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Exposure of butchers in Nigeria to polycyclic aromatic hydrocarbons (PAHs) from burning tyres

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An occupational group in abattoirs all over Nigeria engage in the use of burning scrap tyres to de-fur cow hide popularly known as 'ponmo' or 'kanda' meant for human consumption. These young people are exposed to many toxic particulate matter like carbon monoxide (CO), sulfur oxides (SO₂), oxides of nitrogen (NO_x), volatile organic compounds (VOCs) and other hazardous air pollutants (HAPs), such as polychlorinated biphenyls (PCBs), dioxins, furans, hydrogen chloride, benzene, and metals such as arsenic, cadmium, nickel, zinc, mercury, chromium, and vanadium. Emitted also are polycyclic aromatic hydrocarbons (PAHs) which are a group of ubiquitous chemicals known or suspected to be human carcinogens. This study seeks to determine the extent of environmental contamination of the abattoir and surrounding environment with PAHs and other contaminants coupled with the investigation of the level of occupational exposure of the 'Roasters' to these chemicals through determination of urinary biomarker levels, presence of micronuclei in buccal swabs and the determination of lung function through spirometry. Adequate intervention will be applied and hopefully the study will lead to formulation of better policies protecting the workers and the environment from the effects of this practice.

Biography

Francis Okonkwo is a PhD student of Medical Research-International Health with special emphasis on Environmental and Occupational Toxicology at the Center for International Health of Ludwig Maximilians University, Munich Germany. His areas of interest include but not limited to pesticide toxicity and occupational safety and health especially as regarding exposure to toxicants in the work environment. He teaches toxicology at the Plateau State University, Boko, Nigeria.

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