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To: Representative Paul Seaton
State of Alaska Legislature

Re: Written Testimony in Support of HB 90

Date: 18 February 2013

Dear Representative Seaton,

As I am unable to attend the first hearing of HB 90 entitled "An Act establishing a temporary program in the Department of Health and Social Services for testing newborns for baseline vitamin D levels", I am hereby providing you with written testimony in support of HB 90.

I am a behavioral neuroscientist at the University of Alaska Fairbanks with research experience in animal behavior, behavioral genetics, biological rhythms, and compulsive-like behaviors. I also teach and have taught courses in animal physiology, neuroscience, and human anatomy and physiology.

I have great interest in vitamin D and its functions, as it has been implicated in many aspects of human health, which I stress in the human anatomy and physiology classes I teach. Vitamin D's traditional function has to do with absorption of calcium in the digestive tract and consequent bone health.[1] For example, deficiencies in vitamin D can result in reduced fetal bone growth[2], while treatment with vitamin D can cure rickets, a severe bone deficiency, in infants.[3]

The evidence that vitamin D plays important roles in other physiological processes in humans is accumulating rapidly.[4] For example, deficiencies in Vitamin D have been correlated with decreased immune function[5], hyper parathyroidism[6], and increased risks of cancer[7], dental caries[8], respiratory infections[9,10], eczema[11], lower birth weight and head circumference[12], and multiple sclerosis (MS).[13]

Many of these conditions are prevalent in Alaska.[14] In addition and directly relevant to HB 90, newborns have been found to be deficient in vitamin D from China[12], to Scotland[15] and the USA[16], potentially exposing them to higher risks for developing these conditions. These studies were done at lower latitudes than Alaska. Consequently, newborns in Alaska may have even more severe deficiencies in vitamin D due to sun exposure that is insufficient during 8-9 months of the year to produce vitamin D in the skin.

Importantly, vitamin D deficiency also has been correlated with decreased mental and psychomotor functions[17] and language impairment.[18] What if severe deficiencies in vitamin D might explain some of the academic impairments seen in Alaska's schools? Unfortunately, I am not aware of any studies that have measured vitamin D in Alaska newborns. Therefore, I strongly support your efforts to pass SB 90 during this legislative session to obtain crucial base line data on vitamin D levels in Alaska's newborns.

I hope that you will encourage your colleagues to ensure that Alaskans do the analysis of the data and that you will ask faculty at the University of Alaska to do this as a paid service to the State of Alaska.

Respectfully,

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