SUMMARY

The objective of the study was to confirm the immediate effectiveness of the target dose of C708 (without pyriproxyfen) against fleas on cats.

Methods

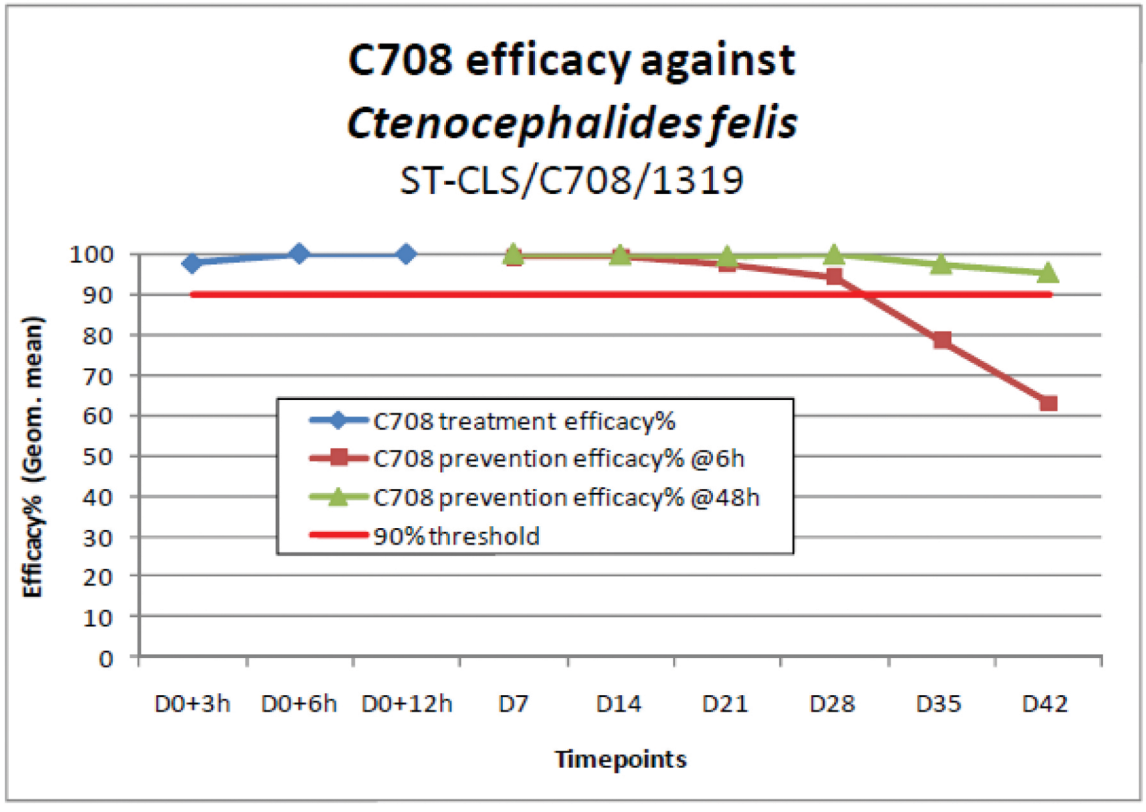
Twenty-four healthy cats, weighing 2.12 kg to 4.64 kg, were studied in this a parallel group design, randomised, single centre, non-blinded, controlled efficacy study. On Day -4, the 24 cats included were ranked, within gender, in descending order of individual pre-treatment flea counts. Animal IDs were used as the criteria to break any ties in pre-treatment flea counts. Within each gender, animals were then blocked into eight blocks of three cats each. Within each block, cats were randomly allocated to the three study groups: Group 1 - Negative control and Groups 2 and 3 - Treated with the test substance (C708).

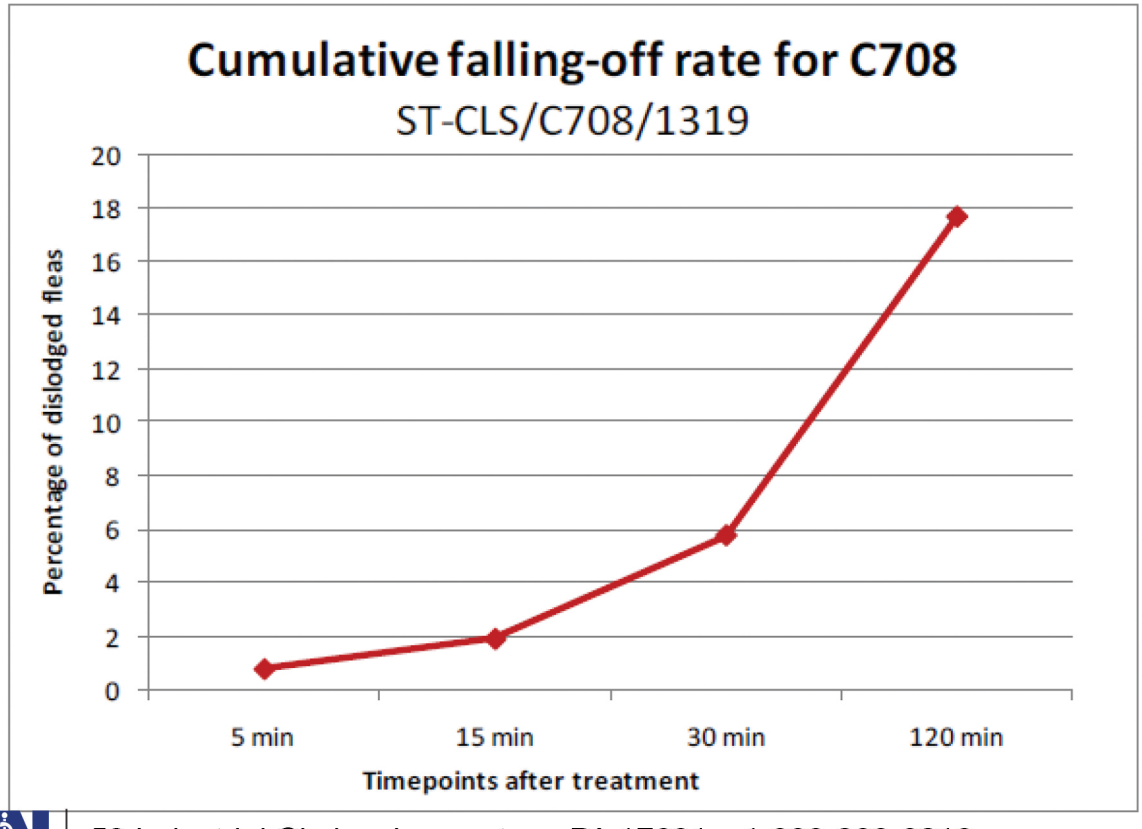
The animals were observed once daily for general health. Following treatment, animals from all groups were also observed approximately hourly for four hours for adverse reactions to treatment. Clinical and local tolerance observations and evaluation of cosmetic effects were conducted on all cats prior to treatment, approximately 4 and 8 hours post-treatment (Groups 1, 2 and 3) and once on Days 1, 2 and 3 (Groups 1 and 3 only).

Flea infestations were performed with 100 adult, unfed *Ctenocephalides felis* (PLRS US strain) on each cat one day prior to treatment and weekly from Days 7 to 42. Fleas were counted on the days and times as set out in section 8.3. Dislodged live, dead and moribund fleas were collected from the cats in Groups 1 and 2 on the day of treatment at 5, 15, 30 and 120 minutes post treatment or flea infestation.

Results

The test substance (C708) demonstrated an extremely rapid speed of kill against *C. felis* with an effectiveness > 95% (based on geometric means) from as soon as three hours against existing flea challenges and remained effective > 95% (based on geometric means) against fleas when assessed at 48 hours post infestation for up to six weeks post-treatment.


C708 efficacy against
Ctenocephalides felis
ST-CLS/C708/1319
Efficacy% (Geom. mean)
100
90
80
70
60
50
40
30
20
10
0
C708 treatment efficacy%
C708 prevention efficacy% @6h
C708 prevention efficacy% @48h
90% threshold
D0+3h
D0+6h
D0+12h
D7
D14
D21
D28
D35
D42
Timepoints


Cumulative falling-off rate for C708
ST-CLS/C708/1319
Percentage of dislodged fleas
20
18
16
14
12
10
8
6
4
2
0
5 min
15 min
30 min
120 min
Timepoints after treatment