splenocytes (effector) were incubated with K-562 (target) in a ratio of 100:1 for 4 hour once a week until the end of the experiment.

Conclusions The splenocytes from KRG treated porcine showed a significantly increased cytotoxicity in time dependent fashion. Whereas, splenocytes from untreated porcine showed a less toxicity. Taken together, KRG has the potential to modulate immune function and should be further investigated as an immunomodulatory agent.

**Background and aims** Natural killer (NK) cells are specialised lymphocytes capable of counteracting pathogens (bacteria, viruses) as well as cancer cells. Unlike T lymphocytes, NK cells do not require antigen-specific recognition to act on target cells. The activation of NK cell requires the action of certain pro-inflammatory cytokines (IL-2, IL-12, IL-18, IL-21).

**Methods** Gastric cancer cells (SNU-484) were grown in RPMI medium with 10% heat inactivated FBS at a seeding density 1*10^6 cells/mL for 3 days, supernatant was concentrated 10 fold. Splenocytes were treated with 1% (v/v) SNU-484 supernatant for various periods of time.

**Results** Flow cytometry (FCM) results suggests that the treatment do not affect the viability of the cells during the study period, further the intracellular levels of NKP30, NKP44, granzyme B, perforin were assessed using Real time-PCR (RT-PCR) and western blot techniques. RT-PCR revealed that NK cell markers were initially down-regulated during 2 days of incubation and increased several folds higher during 5th day when compared to normal control. However, no significant changes were observed in protein expression. SNU-484 cells supernatant treated splenocytes were further analysed for cytolytic activity against K562 cell line as a target with varying (1:6, 1:12, 1:25 and 1:50) target to effector ratio for a period of 24 hour.

**Conclusions** The results suggest that the treated splenocytes have significantly increased cytolytic activity (49.4%) at the lower effector to target ratio (1:25) when compared to untreated control splenocytes (38.2%). Our results indicate that gastric cancer cell micro-environment can modulate the NK cells efficacy to act against cancer.