

a sort of parental supervision, considering the mental caliber of some of the supervisors, but it could be likened to a business or family partnership. The wise man knows that his business partner or his wife may sometimes want to go when he wants to stay, but he also knows that the disadvantages of the partnership—the items on which he surrenders his own preference—are greatly outweighed by the advantages. Therefore, he accepts certain limitations. Is it not possible to do scientific work within such a framework in some degree of contentment, at least until certain potential dangers have receded?

If the trends that appear to threaten academic freedom and even seem to hamstring the progress of research are as dangerous and ominous as claimed, why not consider the matter as a research problem and really study both sides? This type of thing is susceptible of reasonable solution in the conference room, provided both sides are represented by intelligent men who can see the forest as a whole, as well as by men who are still threading their way through the trees. The military and administrative sides must be properly represented, for the scientists alone may find it difficult to make up their collective mind (*cf.* the National Science Foundation!). Of course, we scientists admit privately that our mental processes are a bit superior, but let us try to listen with complaisance to the viewpoints of others.

The turmoil about faculty loyalty oaths has always puzzled the writer. Is it entirely because of the threat to academic freedom, or do unmentioned feelings of personal dignity regarding the unassailable integrity of the scholar complicate the situation? This is only one point of view, but the writer would be very happy to see the research scientist approach the whole problem with more scientific detachment, trying to understand the necessities of those charged with the protection of our national security (and with it our fine research facilities), recognizing without condoning certain weak links in the administrative chain, and, above all, carrying scientific methods and ideals and dignity into the argument, not forgetting these ideals when someone gets a blow on the nose.

Experiment Station
Hawaiian Sugar Planters Association
Honolulu

ALVIN R. LAMB

Pressor and Oxytocic Hormones of the Pituitary Gland

IN THE past few years, by the use of improvements in analytical methods of extraction and of adsorption and elution, du Vigneaud and his collaborators (Pierce and Turner) have added much to previous knowledge concerning the chemistry of the pressor and oxytocic hormones of the pituitary gland. Enough is now known concerning the amino acid constituents of these hormones to warrant the following observations concerning the relationship between them.

According to du Vigneaud and his collaborators,

the acids common to both hormones are tyrosine, proline, glutamic acid, aspartic acid, glycine, and cystine. In addition to these, the pressor hormone contains arginine and phenylalanine, and the oxytocic hormone, leucine and isoleucine.

The presence of phenylalanine in the pressor hormone is in contradiction to the work of Stehle and Fraser, who reported it to be absent. The absence of isoleucine from the same hormone is in contradiction to the work of Stehle and Trister, who reported it to be present. The work of Stehle and his collaborators was done with a preparation much inferior in potency to that investigated by du Vigneaud and his collaborators. The isoleucine reported by the former may have been contained in the ballast of the pressor preparation. The absence of phenylalanine is not easily explained, since conditions were favorable for its detection. If the reader is willing for the moment to accept the results of Stehle and his collaborators as correct, the results of du Vigneaud and his collaborators have what seems like a plausible explanation. In the starch column method of separation, phenylalanine and isoleucine appear in close sequence in the eluate, so that it is possible what was reported as phenylalanine may have been isoleucine.

If this is true, then the interesting conclusion follows that the only difference between the pressor and oxytocic hormones is the occurrence of leucine instead of arginine in the oxytocic hormone and, vice versa, the occurrence of arginine instead of leucine in the pressor hormone. The possibility that one hormone may be derived from the other occurs immediately. The introduction of a guanidine group into leucine with the elimination of a methyl group would convert the oxytocic hormone into the pressor hormone. The reverse, the conversion of the pressor hormone into the oxytocic, requires the elimination of the guanidine radical from arginine and the introduction of a methyl group.

The ideas expressed are not compatible with the conception that the two hormones are split products of a giant molecule.

Department of Pharmacology
McGill University

R. L. STEHLE

Electrokinetic Behavior of Dilute Monodisperse Sulfur Hydrosols

THE development of dilute monodisperse sulfur hydrosols by LaMer and Barnes (1) has resulted in the study and solution of a number of problems previously unattainable with polydisperse sols (2-5). However, the electrokinetic properties of the dilute monodisperse sols had not been studied in connection with any of these investigations.

Recently such a study was made, using a microelectrophoresis method (6). Sols prepared with dilute sodium thiosulfate (0.002 *M*) and HCl (0.001-0.003 *M*) were found to contain *positively charged particles*. Previously, the charge on the sulfur particles in