

## **From the Desk of the President.....**

When the Oklahoma Society of Physiologists met for their annual meeting at Northeastern, I had the opportunity to drag out some of the old equipment that I had found stored away in our recently renovated older building. As a physiologist with a bit of a historical slant, I was pleasantly surprised to find this or that old piece of equipment. Most of them I recognized because back at LSU where I did my graduate work, I was taught mammalian physiology by Dr. Blanche Jackson. While not especially distinguished for her research prowess, Dr Jackson started in physiology when it was just transforming from the mechanical, physical recordings to the electric and electronic era. And she made sure that her students not only knew the great and the new but also the tried and the true. Though the lab had numerous Narco Biosystems Physiographs, we started out recording many parameters on kymographs. And while ink-writing systems for kymographs had come along by this time, we recorded in soot on slick paper (that's right, in soot) and preserved the recordings by sealing them with clear varnish spray in the lab hoods. Also, despite the fact that electric kymographs were coming into use, we used the Harvard Apparatus ratchet wind kymographs (I still like the wind-up kymographs over the electric ones). When I arrived at NSU, I was thrilled to find several ratchet and a few electric kymographs. These are now safely stored in my stockroom for the traditional demonstration for the students in lab on the first day. I was also pleased to find a "high speed" recording apparatus like I had never seen in the old anatomy and physiology lab as we cleaned it out for preparing for renovation of the original 60's era science building as we attempted to renovate it for the current needs. I have yet to meet anyone in my circles familiar with this piece of equipment. I show this vintage item to the students on the first day as well. (My lab at NSU has numerous "very tired" Physiographs that I hate to part with but also has a full set of computer interface systems for physiological data acquisition.)

What got me started on this little walk down memory lane is that I was recently able to purchase a very nice Oxygen/Carbon Dioxide Analyzer. That got me thinking about the old Roughton-Scholander dissolved gas syringe which required a sharp eye, nimble fingers and a fair amount of luck to determine the oxygen dissolved and bound in a sample of blood. A sample of blood was loaded into the syringe. Then the loading cup was sealed with a drop of caprylic alcohol to keep the air and blood/bubble separated. Where did the bubble come from? It was because of chemical degassing of the blood sample to allow determination of the pigments oxygen carrying capacity. Oh, did I mention that the operator had to pull the plunger back fast enough to prevent the rapidly developing bubble from erupting through the caprylic alcohol. While the new machine is not intended to carry out blood gas analysis, it will be an important tool to measure ambient air concentrations as well as expired gas concentrations and all of the

associated metabolic rate determinations on humans all the way down to small invertebrates.

Well for you non-physiologists out there who are scratching your heads and wondering why am I referring to all of this detail, there is a point here. It doesn't matter what I remember using as tools to study the problem at hand in our particular chosen field, it is the science that matters. It is the method that we use to design the experiments. It is the selection of variables and controls that will eventually lead to answering the question. So do we need tools? It sure makes some tasks a lot easier. But as I look back on some of the equipment/tools that I have squirreled away in my lab, I remember that it the creative spirit that allow those before us to solve problems and answer some very difficult questions with what we now view as simplistic and "odd". So, it is the human element that is the most important tool in our toolbox. We as members of OAS and our colleagues at all levels of the educational endeavor are dedicated to developing that human tool both now and into the future.

Keep up the good work!

Craig Clifford