Antisickling, Antioxidant and Antibacterial Activities of *Afromomum alboviolaceum* (Ridley) K. Schum, *Annona senegalensis* Pers. and *Mondia whitei* (Hook. f.) Skeels

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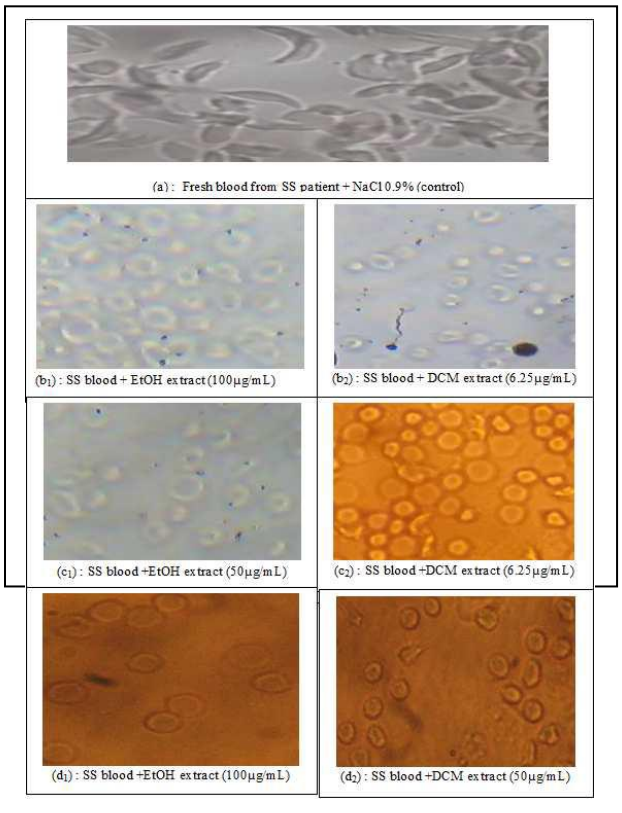
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I. Abstract Body (up to 250 words)

In accordance with statistics from the World Health Organization, nearly 80% of populations depend on traditional medicine for primary health care. In order to scientifically validate the phyto-therapeutic wealth of the Democratic Republic of the Congo, three plants were chosen namely: *Afromomum alboviolaceum*, *Annona senegalensis* and *Mondia whitei*. The objective of our study was to assess the antisickling, antioxidant and antibacterial activities of the ethanolic extracts and the dichloromethane fractions of these three plants. Sickle cell blood was supplied from Centre de Medecine Mixte and Anemie SS of Yolo Sud, Kinshasa. Three bacterial strains were used including *Staphylococcus aureus* ATCC 25923, *Escherichia coli* ATCC 8739 and *Pseudomonas aeroginosa* ATCC 9027. The ethanolic extracts of *A. alboviolaceum* and *A. senegalensis* and dichloromethane fractions of *A. alboviolaceum* and *M. whitei* showed IC50 values < 100 µg/mL in the ABTS test. Only the dichloromethane fraction of *A. senengalensis* showed an IC50 value of less than 100 $\mu g.mL^{-1}$ for the DPPH test. The inhibitory concentration 50 (IC50) values obtained from the ABTS test are lower than those of the DPPH test. All tested extracts possess a high antisickling activity and only soluble dichloromethane extracts are active vis-a-vis *Staphylococcus aureus* (MIC = 31.5 µg/mL). These results constitute a scientific evidence validating the use of these three medicinal plants for the management of sickle-cell anemia in the Democratic Republic of the Congo.

II. Image:



III. Reference:

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IV. Biography:

Gedeon Bongo has a MSc degree in Applied Microbiology and he is currently a junior lecturer at University of Kinshasa and University of Gbado-Lité in DRC. He has performed a lot of international trainings and has attended several international schools. His research interests are : Infectious diseases (Tuberculosis) and Medicinal plants, Virology and ecology of Lassa virus and genetic diseases like sickle cell aneamia. Currently, he is a PhD candidate and he is looking for a PhD position.

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