

Development and application of physiological stress markers in hair and skin of brown (grizzly) bears

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Grizzly bears (*Ursus arctos*) in western Alberta, Canada inhabit areas of rapid landscape change, and are currently listed as Threatened. We hypothesize that anthropogenic activities within the grizzly bear range in Alberta are causing long-term stress in bears, which may be associated with poor population performance. To test this hypothesis, we are using cortisol concentration in hair and stress protein expression in small skin biopsies as markers of stress. Our current work is investigating relationships between these stress markers and associated environmental and biological data. Our goal is to develop tools that can be used by wildlife managers to assist with the recovery and conservation of grizzly bears in Alberta.