Behavior in mammals is strongly influenced by environmental factors, particularly when experienced during early postnatal life. While positive factors can favor proper behavioral responses, negative factors such as traumatic events can alter behavior and induce diseases like borderline personality disorder, bipolar depression and antisocial behaviors. Such disorders are usually marked in individuals directly exposed but strikingly, they can also affect their offspring sometimes across several generations. The biological mechanisms for the transmission of trauma-induced symptoms from parent to offspring have only started to be examined recently and are thought to involve non-genetic factors. This talk will present an experimental model of early traumatic stress in mice and will show evidence that non-genetic mechanisms are implicated in the expression and inheritance of the impact of such trauma.