The aim of this study was to know the immune response of chronic heat stress exposed broiler chicken and vaccinated with ND vaccine.

This research was conducted over three months, from March to May 2010 which was held in Surabaya PUSVETMA. DOC animals used were as many as 32 male Cobb strain. DOC are adapted for 14 days. After the age of 14 days, broilers were divided randomly into four treatment groups are: P0: without stress and without the ND vaccine (S- V-), P1: treatment without stress and vaccinated ND (S- V+), P2: treatment with stress and without vaccine ND (S+ V-) and P3: the treatment of stress and vaccinated with ND (S+ V+). Vaccination in the treatment group P1 and P3 performed on 29 day old broiler chickens. HI examinations conducted at age 14 days, 28 days, 42 days. At the age of 14 today HI examination there was no significant difference because the treatment is not given. On examination HI 28 days showed significant differences between the treatment of chickens get heat stress treatment (P2 and P3) with a chicken who did not receive stress (P0 and P1). While in HI examinations 42 days showed significant differences among the treatments. In the group without vaccination either with heat stress and without stress (P0 and P2) of maternal antibodies has been greatly reduced while in the group of chickens that received heat stress with a temperature of 35 to 35.5 °C and ND vaccinated groups did not differ significantly with the chicken that does not get stressed with a temperature of 30-32 °C so it can be concluded in the group of chickens who got vaccinated ND heat stress and heat stress in the receiving phase is in the resistance or adaptation.