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## Substandard *Amoxicillin* in Sierra Leone

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Bacterial resistance to antibiotic is posing a global health threat as many antibiotics no longer work against urinary and skin infections. Prevalence of substandard medicine in the developing countries can lead to further development of new strain with antibiotic resistance. Sierra Leone is one of such countries where multidrug resistant *Shigella* dysenteries serotype and tet (x)- containing clinical isolates are already detected. A mystery shopper has visited a local market in Sierra Leone and purchased 6 different brands of Amoxicillin capsules, which has been analysed using spectroscopic methods. The sample of Amoxicillin capsules has been purchased using convenience sampling approach at an undisclosed location in Sierra Leone. The 100 mg of sample was dissolved in D<sub>2</sub>O and 100 mg of sample was dissolved in CD<sub>3</sub>OD. The dissolved sample was vortexed for 30 seconds, followed by centrifugation. The supernatants were filtered when transferred in to NMR tubes. The 1D <sup>1</sup>H and 1H2D COSY NMR spectra were acquired using JEOL ECA 600 MHZ at 298 K and were processed JEOL Delta software. The weighing of the content of the capsules has provided initial indication that some of the purchased medicine is substandard. Furthermore, preliminary NIR measurement has suggested that there is significant variation in the sample composition between manufactures. The pilot study of the quality of medicine in developing countries has indicated that substandard medicine is freely available on the market despite efforts by governments to improve their healthcare system. The poor quality medicine can harm patients directly via lack of effort or toxicity of additional components, but it can also contribute to the spread of bacterial resistance to antibiotics.

### Biography

Abdulaziz Alhedethe is a fully qualified Pharmacist committed professional with a genuine interest in improving patient's services and customer awareness focused on compliance. He is self-motivated and able to take the initiative, able to give specialized services to help patients' manage conditions. He is able to guide customers on the selection of medicines brands, medical equipments and health care supplies.

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