

# on Vaccine Research

## ABSTRACTS OF SUBMITTED POSTER PRESENTATIONS

### P13

The Pantone-Valentine Leucocidin (PVL) of *Staphylococcus aureus* seems to be correlated with recurrent furunculosis in humans but not with inflammatory diseases in cattle.

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**BACKGROUND:** *S. aureus* causes furunculosis in humans and is one of the etiologic agents of bovine mastitis. LINA et al have demonstrated that in most cases of human furunculosis the isolated *S. aureus* strain carried the PVL gene giving a strong correlation between PVL positive *S. aureus* and necrotic skin lesions (1). The prevalence of PVL positive *S. aureus* in animal populations is hitherto unknown.

**OBJECTIVE:** To evaluate the rate of PVL positive *S. aureus* in a collection of strains obtained from patients with recurrent furunculosis (n=24) who had received specific autovaccines and in a collection of strains isolated from dairy cows (belonging to different herds) suffering mastitis (n=62).

**METHODS:** Polymerase chain reaction was done following a protocol published previously (1). Boiled culture supernatants were used as source of DNA. Strains were examined for the presence of PVL and gamma hemolysine (HLG) by PCR.

**RESULTS:** 23 of 62 bovine *S. aureus* were positive for both HLG and PVL and 16 were only positive for HLG (37.1% positive for PVL). 20 human *S. aureus* were proved to be positive for PVL & HLG and two strains were positive for PVL only (84.6% positive for PVL) whilst four strains were positive for HLG only.

**DISCUSSION:** Although this is only a preliminary work by far not matching standards for a controlled study it appears that PVL positive strains correlate with recurrent furunculosis in humans but not with mastitis in cattle. Recombinant PVL might be a prospective candidate for a therapeutic vaccine, designed to treat recurrent furunculosis in humans as soon as immunological data will be available.

(1) LINA G., PIEMONT Y., GODAIL-GAMOT F. et al (1999): Involvement of Pantone-Valentine Leucocidin-producing *Staphylococcus aureus* in primary skin infections and pneumonia. Clin. Infect. Dis. 29:1128-1132

### P14

Linear B-cell epitopes of human respiratory syncytial virus fusion protein identified by sera from adults and children  
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#### Objective

To identify linear human B-cell epitopes of the fusion protein of RSV as a part of a programme of work to develop an epitope based vaccine against RSV.

#### Methods

To screen for linear human B-cell epitopes of the fusion protein of RSV and to determine the differences in the pattern of peptide recognition in sera at different stages of exposure to RSV, 55 overlapping peptides covering the whole of the fusion protein of RSV were synthesised by solid phase synthesis using the RAMPs system.

These peptides were used to screen RSV positive sera from adult healthy individuals and sera from 49 children infected with RSV at 6 months of age and with a repeated infection at 9 or 12 month or both using an Enzyme Linked Immunosorbent Assay (ELISA).

#### RESULTS

6 of the 55 peptides were strongly bound by all adult sera and 10 peptides were recognised strongly but less frequently.

A further 5 peptides were bound less strongly by the majority of the sera.

Analysis of the binding of peptides by sera from the children showed;

1) several peptides were bound by pre-infection sera, probably maternally derived-antibody

2) some peptides were bound by sera following first and second infection

3) Sera after second infection showed highest levels of peptide binding

and 4) only few peptides were recognised by sera from both adults and children.

#### CONCLUSION

These results suggest that certain linear B-cell epitopes of the F protein should be Assessed for their ability to induce virus-neutralising and protective antibody responses in vivo.

### P16

WITHDRAWN