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## **VALIDITY STATEMENT FOR SALIVA TESTING**

Saliva testing of steroid hormones has been documented in the scientific literature for almost 30 years and is routinely used in scientific research settings and as standard textbook material for students of endocrinology and internal medicine (Williams Textbook of Endocrinology)

There is, in fact, a substantial volume of published clinical and scientific research strongly supporting saliva testing of steroid hormones (estradiol, progesterone, testosterone, DHEA, cortisol) as superior in many cases to serum testing for determination of hormone imbalance. (See enclosures). This research redresses any misconception that saliva hormone testing methods lack validity.

Dr. Peter Ellison of Harvard University, in conjunction with the World Health organization, has used salivary hormone testing to compare cross-cultural estrogen levels between women living in Western vs. non-industrialized countries. WHO approved this modality in the 1990s when it was found to be an accurate, convenient, noninvasive measurement of free hormone levels.

Additionally, as you know, there is an enormous amount of literature on hormones based on serum/plasma assays. Steroids in saliva reflect the portion of circulating hormones in the bloodstream that are unbound (free or bioavailable) by serum binding proteins and enter tissues throughout the body. The salivary hormone values, therefore, reflect the biologically active (the unbound) portion available to target cells. Blood hormone assays reflect both bound and free forms and do not provide information about the bioavailable fraction of hormone, which can vary depending on the level of blood hormone binding proteins.

Significantly, many insurance companies cover the cost of saliva testing because it has been shown to be as accurate as blood testing and more cost effective. Although serum/hormone is the traditional matrix tested for steroid hormones, saliva testing is proven to be as effective as serum testing. The difference between effectiveness of these matrices does not establish or support the superiority of one measure over the other.

In short, the weight of evidence clearly validates salivary testing as a well established technique used not only in this country but also worldwide to measure steroid hormone levels in both men and women.