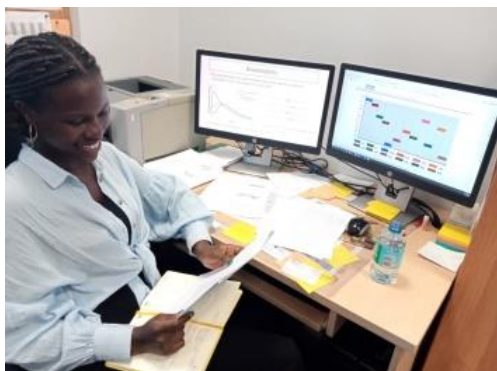


Sandra C. Aiyabei – my experience at TABMED 2023



My time at Nicolaus Copernicus University has been rich and rewarding, both in and outside of internship work. I am a pharmacy student at the University of Nairobi in Kenya. I was fortunate to be one of the students participating in the Toruń and Bydgoszcz Medical Summer Program (TABMED) in 2023. I applied to the project with the title “Application of in-silico methods in determining drug bioavailability”, under Prof. Alicja Nowaczyk and Dr n. farm. Łukasz Fijałkowski. My supervisors were kind and very resourceful, and it was easy to form a rapport quickly.

During the day, we would sit in our supervisors’ office where they would take us through the various softwares used in in silico analysis of drugs and potential drugs. With patience and understanding, they taught us the ins and outs of those applications. We began by learning how to draw the molecular structures using ChemSketch, and how to visualize them in 3D format. We then learnt how to create data sets on Osiris Data Warrior and analyse the said data in order to obtain useful information about the probable pharmacokinetic properties of potential new drugs. These included assessing conformance of the molecules to Lipinski’s Rule of 5 as well as the Veber Rule.

My personal favourite was using SwissADME to investigate the probability of the molecules to cross the Blood Brain Barrier (BBB) and membranes in the gastrointestinal tract. I learnt how to interpret the Egan Boiled Egg plot, which literally resembles a boiled egg, or from a different perspective, a sunny-side up fried egg too! When it comes to docking processes, we learnt how to use Autodock to check if a molecule could dock in a selected enzyme.

Enough about molecular modelling for now, allow me to let you in on some of the adventures we got to experience outside the walls of the Faculty of Pharmacy. The TABMED team organized educational workshops and some visits, for example to the Museum of soap and the history of dirt, the Exploseum, and the Invisible House in Toruń, where we got to experience our surroundings, but in infinite darkness!

On the weekends, we would visit the nearby and some not-so-near cities. I had the best day tour to Toruń, where we completed the Game of Toruń, a quest-like game that took us around some attractions in the historical part of the city. That night, we were privileged to experience the 14th edition of the Bella Skyway Festival which involved the presentation of artistic light installations that illuminated the city. We also visited Gdańsk and got to dip our feet in cold waters of the Baltic Sea. Outside Poland, I was able to visit Vienna, which some have called the music capital of the World, and Budapest, where one of the metro lines actually runs under the Danube River. Within the dorms, the cultural exchange was remarkable, as I made new friends from Poland, Spain, Albania, Turkey, Brazil, Pakistan, Bangladesh, and the Philippines. One evening, we all cooked something native to our home countries and had a potluck picnic.

To sum it all up, my stay was eye-opening and amazing. My thinking has been stretched and my perspective broadened. I am grateful for the support I received from my supervisors and fellow students throughout the program. I shall carry the memories in my heart for years to come, and I would wish that more people get the opportunity to have the experience too.