

Red grape skin extract could be new treatment for sickle cell disease patients

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Davies Agyekum, a second-year Ph.D. student in the MCG School of Graduate Studies, received a three- to five-year \$15,000 scholarship from the Southern Regional Education Board for his sickle cell disease research. Credit: Medical College of Georgia

An extract in red grape skin may be a new treatment for sickle cell disease, Medical College of Georgia researchers say.

The extract, resveratrol, a natural chemical typically found in red wine and various plants and fruits, has been found to induce production of fetal [hemoglobin](#), which decreases the sickling of [red blood cells](#) and reduces the painful vascular episodes associated with the disease.

Most fetal hemoglobin production ceases after birth, but in patients where it remains the predominant form, it can result in fewer

complications, says Davies Agyekum, a second-year Ph.D. student in the MCG School of Graduate Studies.

In sickle cell disease, abnormal hemoglobin causes red blood cells to sickle. The abnormal shape impedes blood's passage through vessels and can cause excruciating pain and other complications because of the blood's oxygen deficiency.

Davies is working with Dr. Steffen E. Meiler, vice chair of research for the Department of Anesthesiology and Perioperative Medicine, on an eight-week animal study to determine if the combined anti-inflammatory and fetal hemoglobin-producing properties of resveratrol, a dietary polyphenol, can reduce the severity of sickle cell disease.

Hydroxyurea, an anti-cancer agent and the only Food and Drug Administration-approved therapeutic drug for sickle cell disease, increases [fetal hemoglobin](#). Davies says resveratrol-based therapy might be easier on patients.

The Ghana native recently received a three- to five-year \$15,000 scholarship from the Southern Regional Education Board State Doctoral Scholars Program, a program aimed at increasing the number of minority students who earn doctoral degrees and become college and university professors.

He is attending the organization's annual Institute on Teaching and Mentoring in Arlington, Va., today through Oct. 25, to learn success skills and prepare for a university-level teaching position.

"My ultimate career goal is to be in position where I can inspire future generation through teaching and mentoring, so I am ecstatic about the opportunity this scholarship presents," Davies says.

Source: Medical College of Georgia

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