

**Evaluating disease resistance of pigs using an in-vitro test.**

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Disease resistance of animals is often evaluated as innate immune response to specific antigens. This involves the inoculation of live animals and the estimation of the response in terms of skin thickness or haematological parameters. The method is usually effective but involves risk of a strong reaction and possible secondary infection that may adversely affect growth and productivity. As an alternative, a multi parameter assay has been developed to assess the general immune capacity using a small sample of blood. The lymphocytes of the peripheral blood are exposed to several chemicals known to trigger a blastogenic response. The proliferation of the various blood cell subsets is then measured using flow cytometry analysis, and reflects the potential of the animals to adoptive viral and bacterial disease resistance. The assay was applied to a group of pigs also tested for the effect of an immunomodulator. It was effective at measuring the differences between animals, as well as the dose response to the modulator.