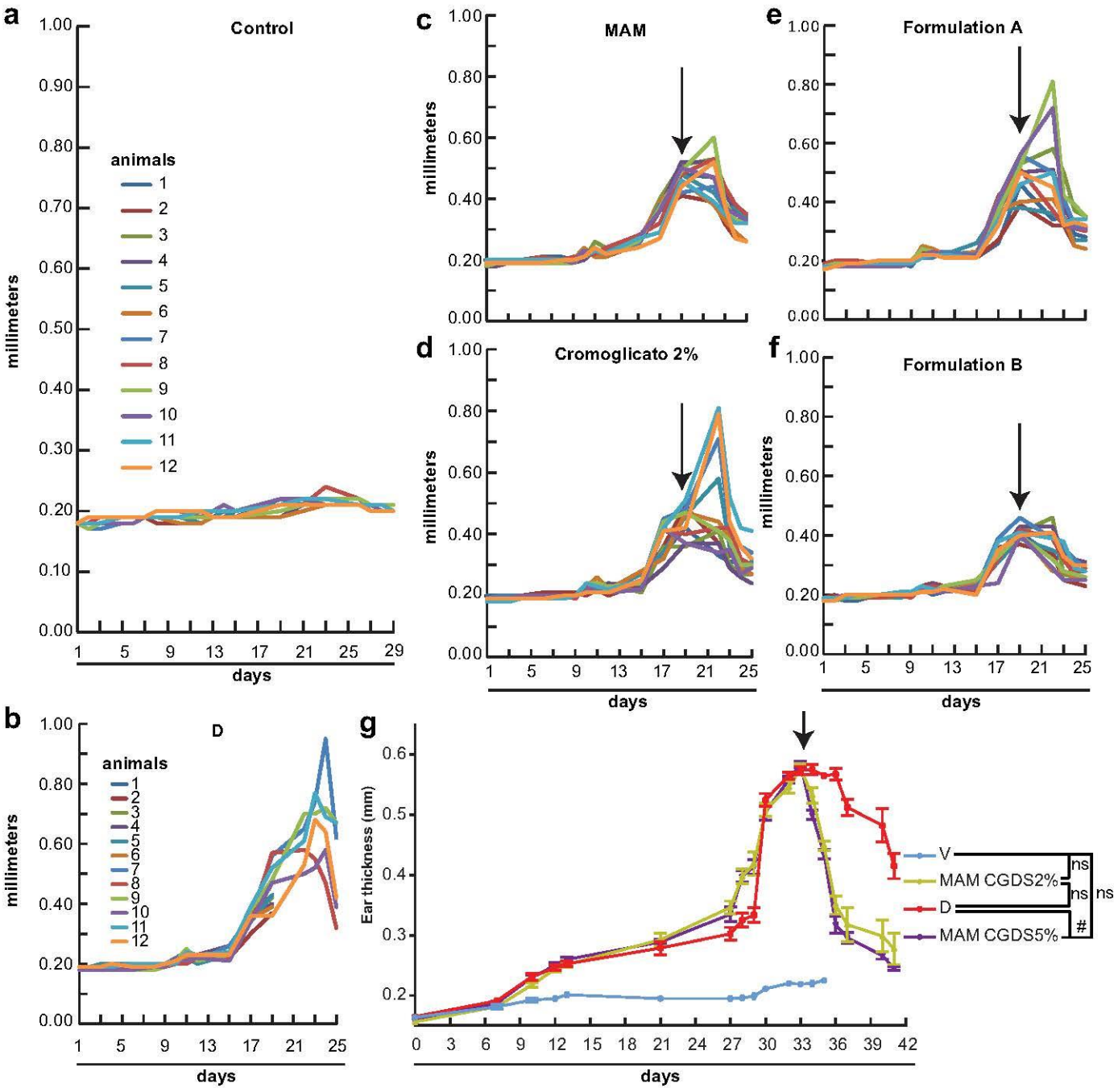
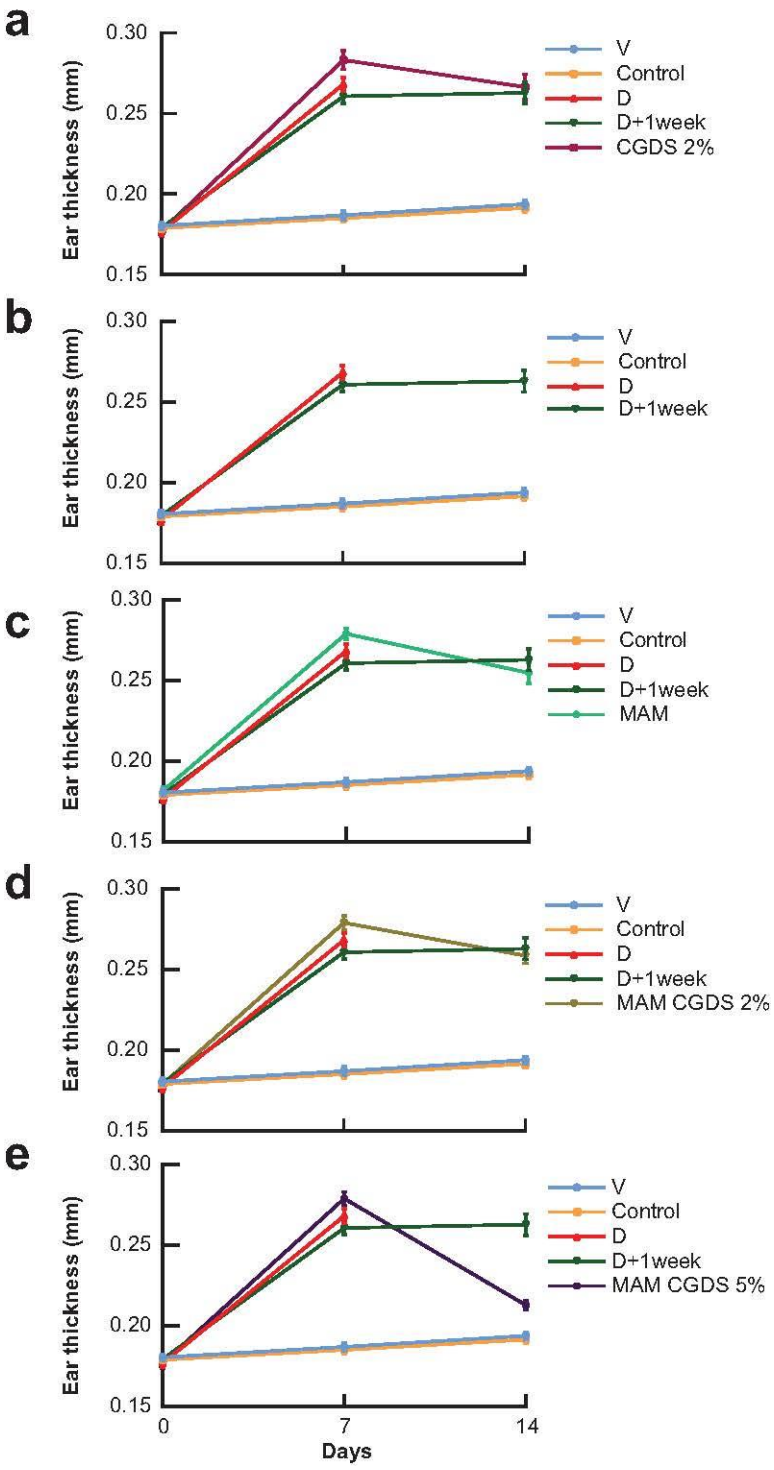
Supplementary Figures

S1. Ear thickness profiles for curative experimental treatments: novel formulations promote resolution of inflammation-induced ear thickening. a. Untreated naive (Control) mice with no ACD maintained constant ear thickness. **b.** Ears of ACD mice (D), which developed ACD but received no subsequent treatment, continued to thicken until DNFB was discontinued. At that point, recovery started and thickness declined. **c.** Mouse ear thickness increased as ACD developed, but with the application of MAM it rapidly declined. **d.** Mouse ear thickness increased as ACD developed, but with the application of disodium cromoglycate 2% it rapidly declined; however, four mice did not respond. **e.** Ears of ACD-induced mice increased in thickness, but declined when Formulation A was applied; however, two mice were unresponsive. **f.** Ear thickness of ACD-induced mice increased, but declined in all cases when Formulation B was applied, thus showing the best response to treatment. Arrows indicate when experimental treatment was begun. **g.** Average ear thickness profiles for the second curative experimental treatment showed a similar pattern; increases were induced by ACD, but subsequent decreases occurred with application of the two formulations. Untreated controls maintained their normal thicknesses (blue curve). Formulation B was most effective in reversing the effect of ACD (purple curve). Arrows indicate the onset of the secondary treatment. Measurements were collected every other day from both ears of seven mice for each treatment (n = 14). D, ACD; MAM, Mixture of Antioxidants and Moisturizer; CGDS2, cromoglycate 2%, MAM CGDS 2% (Formulation A); MAM CGDS 5% (Formulation B). ±SEMs are indicated, # $p<0.0001$, ns=not significant.


a
Control
animals
1
2
3
4
5
6
7
8
9
10
11
12
millimeters
days
b
D
millimeters
days
c
MAM
millimeters
d
Cromoglicato 2%
millimeters
days
e
Formulation A
f
Formulation B
millimeters
days
g
Ear thickness (mm)
days
V
MAM CGDS2%
D
MAM CGDS5%
ns
ns
ns
#

S2. ACD induction is altered by treatments with novel formulations. a-e. Ear thickness averages for each curative 14-day experimental treatment showed increases of about 0.1 mm induced by ACD during the first week. Following onset of secondary treatments during week two, thicknesses generally stabilized or were reduced. Treatment with a combination of MAM and cromoglycate 5% induced the most dramatic reduction, returning thicknesses to near starting levels (e). Onset of the secondary treatment occurred after one week. Measurements were collected at time zero and at one and two weeks from both ears of seven mice for each treatment. For clarity, these graphs present different combinations of same results, and represent two independent experiments (total n = 28). D, ACD; MAM, Mixture of Antioxidants and Moisturizer; CGDS2, cromoglycate 2%; MAM CGDS 2%, Formulation A; MAM CGDS 5%, Formulation B.


a
b
c
d
e
Ear thickness (mm)
0.30
0.25
0.20
0.15
V
Control
D
D+1week
CGDS 2%
MAM
MAM CGDS 2%
MAM CGDS 5%
0
7
14
Days