September 2026.

Abstract

In Côte d'Ivoire, diabetes is one of the chronic diseases causing significant harm, with a prevalence ranging from 4.2% to 10.2% since 2012. However, there are few satisfactory therapies. An alternative based on plant resources with pharmacological properties is therefore essential. The present study aims to promote the use of extracts from the leafy stem of *Chromolaena odorata* in the treatment of this condition in the Gbêkê region. Thus, the hypoglycemic effect was demonstrated orally in rabbits rendered hyperglycemic, in comparison with a control group and a reference group treated with glibenclamide. A total of thirty-six (36) rabbits divided into 8 groups of 3 were used during six hours of experimentation. The results demonstrated the hypoglycemic properties of the extracts (macerate and

decoction) of the species at concentrations of 9000 mg/kg (macerate) and 45000 mg/kg (decoction) of body weight (b.w.) in treated rabbits. The results suggest that the two extracts exert a significant antihyperglycemic effect on the blood glucose levels of hyperglycemic rabbits. They would therefore possess “antidiabetic activity” and could be recommended as effective remedies in the treatment of diabetes.

Keywords: Chronic diseases, Pharmacological properties, Herbal medicine, Hypoglycemic

Introduction

Worldwide, interest in traditional medicine continues to grow. According to the World Health Organization (WHO, 2013), it comprises the body of knowledge and techniques, whether explicable or not, used to diagnose, prevent, or eradicate physical, mental, or social diseases. It may rely exclusively on traditional experiences and observations transmitted from generation to generation, either orally or in writing (Kaboré, 2007). The traditional use of human medicine remains very active in African societies. Indeed, approximately 80% of individuals first turn to traditional medicine and traditional pharmacopoeia remedies to treat their health problems (Committee Rapport, 1998). Traditional medicine makes use of a large number of plants in the preparation of medicinal remedies for the treatment of human diseases. Plants have therefore proved indispensable to the existence of all living beings, as they provide all the elements necessary for their survival. In this practice, various parts of these plant species are used to prepare remedies. Thus, these plants have proved essential to the survival of all living organisms, providing all the components required for their perpetuation. Humans use plants in various fields, including traditional medicine, to ensure their daily well-being. Traditional medicine is therefore regarded as the “ancestor” of modern medicine (Nana, 2009). Although traditional practitioners have accumulated many years of experience, the use of plants remains risky, not only because of

their potential toxicity but also with regard to the dose to be administered. However, it is clear that traditional medicine offers undeniable advantages that need to be optimized so that it can become a pillar of African medicine (Nana, 2009). Furthermore, in 2012, according to the National Programme for the Control of Metabolic Diseases (PCMD), prevalence ranged from 4.2% to 10.2%; and the number of deaths attributed to diabetes was estimated at nearly one and a half million worldwide. This makes the disease one of the 15 most deadly diseases in the world (Tenenbaum et al., 2018). In this context, we conducted research on diabetes in Côte d’Ivoire based on the leafy stem of *Chromolaena odorata* (L.), a plant considered by some traditional healers to have antidiabetic properties. The main objective of this research is to examine the hypoglycemic effect of the leafy stem of this plant on rabbit blood glucose through scientific experiments, using aqueous macerate and decoction.

I – Study material

Pharmacological study material

Plant material

It consisted of leafy stems (**Figure 1**) of *Chromolaena odorata* (L.) (Asteraceae) collected in April 2026 in the Municipality of Sakassou, a town in the Gbêkê region.



Figure 1 : leafy stems of *Chromolaena odorata* (L.) (Asteraceae)

Animal material

Male and female rabbits from a private farm in the city of Bouaké were used. They were taken to the animal facility of the UFR of Medical Sciences of Alassane OUATTARA University in Bouaké, Côte d'Ivoire. They were preferred to rats because of their ease and convenience of handling.

Technical equipment

It consisted of an automatic spectrophotometer (HITACHI 902), an electronic balance, a rotary evaporator, an incubation cannula, absorbent cotton, test tubes, a spatula, tubes without EDTA, tubes containing EDTA, and blood collection needles.

Chemicals

The chemicals used included glucose, glibenclamide (Daonil 5 mg tablets), and distilled water (solvent).

II – Study Methods

1 – Botanical and ethnopharmacological study method

Survey

Chromolaena odorata (L.) (Asteraceae) was suggested to us by the phytotherapist Yao Kouassi

at the general hospital of Sakassou. Among four plants used to treat his patients, he suggested the one that rapidly lowered hyperglycemia according to the expectations of good health.

2 – Pharmacological study method

Preparation of crude extracts

The leafy stems of *Chromolaena odorata* (L.) (1000 g) were collected, dried in a ventilated environment, and then pulverized. Two hundred (200) grams of the pulverized plant material were introduced into 500 mL of distilled water. The mixture was boiled for 30 min. It was successively filtered twice through absorbent cotton and then through 3 mm Whatman paper. The volume of the filtrate obtained was concentrated in an oven at 60°C. The total extract (aqueous decoction) was kept in sterile glass jars, tightly closed and refrigerated. The same quantity of plant material was macerated in distilled water for 3 hours at room temperature. The resulting extract (aqueous macerate) was stored under the same conditions as the previous one to obtain a dry extract, which was then refrigerated.

Induction of hyperglycemia

This procedure makes it possible to induce hyperglycemia in the experimental animal. This is achieved by administering a single high dose of a glucose solution to the fasting animal by gavage.

Thus, the rabbits were fasted with free access to water for 24 hours before hyperglycemia was induced. The glucose load was administered orally to the animals 1 h (at time T_0) after gavage with glibenclamide, distilled water, and the various aqueous extracts (Koné, 2004). Glucose (120 mg/kg) was administered orally to the animals using an intubation cannula with a slightly curved tip. The glucose was administered at a ratio of 0.6 mL of solution per 20 g of body weight. Except for rabbits in groups 1, 10, 11, and 12, all animals received a glucose load after baseline blood glucose had been determined (at T_0). Thereafter, blood glucose was measured every 120 minutes to assess its evolution.

Housing and allocation of animals into groups

To conduct this pharmacological study, thirty-six (36) rabbits were used. There were equal numbers of males and females. They were 4 to 8 weeks old and weighed between 1500 and 2000 grams (g). The rabbits were housed in ventilated metal cages and acclimatized to the animal facility conditions for one week before treatment. Pellets from IVOGRAIN® and drinking water supplied by SODECI were used to feed them. They were divided into 12 groups of 3 rabbits with homogeneous body weights as follows:

- Group 1: Fasting control rabbits receiving distilled water
- Group 2: Hyperglycemic control rabbits treated with glucose 120 mg/kg
- Group 3: Hyperglycemic rabbits treated with glibenclamide 6 mg/kg
- Group 4: Hyperglycemic rabbits treated with macerate at 9000 mg/kg
- Group 5: Hyperglycemic rabbits treated with macerate at 900 mg/kg
- Group 6: Hyperglycemic rabbits treated with macerate at 90 mg/kg
- Group 7: Hyperglycemic rabbits treated with decoction at 45000 mg/kg
- Group 8: Hyperglycemic rabbits treated with decoction at 4500 mg/kg
- Group 9: Hyperglycemic rabbits treated with decoction at 450 mg/kg
- Group 10: Normoglycemic rabbits receiving glibenclamide at 6 mg/kg

- Group 11: Normoglycemic rabbits receiving macerate at 9000 mg/kg
- Group 12: Normoglycemic rabbits receiving decoction at 45000 mg/kg

Treatment of rabbits with glibenclamide and the herbal medicine

The hyperglycemic rabbits in group 3 were treated with glibenclamide at 6 mg/kg. The hyperglycemic rabbits in groups 4, 5, and 6 were treated with the herbal medicine in macerate form at different doses. The hyperglycemic rabbits in groups 7, 8, and 9 were treated with the herbal medicine in decoction form at different doses. The normoglycemic rabbits in group 10 were treated with glibenclamide (6 mg/kg). The normoglycemic rabbits in group 11 were treated with macerate at 9000 mg/kg. The normoglycemic rabbits in group 12 were treated with decoction at 45000 mg/kg. To imitate the traditional healer's practice, the rabbits received 0.6 mL of glibenclamide or herbal medicine orally per 20 g of body weight.

Blood sampling from the animals

The rabbit was placed in a restraint cage. Blood sampling was performed using a needle at the level of the ear. The blood rose by capillarity into a collection tube (gray tube) containing an anticoagulant (sodium oxalate and sodium fluoride). The anticoagulant serves to stabilize the glycolysis process in the blood.

Determination of blood glucose levels in the animals

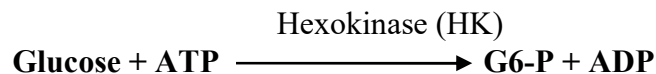
Evaluation of the activity of *Chromolaena odorata* (L.) on blood glucose consisted of determining its hypoglycemic, normoglycemic, hyperglycemic effect, or lack of activity on rabbit blood glucose.

Principle of the determination

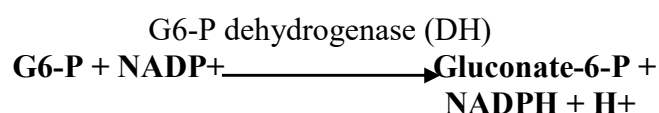
Blood glucose was determined according to the enzymatic method used by Djédjé (2002), the principle of which is as follows:

- Reagent R1 (buffer/ATP/NADPH) was added to the sample

- Reagent R2 (HK/G-6-PDH) was added to the preceding solution, resulting in the following reactions:



Glucose is phosphorylated into glucose-6-phosphate by the action of ATP and hexokinase.



Glucose-6-phosphate is oxidized into gluconate-6-phosphate by glucose-6-phosphate dehydrogenase in the presence of NADP. Other carbohydrates are not oxidized. The amount of NADPH formed is directly proportional to the glucose concentration and is measured photometrically.

Protocol

The collection tubes bearing the rabbits' identification were transported to the medical analysis laboratory of the Community-Based Urban Health Facility of Yopougon-Ouassakara-Attie (Abidjan, Côte d'Ivoire) for blood glucose determination. These samples were kept in a cooler to facilitate transport to the laboratory before being centrifuged at 3000 rpm for 3 minutes. After centrifugation, the supernatant, which was the plasma, was collected for blood glucose analysis. This was determined by the enzymatic method. The reading was performed using an automatic spectrophotometer.

3. Statistical analysis

The data relating to the blood glucose study were subjected to repeated-measures analysis of variance, $\alpha = 5\%$, and expressed as mean $\pm$ standard deviation in the tables presented. Mean comparisons were performed using the Newman-Keuls test ($\alpha = 5\%$). The software used to process

the data was STATISTICA version 6.05 (WINDOWS XP). The analysis of variance was considered significant when the probability level (p) was lower than the theoretical probability level at $\alpha = 5\%$, i.e. $p < 0.05$. If $p > 0.05$, the variance was not significant.

III – Results

3-1 – Baseline blood glucose and effects of glucose 120 mg/kg on rabbit blood glucose, and effects of glibenclamide on hyperglycemic rabbits

Blood glucose in rabbits not induced with glucose did not vary significantly ($p > 0.05$) throughout the study period (6 hours). It remained at $0.94 \pm 0.04 \text{ g l}^{-1}$ at 4 hours (**Figure 2**). One hour after glucose administration, blood glucose in untreated control rabbits increased significantly and reached $1.24 \pm 0.02 \text{ g l}^{-1}$ ($p < 0.05$). The glucose load reached $31.9 \pm 0.03\%$ of the baseline load. At the end of the experiment, blood glucose in induced rabbits in group 2 did not vary significantly ($p > 0.05$). This result indicates that the body restored normal blood glucose after at least 4 hours of experimentation (**Figure 2**). Glibenclamide (reference substance), at a dose of 6 mg/kg, also caused a decrease in blood glucose in treated rabbits. This hypoglycemia was significant ($p < 0.001$) 60 min after administration and increased throughout the experimental period. The reduction in blood glucose was $0.72 \pm 0.02 \text{ g l}^{-1}$, one hour after administration to hyperglycemic rabbits in group 3. After 6 hours, a decrease of $41.93 \pm 0.02\%$ was observed.

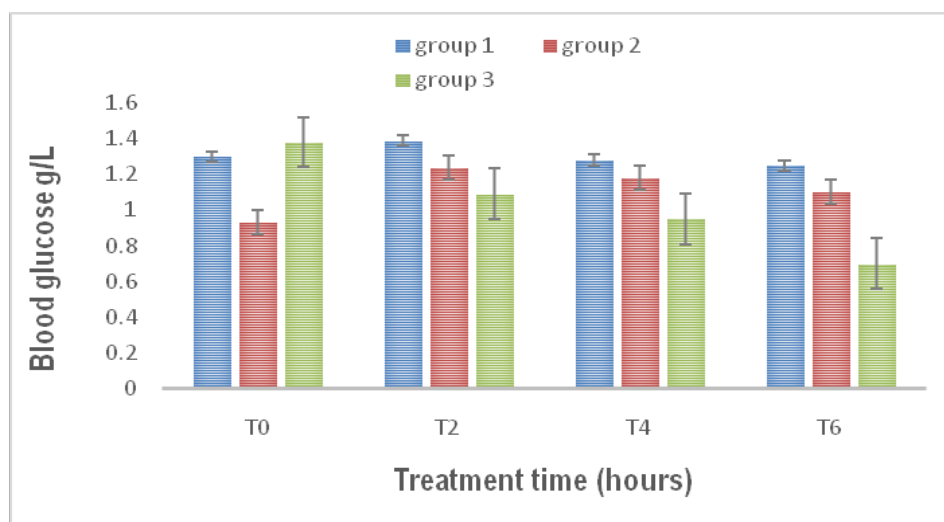


Figure 2: Dose-response effects of glucose 120 mg/kg on blood glucose in normoglycemic and hyperglycemic rabbits, Mean $\pm$ SEM, $n = 3$, $P < 0.05$. Group 1: normoglycemic control rabbits receiving distilled water. Group 2: hyperglycemic control rabbits induced with glucose (120 mg/kg). Group 3: hyperglycemic rabbits treated with glibenclamide (6 mg/kg).

Evolution of blood glucose in hyperglycemic rabbits treated with extracts (macerate and decoction) of the herbal medicine

Mean blood glucose (g/L) of hyperglycemic rabbits treated with different doses of macerate over time

Blood glucose decreased both in the group treated with glibenclamide (group 3) and in the groups treated with the different doses of macerate. Macerates at doses of 9000, 900, and 90 mg/kg caused a significant decrease in blood glucose at $\alpha < 5\%$. This very significant decrease in blood glucose was from 1.22 g g l^{-1} to 0.89 g/L at 9000 mg/kg ($p < 0.05$). After 6 hours of experimentation, this decrease was estimated at approximately 36.09%. Analysis of **Figure 3** shows that the 900 mg/kg macerate also caused rabbit blood glucose to fall from 1.21 g g l^{-1} to 1 g g l^{-1} , i.e. approximately 4.13% after 6 hours of

experimentation. The same observations were not obtained with 90 mg/kg.

Mean blood glucose (g/L) of hyperglycemic rabbits treated with decoctions over time

Blood glucose decreased significantly in rabbits in groups 7, 8, and 9 treated with decoctions (**Figure 4**). These groups received doses of 45000, 4500, and 450 mg/kg. Indeed, administration of the herbal medicine to the animals showed a remarkable decrease in blood glucose, from 1.15 g l^{-1} to 0.85 g l^{-1} at the 45000 mg/kg dose, a decrease of approximately 35.48% 6 hours later. The herbal medicine at 4500 mg/kg reduced blood glucose from 1.3 g l^{-1} to 1 g l^{-1} after 6 hours of experimentation. From the peak, we observed a decrease of 23.43%. Blood glucose in rabbits in group 9, treated with the herbal medicine at 450 mg/kg, fell sharply from 1.29 to 1.16 mg ml^{-1} ; this decrease was not significant for the decoction at 450 mg/kg at $\alpha = 0.05$.

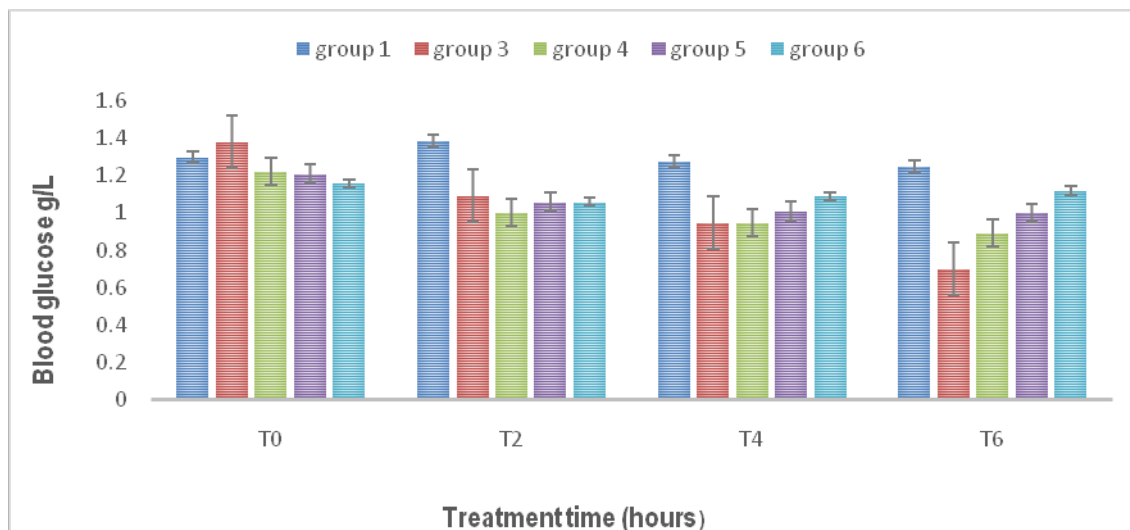


Figure 3: Histogram of plasma blood glucose as a function of time and the products administered (Macerate), Mean $\pm$ SEM, $n = 3$, $P < 0.05$. Group 4: *hyperglycemic rabbits* treated with macerate at 9000 mg/kg. Group 5: hyperglycemic rabbits treated with macerate at 900 mg/kg. Group 6: hyperglycemic rabbits treated with macerate at 90 mg/kg.

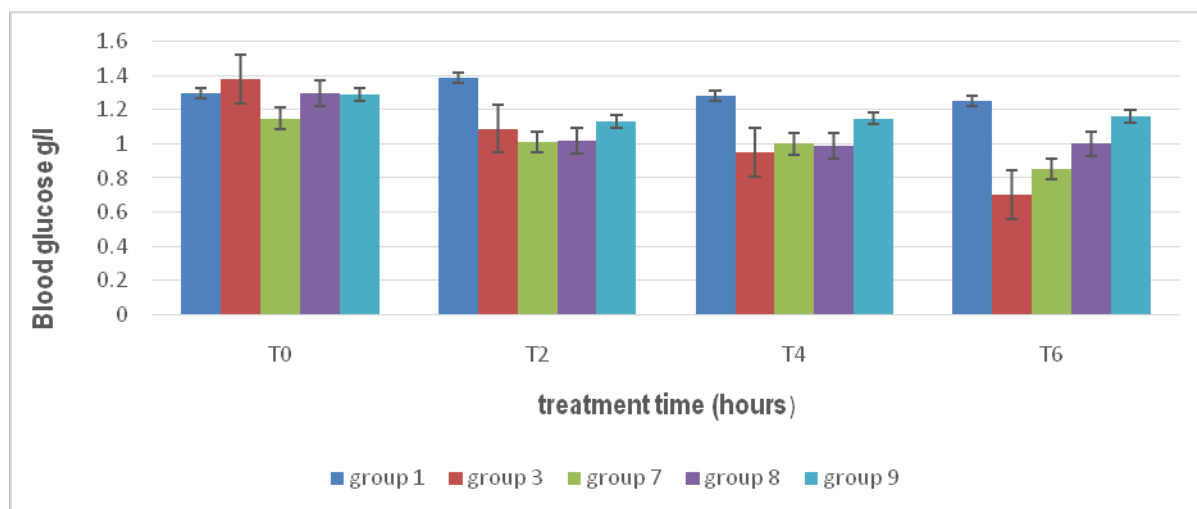


Figure 4: Histogram of plasma blood glucose as a function of time and the products administered (Decoction); Mean $\pm$ SEM, $n = 3$, $P < 0.05$. Group 7: *hyperglycemic rabbits* treated with decoction at 45000 mg/kg. Group 8: hyperglycemic rabbits treated with decoction at 4500 mg/kg. Group 9: hyperglycemic rabbits treated with decoction at 450 mg/kg.

2 – Evolution of baseline blood glucose with effects of herbal medicines at the maximum dose

Study of normoglycemia with macerate

The macerate was used at the dose producing the best activity, 9000 mg/kg (**Figure 5**).

Blood glucose decreased significantly at T_2 , T_4 , and T_6 both with glibenclamide and with the macerate. This decrease in blood glucose was significant with macerate and glibenclamide compared with group 1 (distilled water). Hypoglycemic activity was observed with the macerate compared with the control group treated with water; however, its influence on blood glucose was practically similar to that of the reference product (glibenclamide).

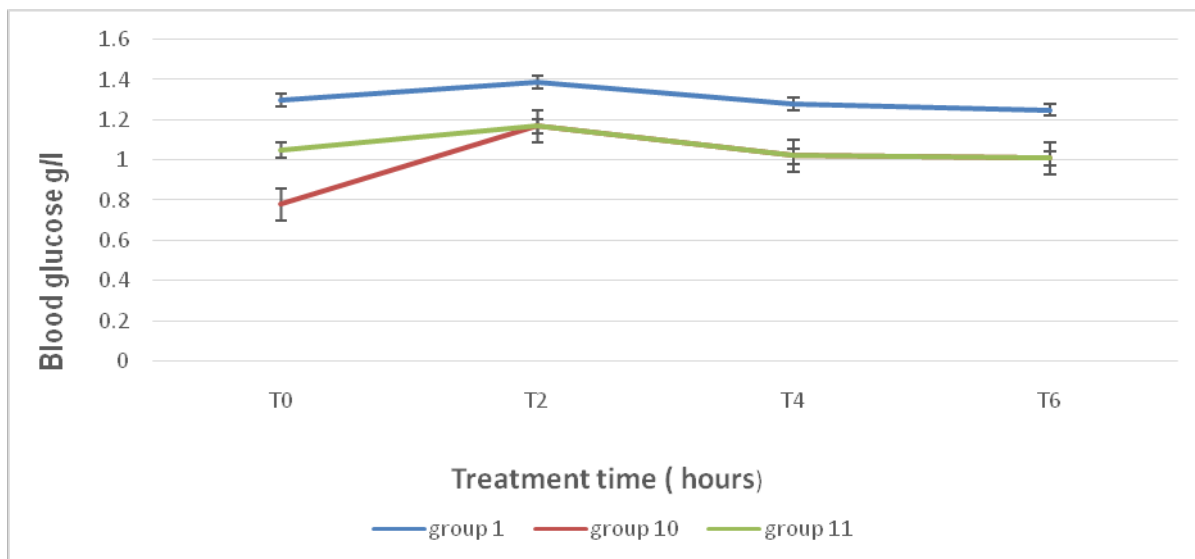


Figure 5: Evolution of normoglycemia after administration of macerate at a dose of 9000 mg/kg.
*: significant value at $p < 0.05$

Study of normoglycemia with decoction

The decoction was used at the dose producing the best activity, 45000 mg/kg (**Figure 6**). A notable decrease in blood glucose was observed at T₂, T₄, T₆ both with glibenclamide and with the decoction. The decrease in blood glucose was

significant with glibenclamide and decoction compared with group 1 (distilled water). Hypoglycemic activity was observed with the decoction compared with the control group (group 1), but its influence on blood glucose was much greater than that of the reference product (glibenclamide).

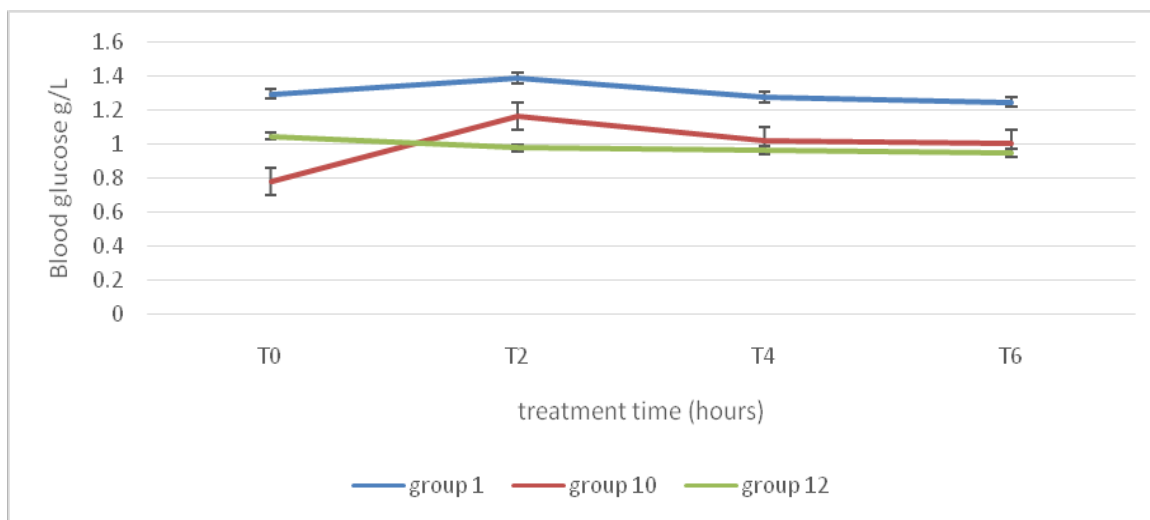


Figure 6: Evolution of normoglycemia after administration of decoction at a dose of 45000 mg/kg.
*: significant value at $p < 0.05$

IV. Discussion

Baseline blood glucose of rabbits (T0)

Before treatment, all animals had a baseline blood glucose level of $0.95 \text{ g l}^{-1} \pm 0.04$. The baseline blood glucose of rabbits fasted overnight is close to $1.11 \pm 0.04 \text{ g l}^{-1}$. This value was also reported by N'Guessan et al. (2011a) in the study of the effect of *Boerhavia diffusa* on rabbit blood glucose. Similar baseline blood glucose values have been reported in various other studies (N'Guessan et al., 2011b; N'Guessan et al., 2013; Doh et al., 2013; Doh, 2015).

Evolution of blood glucose after the glucose load (T2)

The glucose load induced a significant blood glucose level of 1.24 g l^{-1} in rabbits, indicative of a hyperglycemic state. This confirms the ability of glucose to induce hyperglycemia. At the end of the experiment, the blood glucose value (1.18 g l^{-1}) indicates that the hyperglycemia is transient: the body is indeed capable of restoring normal blood glucose after a glucose load. The effect of glucose in causing significant hyperglycemia ($p < 0.05$) in rabbits has also been reported in other studies (N'Guessan et al., 2011b; Hobou, 2013). This result, in untreated induced control rabbits, differs from what Bosede and Oyelola (2013) reported.

Effects of glibenclamide on hyperglycemic rabbits

Administration of glibenclamide to hyperglycemic rabbits showed a significant decrease in blood glucose level of 41.80%. Glibenclamide exerts a hypoglycemic effect, consistent with the results of Gharra et al. (1999). Administration of glibenclamide corrected the hyperglycemia induced by the glucose load. Binding of glibenclamide to its membrane receptor promotes glucose entry into the cell, thereby preventing glucose accumulation in the blood, which explains the observed reduction in hyperglycemia. However, administration of glibenclamide did not restore normal blood

glucose levels after 6 hours of experimentation, which differs from the findings reported by Bosede and Oyelola (2013).

Study of normoglycemia with macerate and decoction

The different extracts exerted a true dose-response effect, comparable to that observed by Teugwa et al. (2013). They showed that at 9000 and 45000 mg/kg, the extracts exert a prominent antidiabetic effect, reducing blood glucose by more than 38.48%. This finding was also reported by N'Guessan et al. (2011b) for *Terminalia catappa* (Combretaceae). Overall, it can be noted that therapeutic efficacy is not achieved at the same doses for the same plant species. This could depend on the type of extract used.

Conclusion

The results obtained for rabbit blood glucose show that the decoction caused a substantial decrease in fasting blood glucose at T4 and T6 after an oral glucose load. This was especially observed with decoctions at concentrations of 45000 and 450 mg/kg, respectively. The decoction of the leafy stem of *Chromolaena odorata* is therefore active both in fasting rabbits and in those that received glucose, with a more remarkable activity in the latter. Indeed, the decrease in blood glucose with the herbal medicine decoction was greater after 4 hours following its administration to fasting animals. These results suggest that this extract causes a rapid decrease in blood glucose, after which it does not return to its initial value after six hours of treatment. The substantial and progressive decrease in blood glucose in rabbits following an oral glucose load could support the use of the decoction of the leafy stem of *Chromolaena odorata* in the treatment of diabetes. Since glibenclamide is active both in fasting conditions and after an oral glucose load, the decoction of the leafy stem of *Chromolaena odorata* exhibits moderate activity compared with glibenclamide.

Conflict of interest

The authors declare that there is no conflict of interest regarding this article. Their thanks go to the authorities of Alassane OUATTARA University– BOUAKÉ (Côte d'Ivoire) and to the Laboratory of Plant Biology and Earth Sciences of this university for their contribution to the completion of this work.

References

- Committee Rapport, 1998:** Report of expert committee of diagnosis and classification of diabetes mellitus. Diabetes Care, pp. 21: 30.
- Bosede M.A. and Oyelola B.O., 2013.-** Antihyperglycaemic and antihyperproteinaemic activities of extracts of *Picralima nitida* seed and *Tapinanthus bangwensis* leaf on Alloxan-induced diabetic rabbits. *International Journal of Innovation and Applied Studies*, **3 (4)**: 1125-1131.
- Djédjé H. 2002 :** Prospective Study on the Reduction and Stabilization of Blood Glucose Levels in Diabetic Rabbits Using DIACODA, a Plant-Derived Substance. Advanced Diploma in Biotechnology. University of Cocody-Abidjan, U.F.R. of Biosciences, Biochemistry Laboratory (2002), pp. 10–36.
- Doh K. S., 2015 :** Plants with Antidiabetic Potential Used in Traditional Medicine in the District of Abidjan (Côte d'Ivoire): Ethnobotanical Study, Phytochemical Characterization, and Evaluation of Selected Pharmacodynamic Parameters of Certain Species. PhD Dissertation, Félix Houphouët-Boigny University, 2015, p. 151.
- Doh K. S., N'guessan K., & Aké C.B., 2013.-** Effect of Aqueous Extract of *Ageratum conyzoides* Leaves on the Glycaemia of Rabbits. *The Pharma Innovation – Journal*, **2 (8)**: 1-8.
- Gharras L., Hmamouchi M., Lamnouar D. & Bengoumi M., 1999.-** Comparative Study of the Hypoglycemic Effect of Six Plants Used in Moroccan Traditional Medicine. *Journal of African Medicines and Pharmacopoeia*, **13**: 71–80.
- Hobou D.R.A.C., 2013.** Phytochemical Study and Evaluation of the Pharmacodynamic Activity of *Stachytarpheta indica* (Verbenaceae), a Plant Used in Traditional Medicine for the Treatment of Diabetes. Doctor of Pharmacy Thesis, University of Cocody-Abidjan (Côte d'Ivoire), U.F.R. of Pharmaceutical and Biological Sciences, Laboratory of Pharmacognosy, Botany and Cryptogamy, 81.
- Inya-Agha S.I., Ezea S.C., Odukoya O.A., 2006.-** Evaluation of *Picralima nitida* hypoglycemic activity, toxicity and analytical standards. *International Journal of Pharmacology*, **2 (5)**: 576-582.
- Kaboré U 2007:** African Traditional Medicine Day: Six Medicines Approved in Burkina Faso
- Koné P.P., 2004.-** Practitioners of Traditional Medicine. In: Valorization of African Traditional Medicine in Côte d'Ivoire. Edited by CEDA, pp. 76–87.
- Nana Djimi Ariane; 2009:** Contribution to the Study of a Plant Used in African Traditional Medicine: Phytochemical Study and Evaluation of the Effects of the Seeds of *Picralima nitida* Stapf (Apocynaceae). Doctor of Pharmacy Thesis, University of Cocody-Abidjan (Côte d'Ivoire), U.F.R. of Pharmaceutical and Biological Sciences, Laboratory of Pharmacognosy, Botany and Cryptogamy, pp. 92–119.
- N'Guessan K., Doh K.S., Bomisso E.L., 2013.-** Effect of aqueous extract of *Picralima nitida* seeds on the glycaemia of rabbits. *International Research Journal of Pharmaceutical and Applied Sciences*, **3 (5)**: 81-87.
- N'Guessan K., Fofié N.B.Y., Zirihi G.N., 2011.-** Effect of aqueous extract of *Terminalia catappa* leaves on the glycaemia of rabbits. *Journal of Applied Pharmaceutical Science*, **1 (8)**: 59-64.

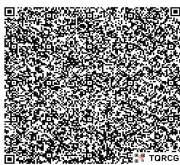
N'Guessan K., Fofié N.B.Y. & Kouassi K.H., 2011a.- Effect of aqueous extract of *Boerhavia diffusa* leaves on the glycaemia of rabbits. *International Journal of Applied Biology and Pharmaceutical Technology*, **2** (3): 330-338.

Nyunaï N. & Njifutié, N., 2006.- *Picralima nitida* (Stapf) T.Durand & H.Durand (Apocynaceae). Plant Resources of Tropical Africa. *Bull. Jard. Bot. Brux.*, **2**: 338

NPCMD (National Programme for the Control of Metabolic Diseases), 2012: Let Us Take Action Against Diabetes Now; World Diabetes Day, November 14, Awareness-Raising Form, p. 2.

Teugwa C.M., Mejiato P.C., Zofou D., Tchinda B.T. & Boyom F.F., 2013.- Antioxidant and antidiabetic profiles of two African medicinal plants : *Picralima nitida* (Apocynaceae) and *Sonchus oleraceus* (Asteraceae). *BMC Complem Altern Med*, **13**: 175.

Tenenbaum, M., Bonnefond, A., Froguel, P. et Abderrahmani, A., 2018 : Pathophysiology of Diabetes. *Francophone Laboratory Review*, 2018, pp. 26–32. [https://doi.org/10.1016/S1773-035X\(18\)30145-X](https://doi.org/10.1016/S1773-035X(18)30145-X)

Access this Article in Online	
	Website: www.ijarbs.com
	Subject: Pharmacognosy
Quick Response Code	
DOI: 10.22192/ijarbs.2026.13.09.004	

How to cite this article:

Koffi Stéphane DOH, Kwassi Dauphner Serges Sylvanus AMANI, Rostand M'Baï OFFOUMOU, N'guessan François KOUAME, Emma Ablan AKE-ASSI, Koffi N'GUESSAN. (2026). Comparative analysis of the antidiabetic effect of two extracts of the leafy stem of *Chromolaena odorata* (L.) R.M. King and H. Robinson (Asteraceae) on glycemic regulation in rabbits. *Int. J. Adv. Res. Biol. Sci.* 13(9): 31-41.

DOI: <http://dx.doi.org/10.22192/ijarbs.2026.13.09.004>