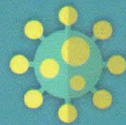
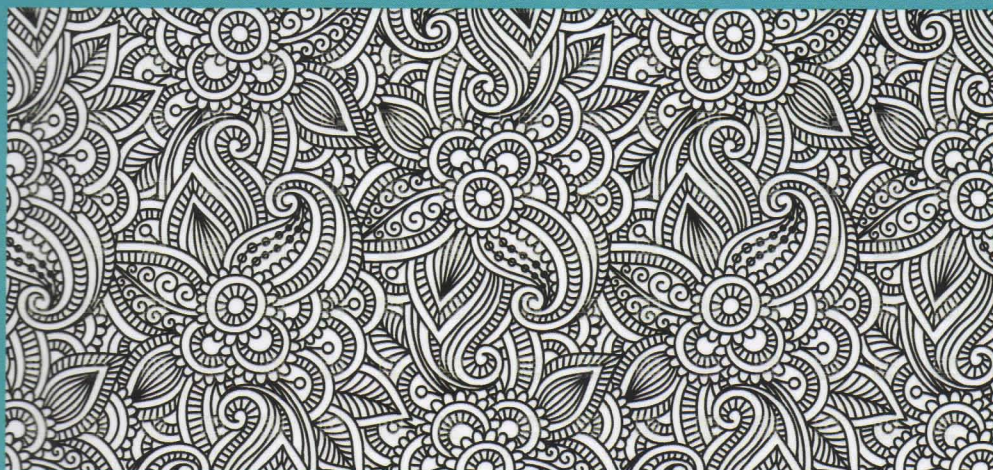


Book of



INNOVATIVE ADJUVANTED
INFLUENZA VACCINES

ABSTRACT



* Colour it

Swiss - Indonesian Vaccine Formulation Symposium

Innovative Adjuvanted Influenza Vaccines : A Swiss-Indonesian Collaboration
Towards Better Pandemic Influenza Preparedness

29-31 March 2017 | Universitas Airlangga, Surabaya



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TIME EXPOSURE DIFFERENCE CHANGE THE MOLECULAR PATTERN OF ANTIGEN-RECEPTOR-ANTIBODY INTERACTIONS

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ABSTRACT

Introduction :Following a binding interaction between a foreign glycoprotein molecule (antigen) and a receptor molecule on one or more antibodies (immunoglobulins) are the major soluble molecules produced to know the pattern of these interactions. The specific and avid interaction of antigen with antibody, is central to an effective defensive role for the antibody response. After knowing each antibody effect in interfere viral replication, molecular competitive pattern of antibody – receptor to antigen complex bind was important information.

Aims : Here we determined 1) binding affinity of complex glycoprotein molecule (antigen) and a receptor molecule to affinity of complex glycoprotein molecule (antigen) and antibodies molecule using surface plasmon resonance (SPR);2) competitive of molecular pattern interaction in several time exposure series using western blot assay (WBA).

Methods :Both quantitative and qualitative studies were done in this study. Complex glycoprotein molecule were defined into Fc and non Fc contained, and also protein of receptor and antibodies, both defined into Fc and non Fc.

Time exposure series of competitive assay were divide into immediate, intermediate and late response. WBA was used to detect antibody to complex glycoprotein molecule (antigen)

Result :Using SPR, we defined the concentration of binding ability at low concentration of its complex. High potential antibodies in interfere viral replication mostly got higher binding affinity to antigen than its receptor to antigen. Similar concentration of binding affinity of antigen-antibody complex to antigen-receptor complex binding effected the molecular interaction after several hours incubation.

Table 1 SPR : Complex glycoprotein (Antigen) to protein A in resonance chip

Analyte	kon (1/M.s)	Koff (1/s)	KD (nM)
Receptor	$1,1 \times 10^6$	$1,6 \times 10^{-2}$	14
Antibody A	$3,5 \times 10^4$	$6,6 \times 10^{-4}$	19
Antibody B	$8,5 \times 10^4$	$3,9 \times 10^{-4}$	46