

MEADOWLACTONE®

MEASUREABLE ANTI-AGING BENEFITS DERIVED FROM NATURE



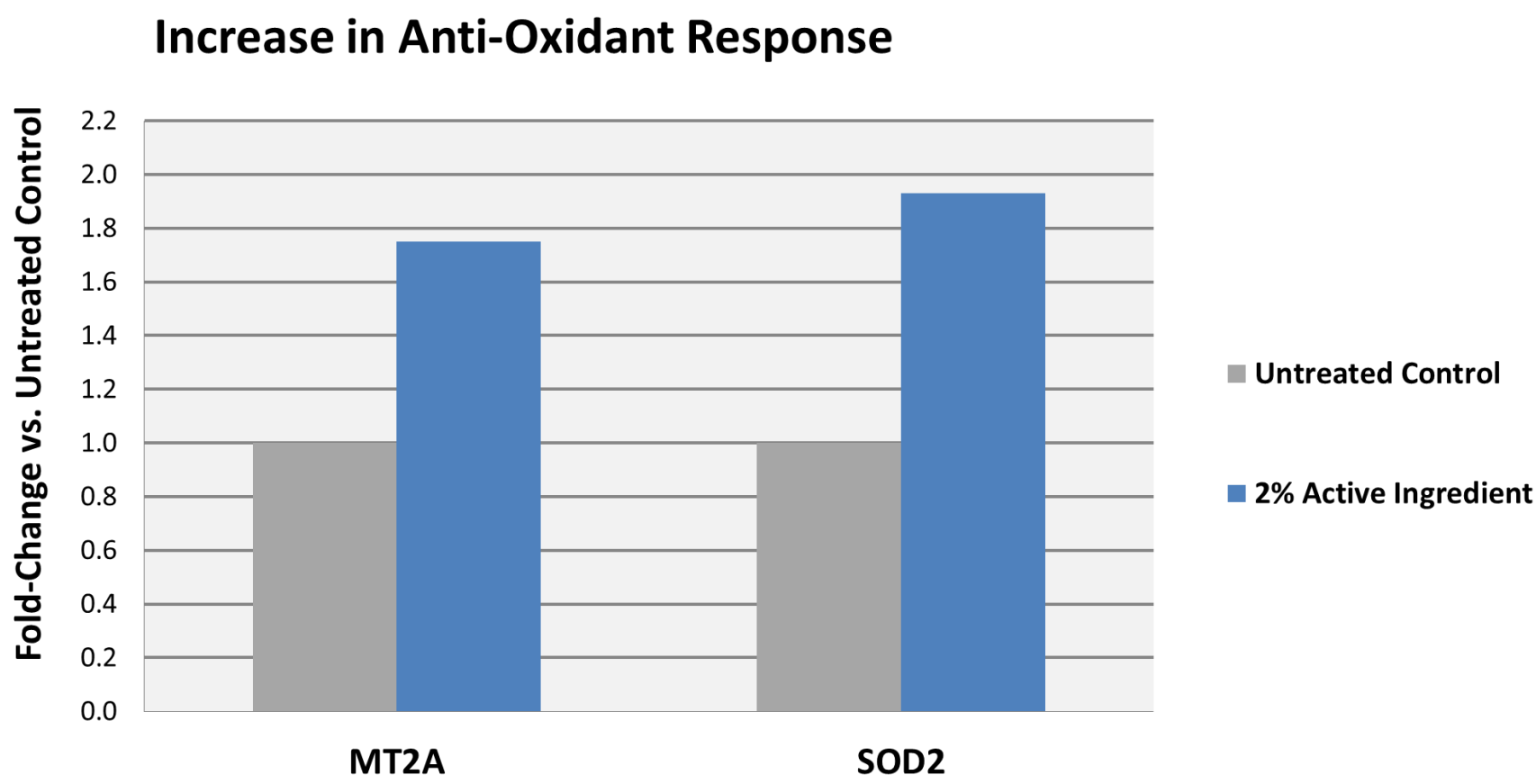
INTRODUCTION

Meadowlactone® is the optimized derivative of Meadowfoam Seed Oil created to contain the ideal ratio of bioactive components to deliver measureable and meaningful anti-aging benefits. An in-vitro study was conducted together with a specialized test institute, evaluated key genetic markers for the indication of potential anti-aging effects. Furthermore the real life relevance of the bioactivity and efficacy were proven in an in-vivo clinical study on facial skin. The in-vivo test showed an improvement in skin texture, total wrinkle surface area and overall appearance.

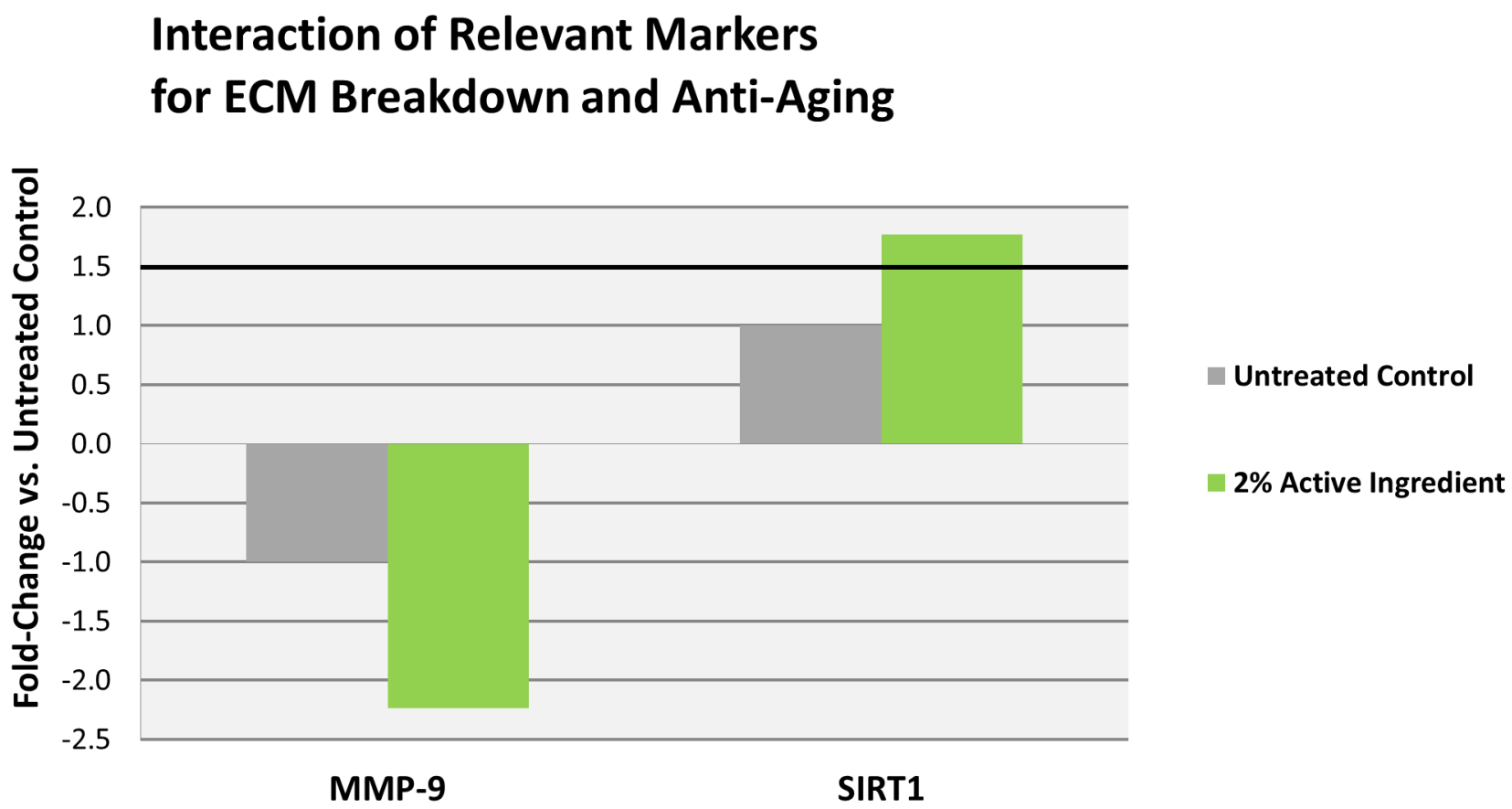
EFFICACY DATA

In-Vitro study

The current study was conducted by GENEMARKERS using a full-thickness in vitro skin culture model (EFT-400, MatTek). A simple vehicle containing 2% of the naturally derived active ingredient was applied to the surface of each test culture and incubated for a period of 24 hours. RNA was isolated and the expression of genes that regulate diverse biological functions, related to anti-aging processes, was measured using Taqman qPCR assays. Statistically significant changes in gene expression ($p \leq 0.05$; black lines) were reported.



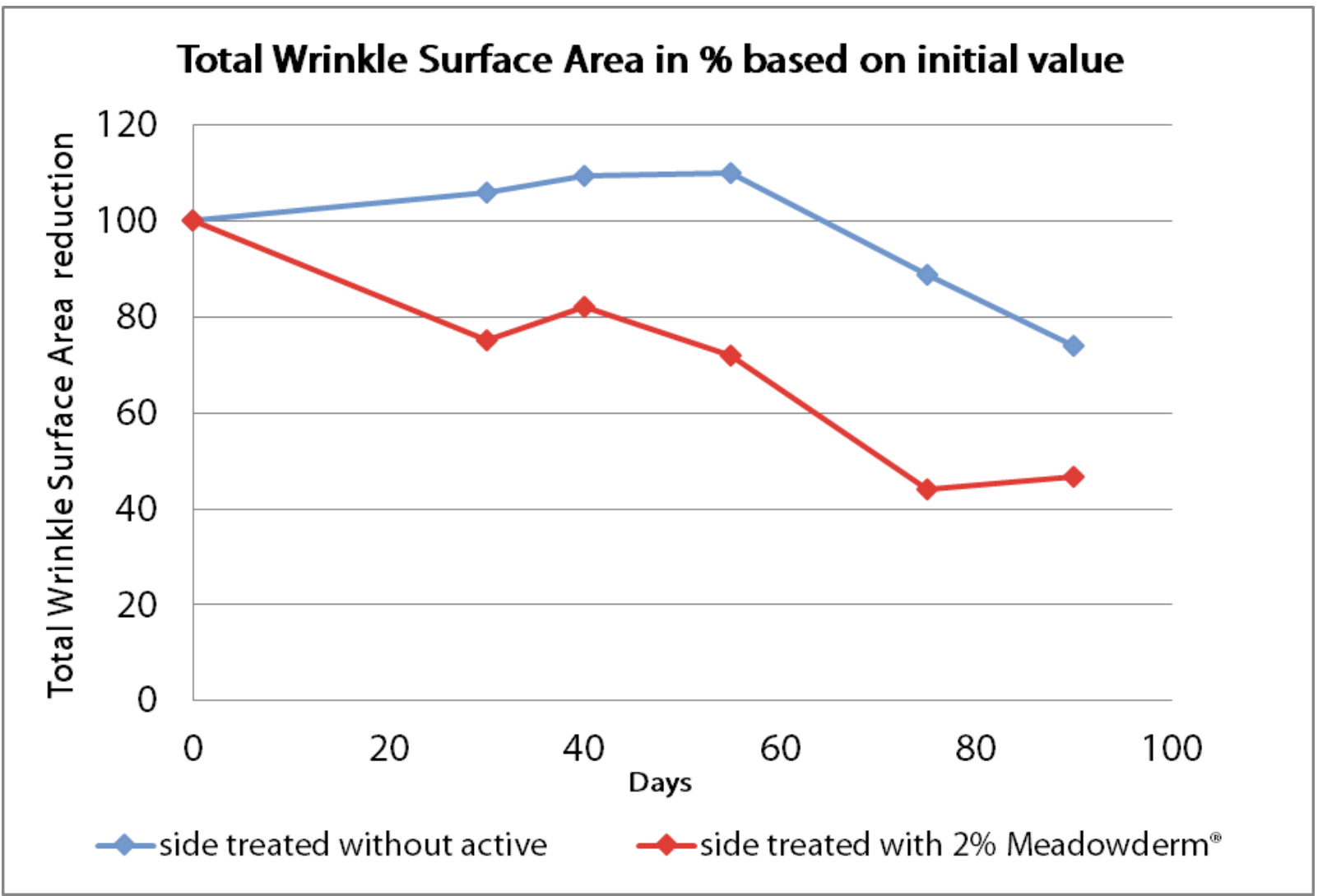
Naturally derived active ingredient treated samples show an increase in expression of Metallothionein-2 (MT2A)¹ and Superoxide dismutase 2 (SOD2)^{2,3} – proteins protecting the cell structures from oxidative stress.



Naturally derived active ingredient treated samples show an increased Sirtuin 1 (Sirt 1) expression – an enzyme known to reduce the severity of metabolic diseases affecting longevity. Our results confirm published data describing Sirt 1 as negative regulator of MMP-9 expression. MMP-9 (matrix metalloproteinase 9) is a major enzyme in the degradation of collagen fragments of the extracellular matrix⁵.

Clinical study

Just by looking at the face we can see that aged skin differs significantly from young childrens skin. As we age the skin becomes less elastic and generally thinner. The pore size increases and the skin tone becomes duller or even greyish. The skin renewal process needs more time and wrinkles and age spots start to manifest. Anti-aging effects of the human skin, using state of the art cosmetics can be visible by slowing down the aging rate or in best case reducing the visible effects. The experimental design of the clinical evaluation was a half-face design, with one side of the face treated with active at 2% concentration in an O/W face cream and the other side treated with the same cream but formulated without active as placebo. The participants were not aware which side was treated with the active component and their opinion and impression of differences during the treatment were recorded.



VisioFace® RD photography

Right side

Treated with 2% Meadowlactone®

Left side

Treated with Placebo Cream

