

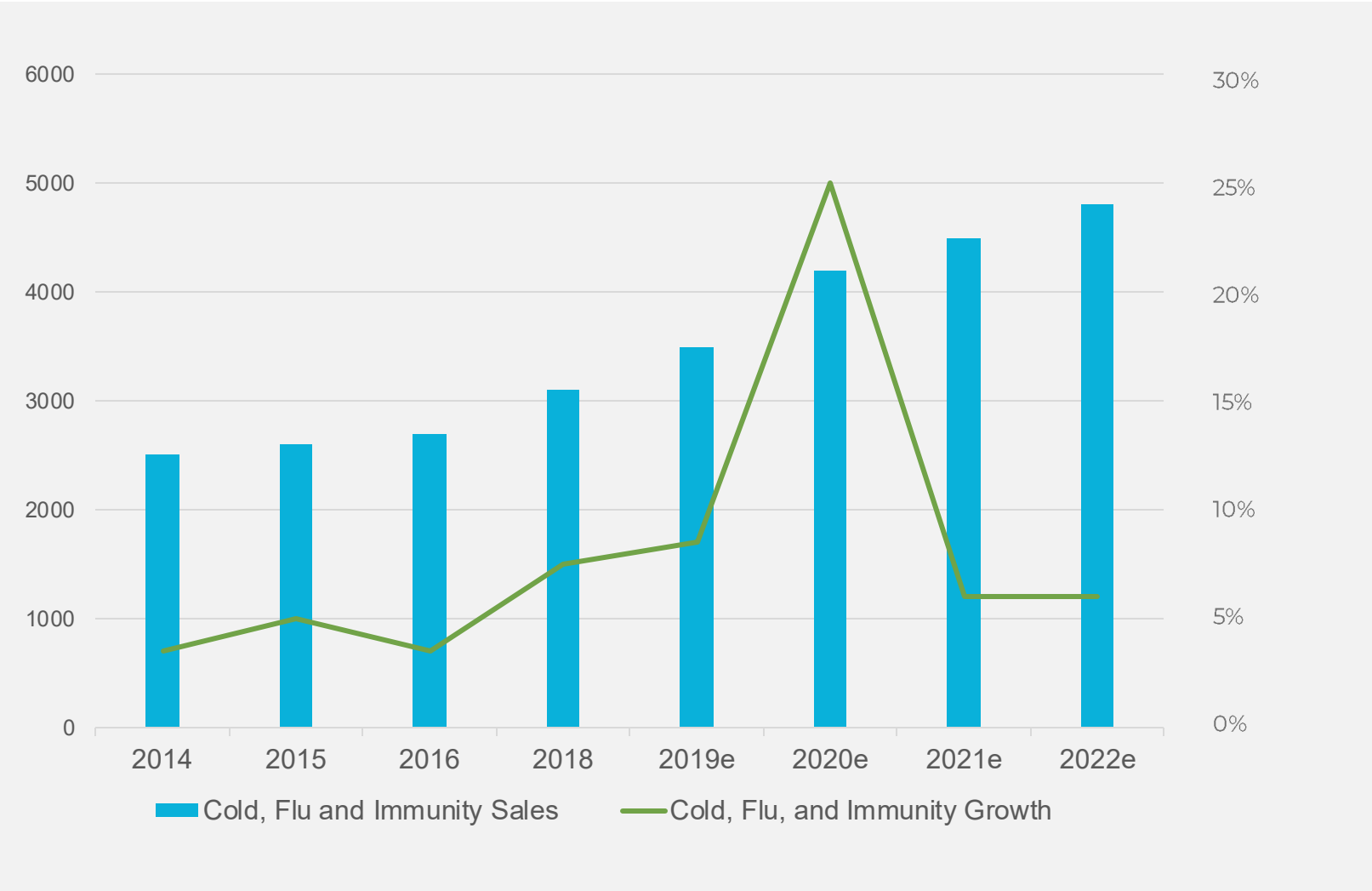


KalmColdTM

**The Power of Andrographis for
Strong Immune Health**

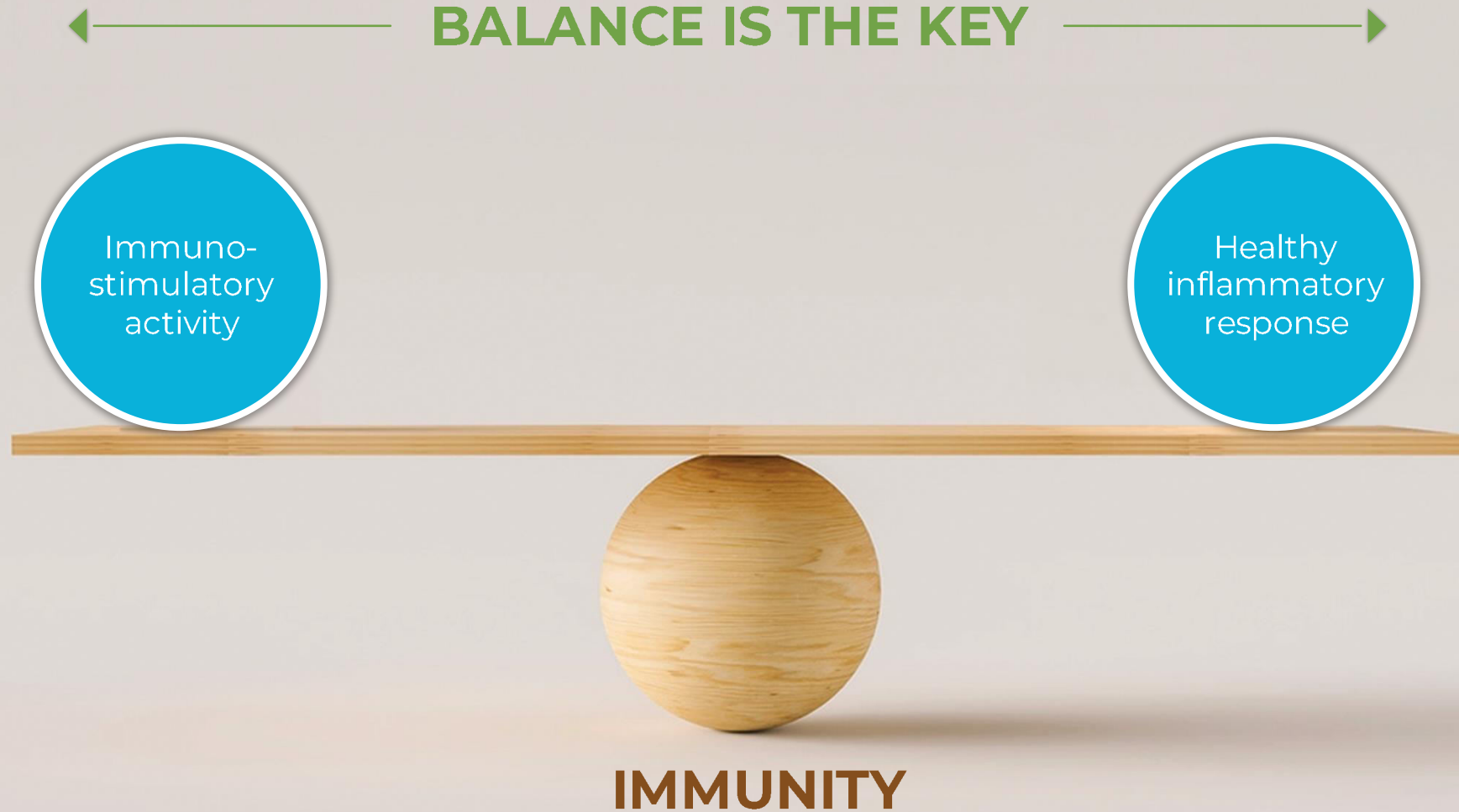


The immune health market scenario



- Cold /Flu & Immunity is one of the fastest growing health categories
- Estimated to reach \$ 25 Billion by 2025**
- Herbal extracts are the fastest-growing ingredient, which is expected to grow at a CAGR of over 12% from 2020-2025.

Immunity and controlled inflammation



Andrographis paniculata



Unique botanical with immuno-stimulatory and healthy inflammatory response properties

Scientific name: *Andrographis paniculata*

Family: Acanthaceae

Part used: Leaves, aerial parts

English name: King of Bitters, The Creat

Common Names: Kalmegh, Andrographis



Widely used in India, China and South East Asia as traditional medicine for managing common cold symptoms

Scientific evidence



3 Meta-analysis & 1 Systematic review of
45 clinical studies on *Andrographis paniculata*

Reference:

1. Wagner et al. Forsch Komplementmed. 2015;22(6):359-368 | 2. Hu et al. PLoS One. 2017 Aug 4;12(8):e0181780 | 3. Coon and Ernst E. Planta Medica 2004, 70(4): 293-298 | 4. Poolsup et al. Journal of Clinical Pharmacy and Therapeutics 2004, 29(1): 37-45.



Reduced frequency & severity
of cough symptoms¹



Reduced cough & sore throat
compared to placebo²



Shortened the duration of cough,
sore throat & sick leave/time to
resolution compared to usual care²



Improved overall symptoms
compared to placebo & usual care²



Reduces the subjective symptoms
of uncomplicated URTI³



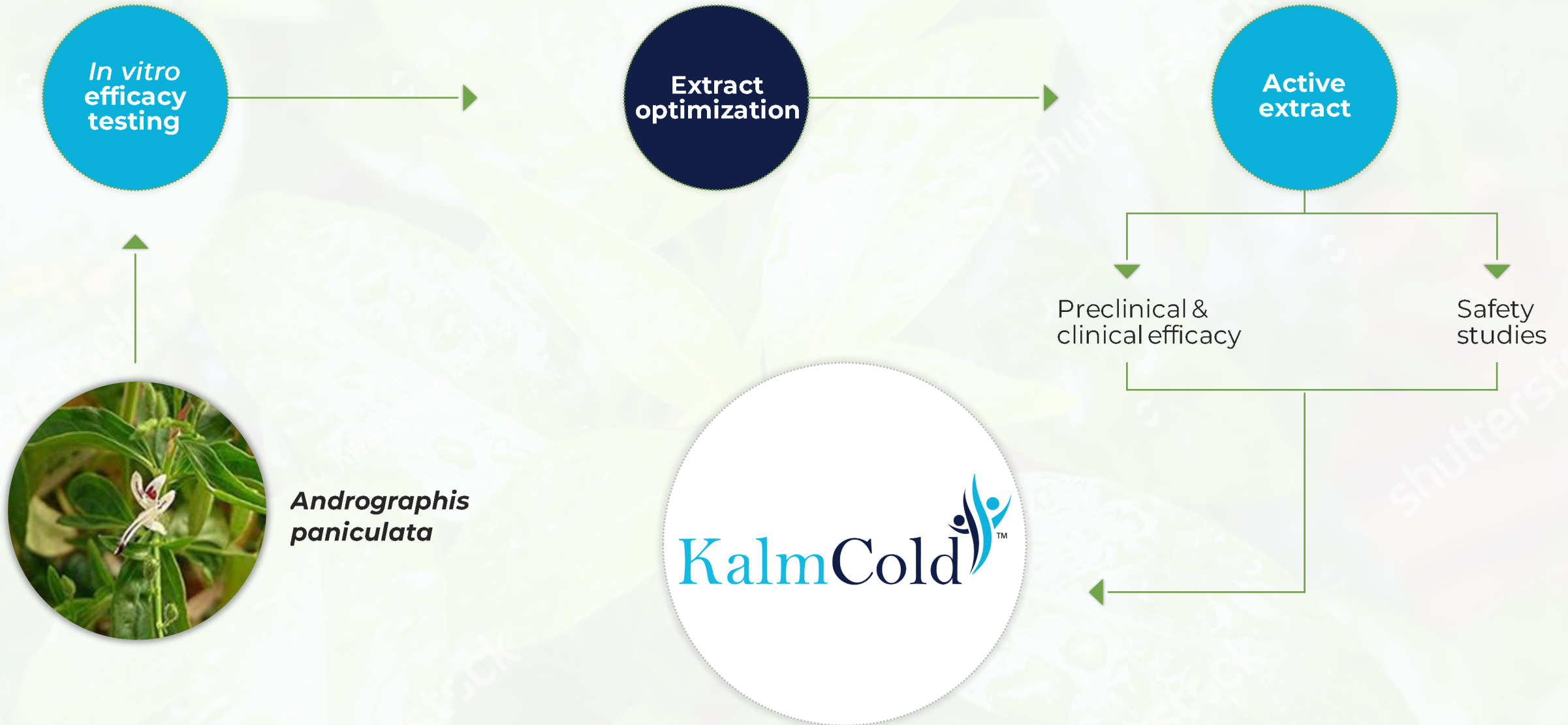
Effective as an early
support for acute URTI⁴



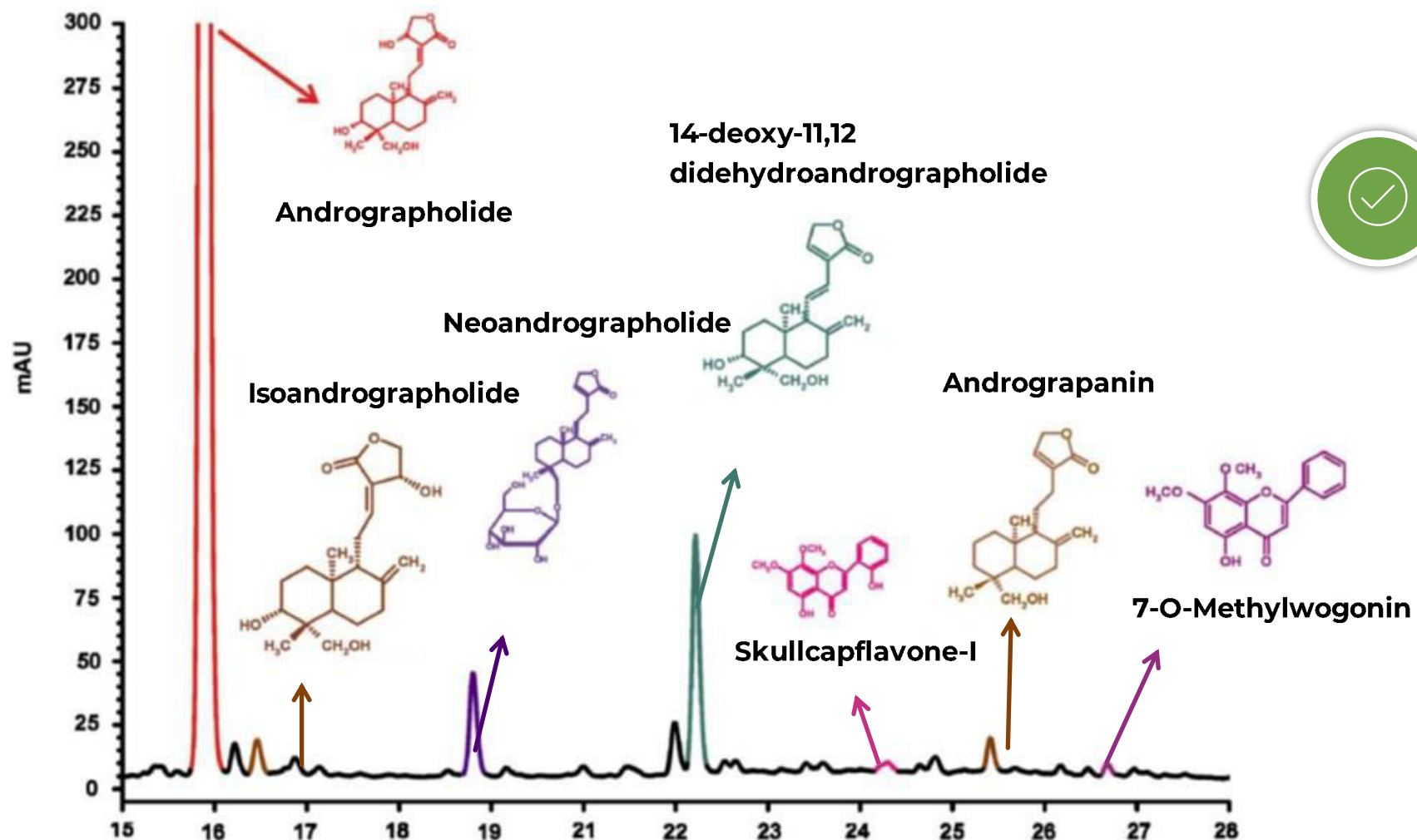
The power of *Andrographis* for
strong Immune Health

KalmCold® is a fast-acting *Andrographis paniculata* with seven bioactives, clinically researched to work by healthy inflammatory response & immuno-stimulatory balance at a low dose

Development of KalmCold®



Unique phytochemical profile of AP-Bio®



7 unique bioactives standardized to >30% andrographolide

7 Unique bioactive constituents of KalmCold®:

Their actions on immunity and inflammation

Actives of KalmCold®	Mechanism	Effect
Andrographolide	Nitric oxide, iNOS, IL-1β, IL-6, TXB ₂ , PGE ₂ & IL-5	<div>Healthy inflammatory and Immuno-stimulation</div>
Isoandrographolide	Nitric oxide, IL-1β, IL-6, TXB ₂ & PGE ₂	
Neoandrographolide	Nitric oxide, PGE ₂ , p38 mitogen activated protein kinase	
Andrograpanin	TNF-alpha, IL-6 and IL-12p70 and p38 mitogen activated protein kinase	
Skullcapflavone-I	Nitric oxide, IL-6, TXB ₂ , PGE ₂ & LTB ₄	
7-O-methylwogonin	Nitric oxide, IL-1β, PGE ₂ , LTB ₄ & histamine	

Healthy Inflammatory Clinical Study



Research Findings of KalmCold®:

Healthy-inflammatory response



Clinical study

Two randomized double-blind placebo-controlled study in subjects with symptoms of common cold¹



Preclinical efficacy studies

Effect on inflammatory and allergic mediators
(in vitro)^{2,3}

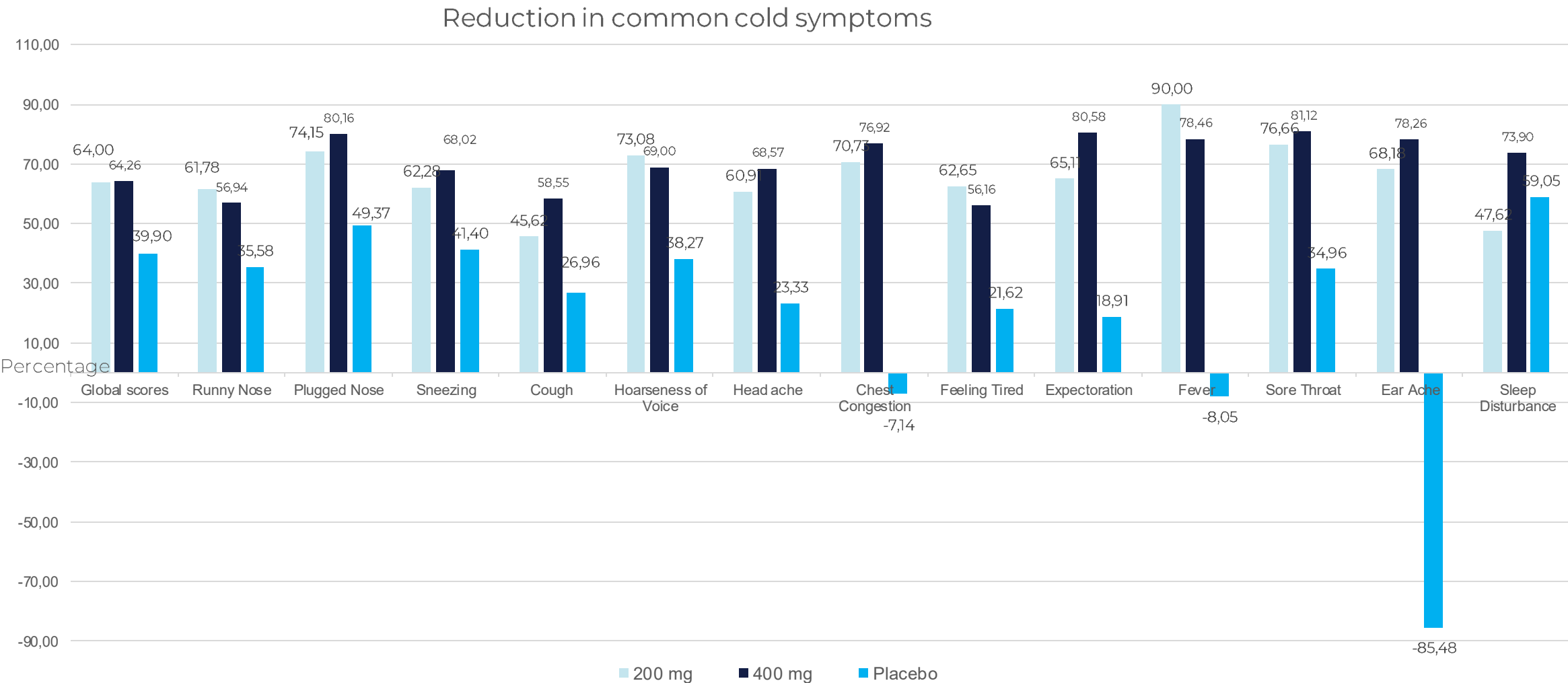
References:
1. Saxena et al. Phytomedicine 2010, 17: 178-185. | 2. Chandrasekaran et al. Journal of Ethnopharmacology 2010, 129(2):203-207. | 3. Chandrasekaran et al. International Immunopharmacology 2011, 11(1): 79-84. | 4. Chandrasekaran et al. Food and Chemical Toxicology 2009, 47:1892-1902.

Randomized placebo controlled clinical study of KalmCold® - Healthy-inflammatory response



Condition	Subjects with symptoms of upper respiratory tract infection
Dose	200 mg and 400 mg
Participants	200 adults (Age: 18-60 years)
Duration	7 days
Evaluation	Baseline, 6 hours, Day 2, Day 3, Day 5 and Day 7
Outcome	KalmCold® 200mg and 400mg groups showed significantly better resolution of symptoms of uncomplicated upper respiratory tract infections when compared with placebo

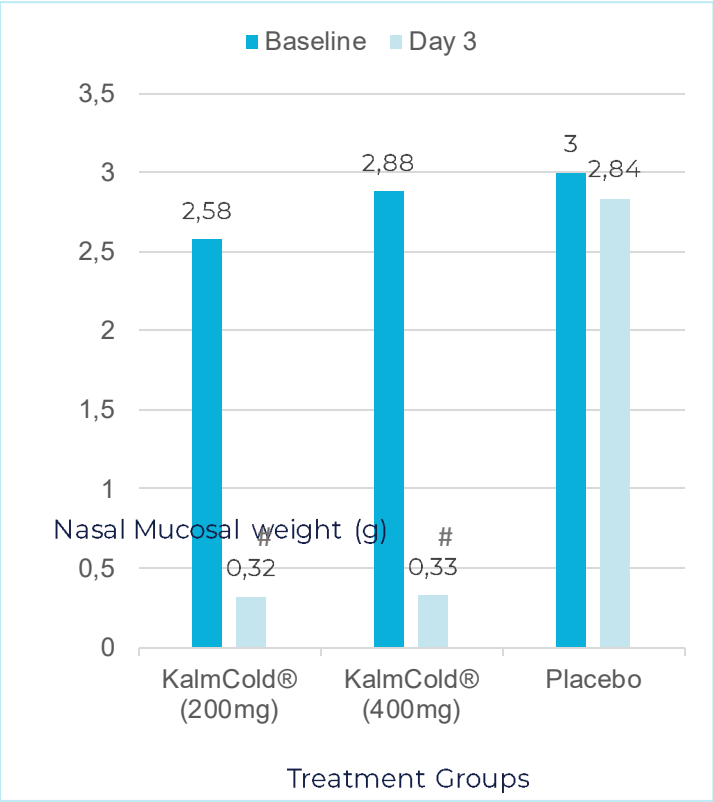
Results – Subjective parameters



- AP-Bio® showed prominent effects at day 3 and the efficacy is 1.6 times the placebo effects.
- Minimal clinical important difference was observed at day 3.

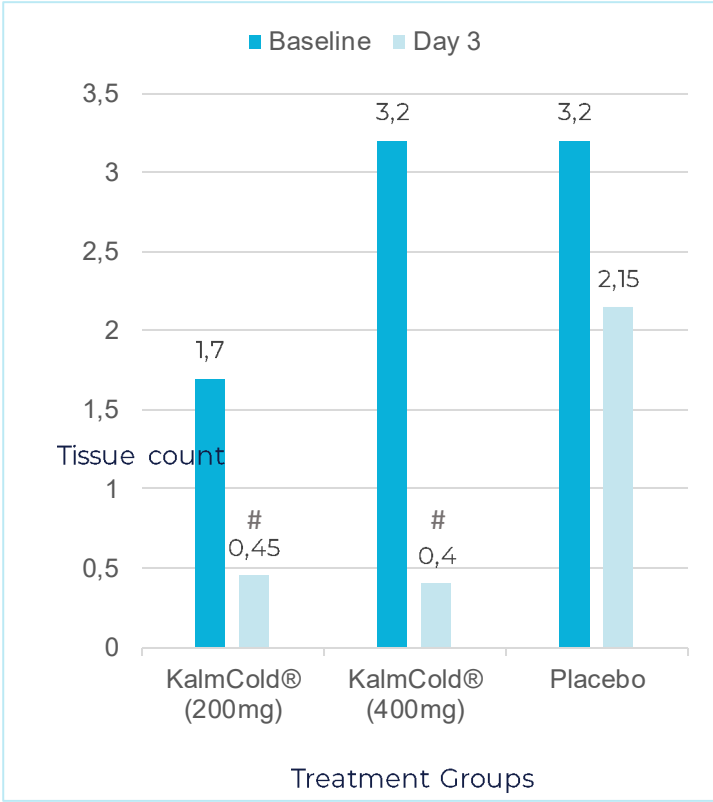
Results-Objective parameters

Effect of KalmCold® on Nasal mucosal weight



n=20 for each group;
* Baseline Vs Day 3

Effect of KalmCold® on Tissue counts

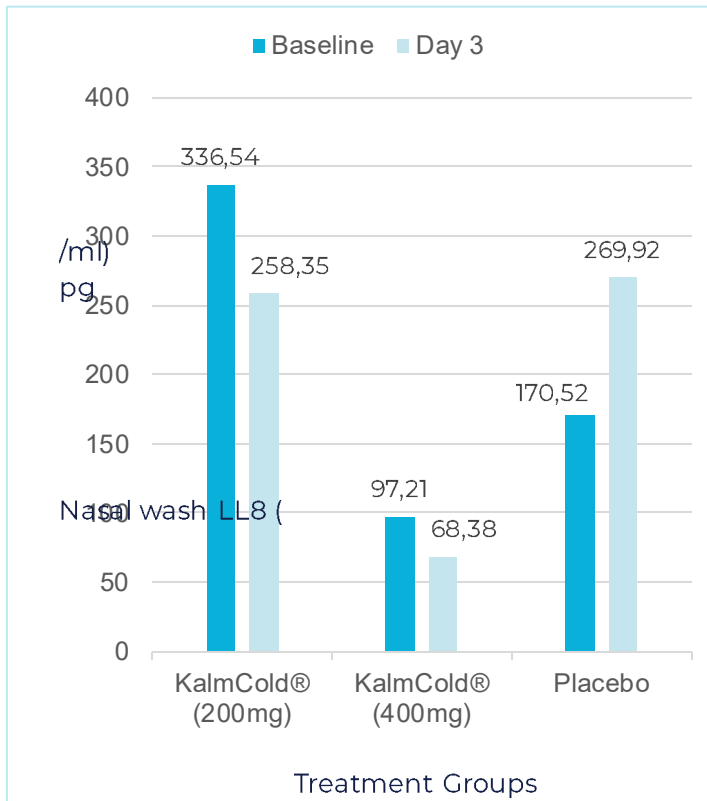


n=20 for each group;
* Baseline Vs Day 3

The objective parameters like nasal mucosal weight, number of tissue papers used showed a strong trend towards significant difference in both the KalmCold® groups when compared to the placebo group.

Results- Objective parameters: IL-8 and cold symptoms

Effect of KalmCold®
on IL-8



n=20 for each group;

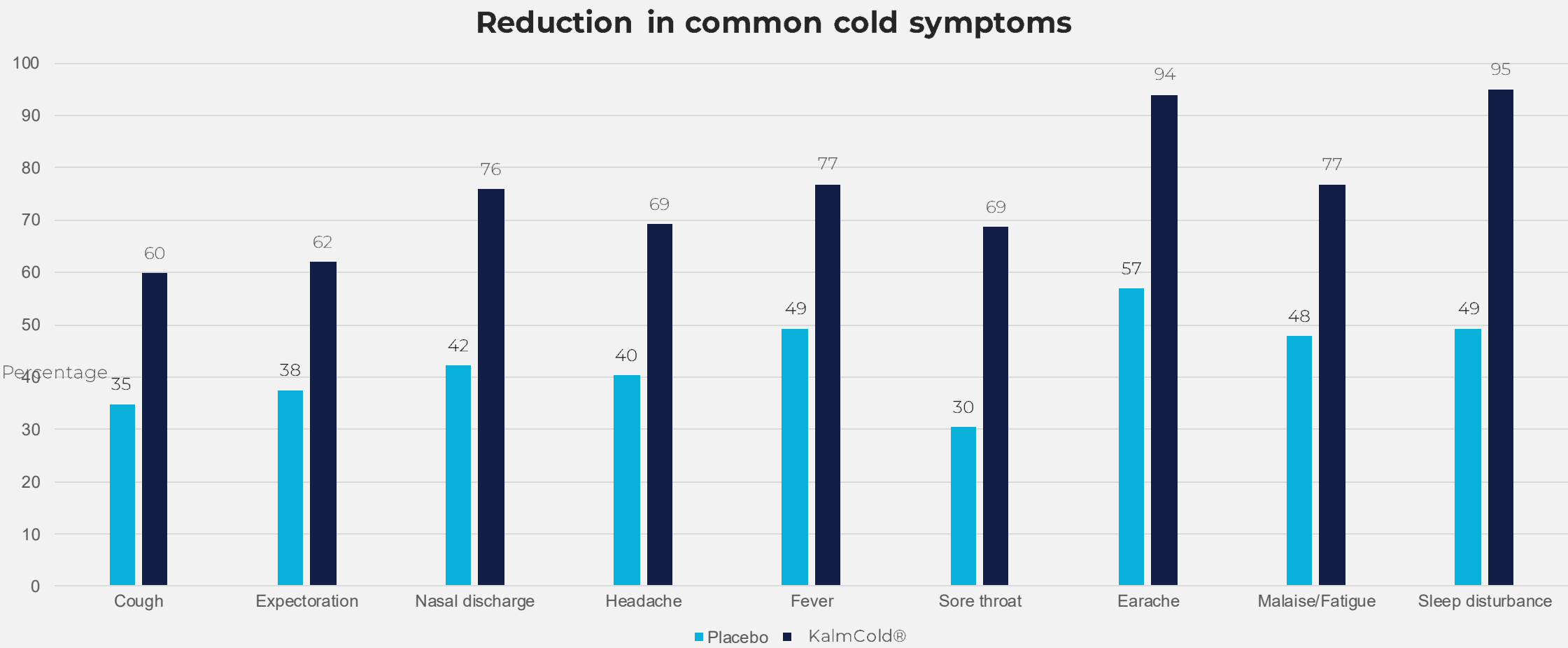
- IL-8 is a major cytokine of human nasal epithelium, readily produced upon virus infection including influenza virus A.
- IL-8 concentrations are high in individuals with acute respiratory infection.
- IL-8 concentration correlates with symptom severity/Global severity.
- IL-8 has a strong correlation with the nasal domain of acute respiratory infection illness and in fact most strongly with three specific symptoms: runny nose, plugged nose, and sneezing

KalmCold® significantly lowers IL-8

Randomized double-blind placebo controlled clinical study of KalmCold® - Healthy-inflammatory response

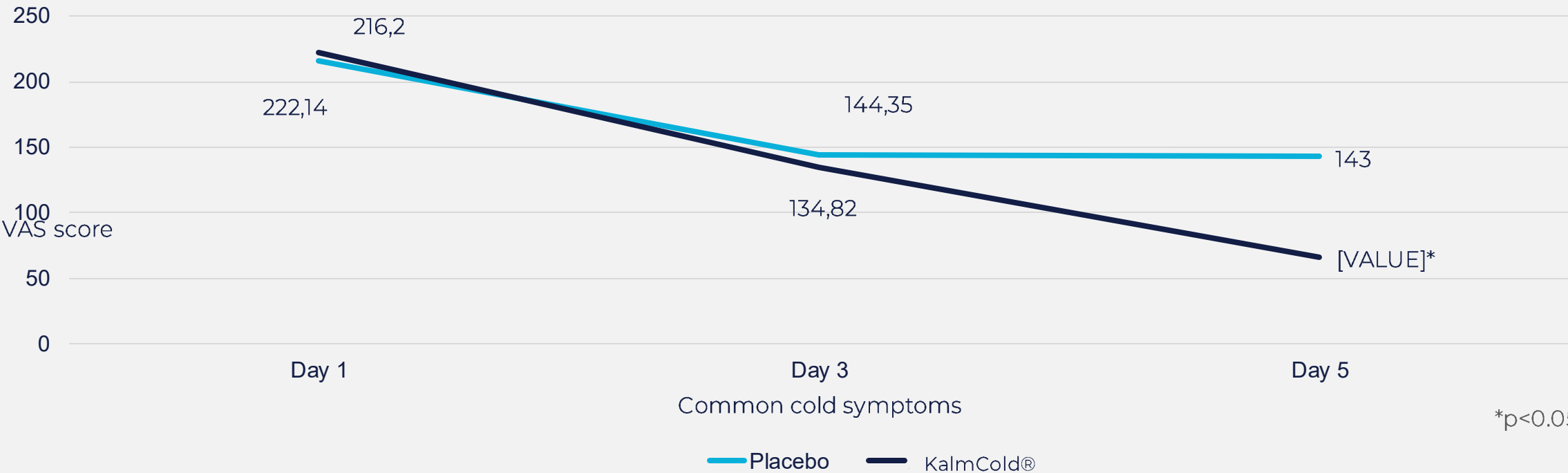
Condition	Subjects with symptoms of common cold
Dose	200 mg per day
Participants	223 adults (Age: 18-60 years)
Duration	5 days
Evaluation	Day 1, Day 3, and Day 5 (using Visual Analogue Scale)
Outcome	KalmCold® showed 2 times efficacy as compared to placebo and was well tolerated

Results



Saxena et al. Phytomedicine 2010, 17: 178-185.

Overall symptoms score

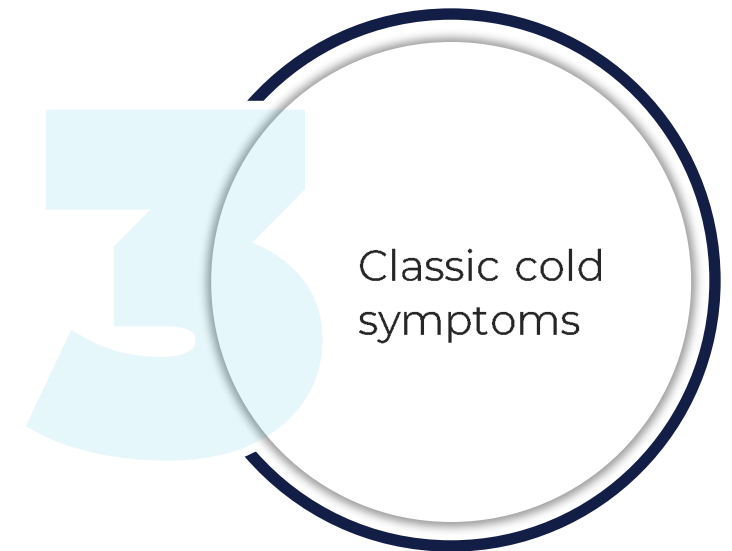
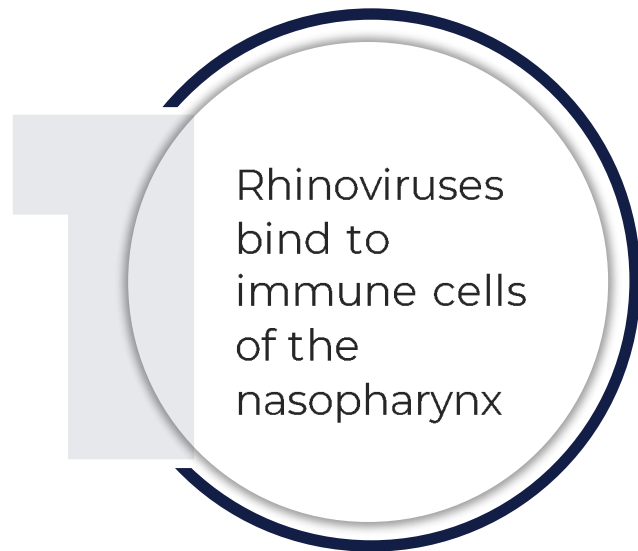


KalmCold® showed 2 times efficacy as compared to placebo and was well tolerated

Preclinical Study

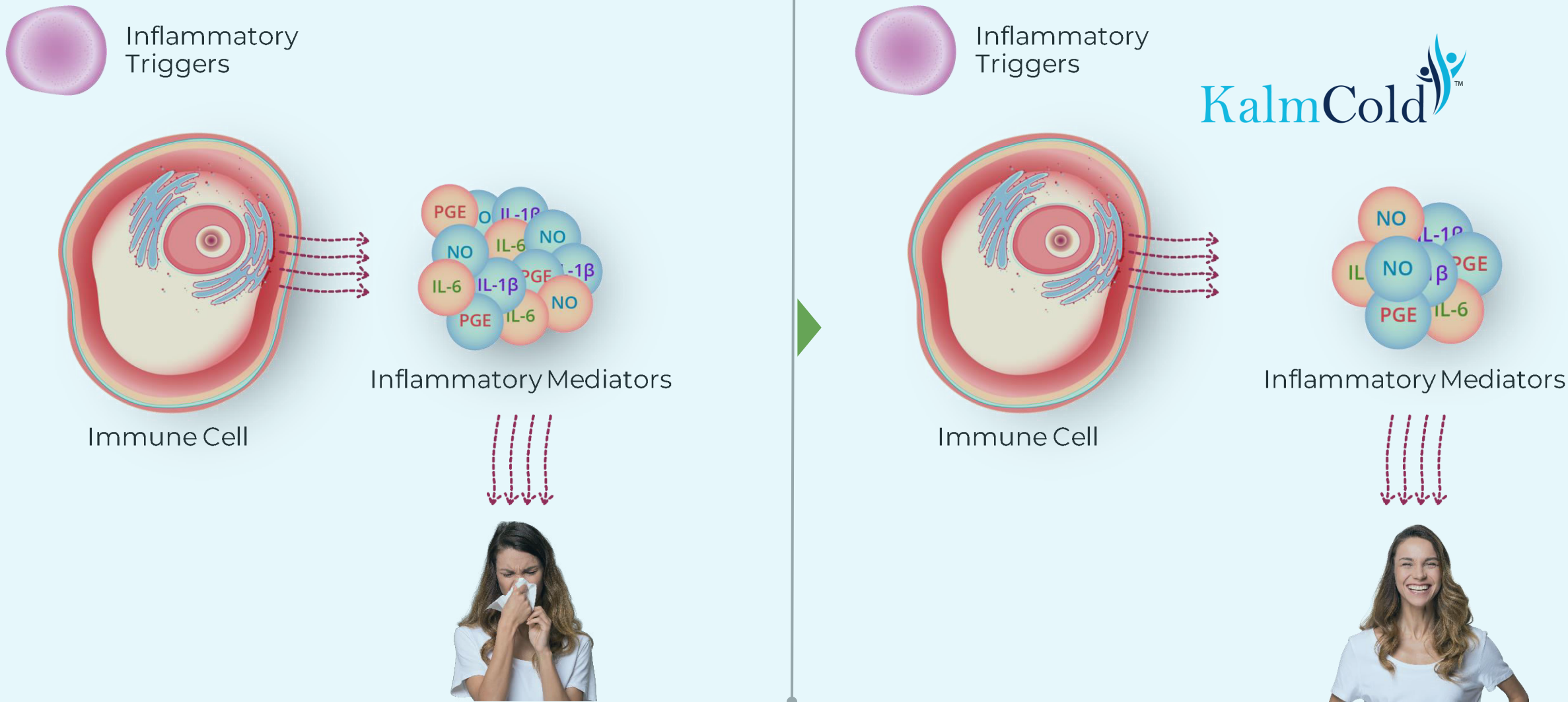


Role of inflammatory mediators in common cold



Reference: Roxas and Jurenka. Alternative Medicine Review 2007,12(1):25-48.

KalmCold® reduces inflammatory mediators



Immuno-stimulatory Clinical Study



Research Findings of KalmCold®:

Immuno-stimulatory activity



Clinical study

A prospective open label, single centre, single-arm study of KalmCold® on immuno-stimulatory activity



Preclinical efficacy study

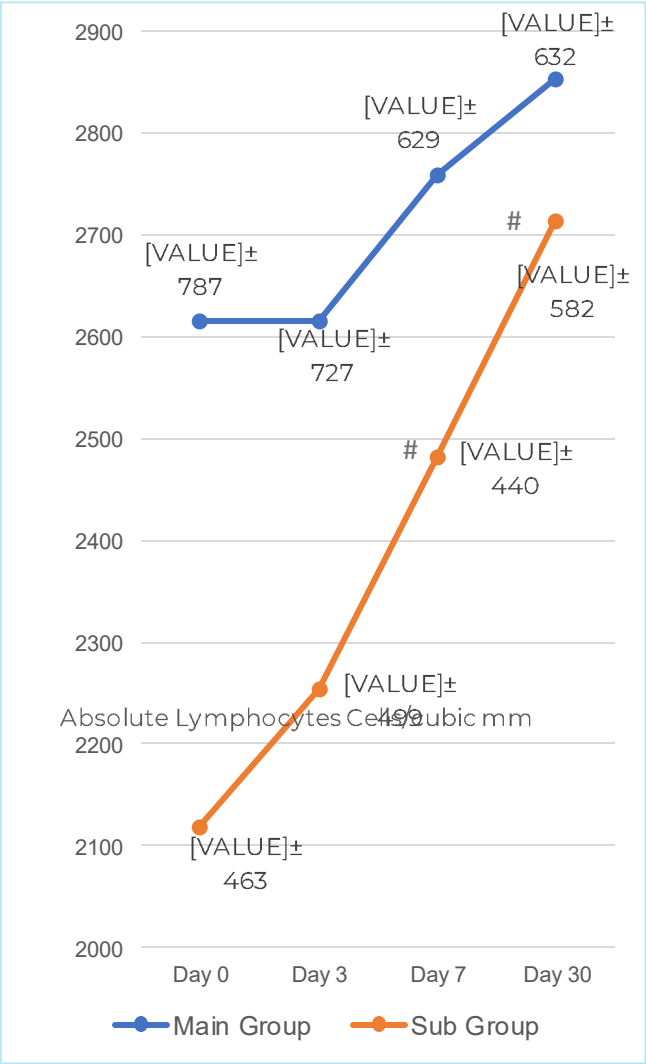
Effect of KalmCold® on Phagocytes and NK cells (Immune cells)

A prospective open label, single centre, single-arm study of KalmCold® - Immuno-stimulatory activity

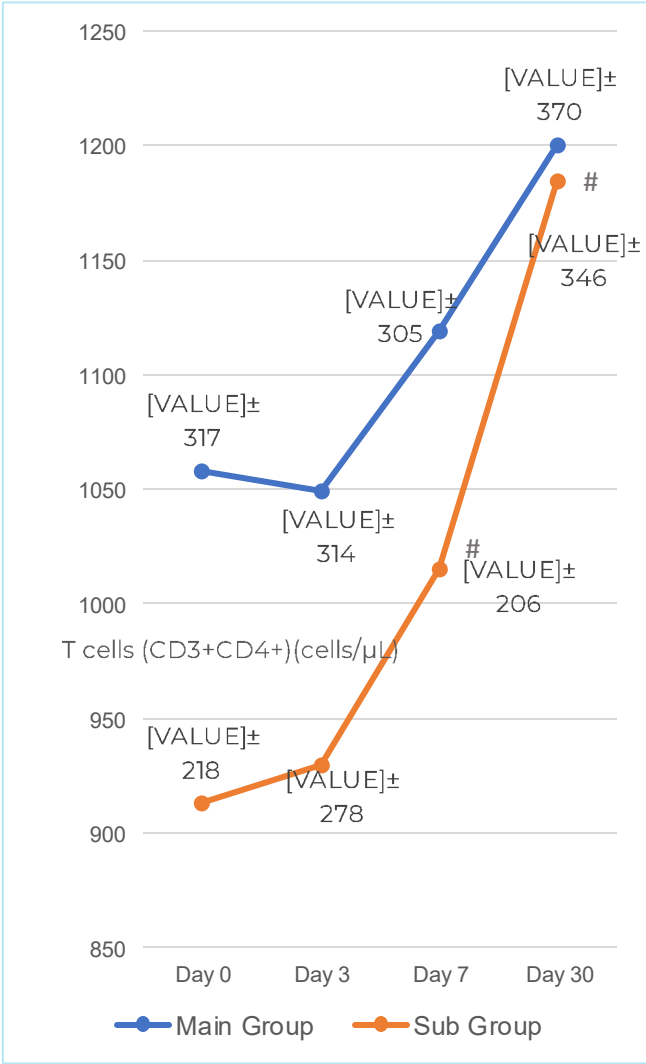
NEW!

Condition	Healthy volunteers
Dose	100 mg twice a day
Participants	30 adults
Duration	30 days
Evaluation	Screening day, day 3, day 7, day 30
Outcome	KalmCold® supports immunity by increasing INF gamma, IL-4 coupled by increased CD4+ and absolute lymphocytes count and decreasing IL-2

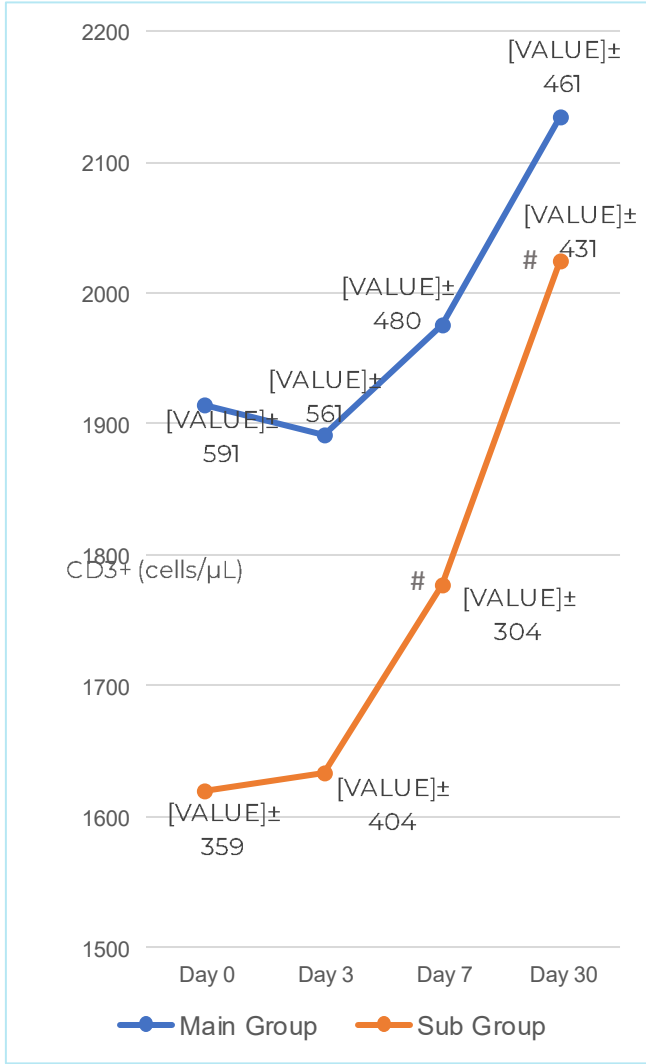
Results- Effect on immune cells



KalmCold® increased Absolute lymphocyte count

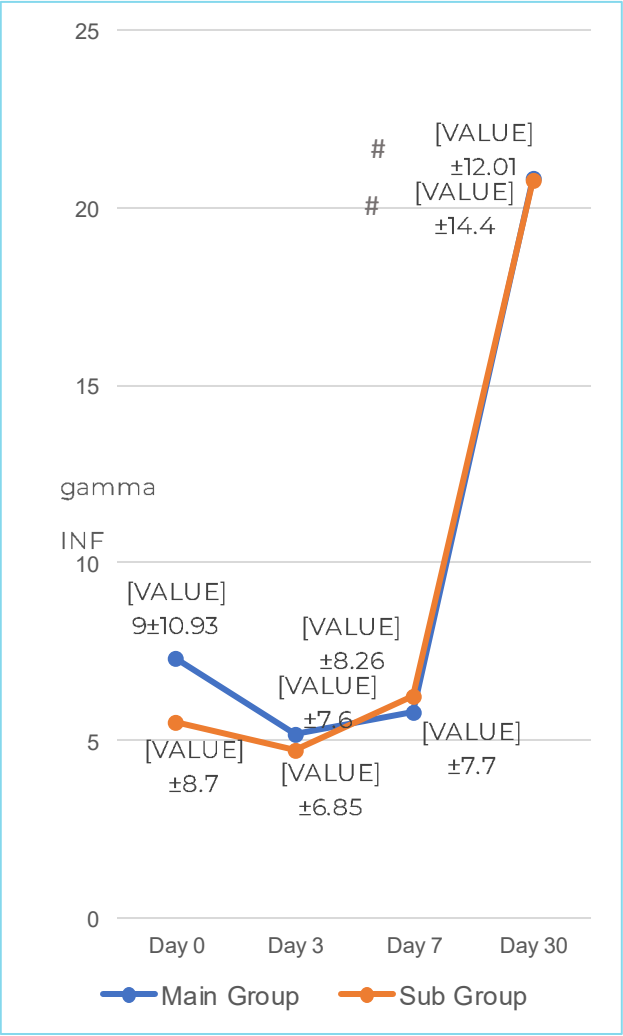


KalmCold® increased T cells

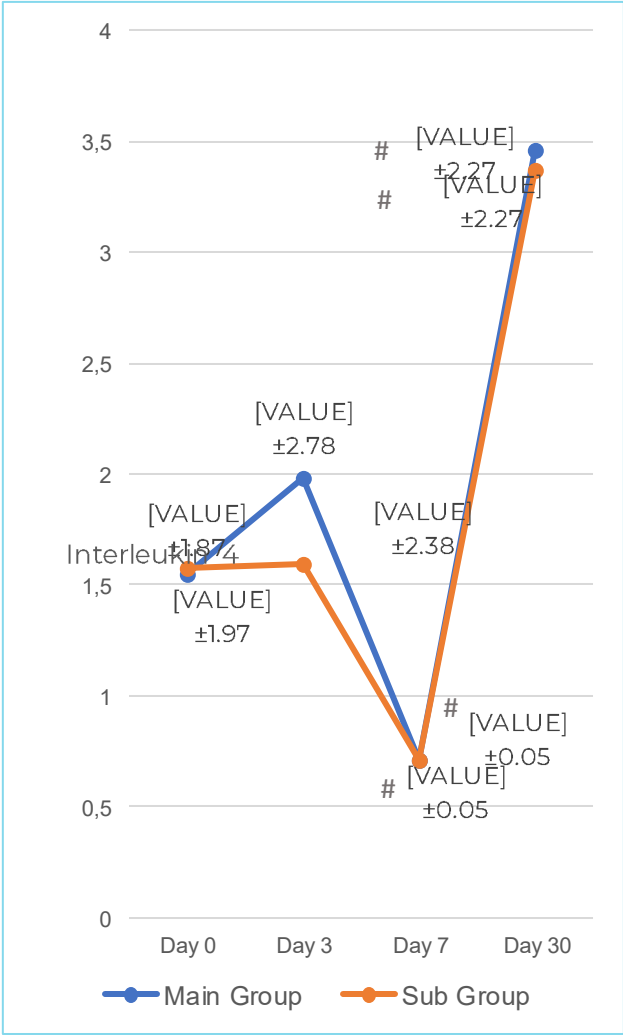


KalmCold® increased CD3+ cells

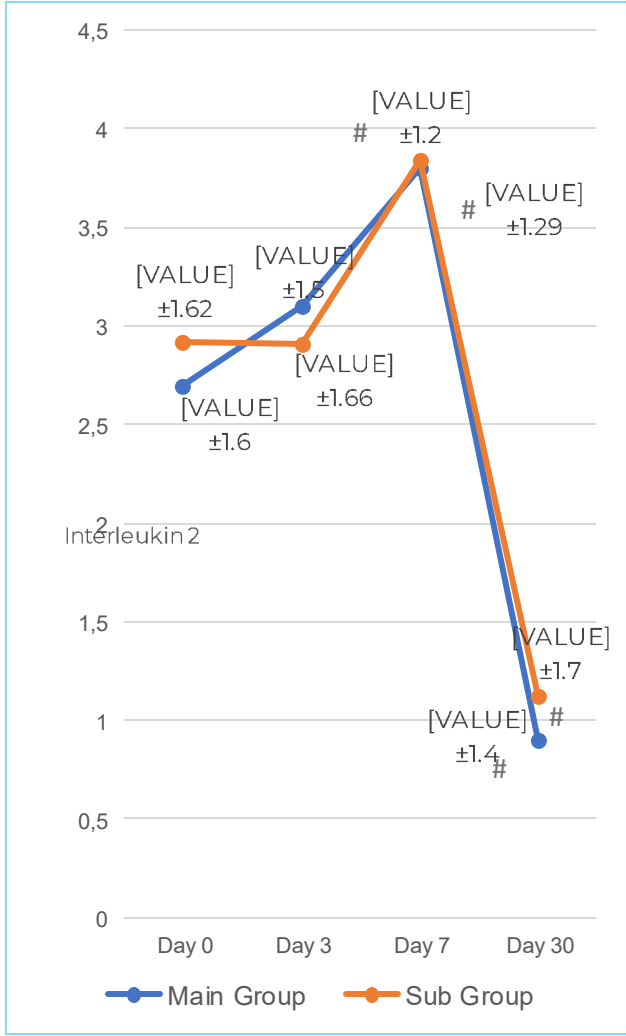
Results- Effect on immune cell mediators



KalmCold® increased INF gamma



KalmCold® increased IL 4

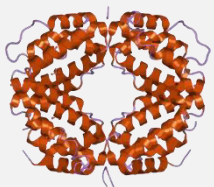


KalmCold® decreased IL 2

Clinical Outcomes- Immuno-stimulatory activity

AP-Bio® improves immunity evident from:

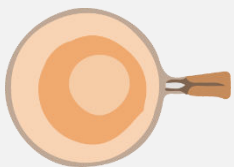
Increased INF gamma | Increased IL-4 | Increased CD4+ and CD3+ | Increased absolute lymphocytes count | Decreased IL-2



INF Gamma



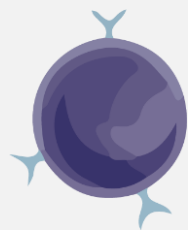
Interleukin 4



CD4+ helper cells



CD3+ cells



Lymphocytes



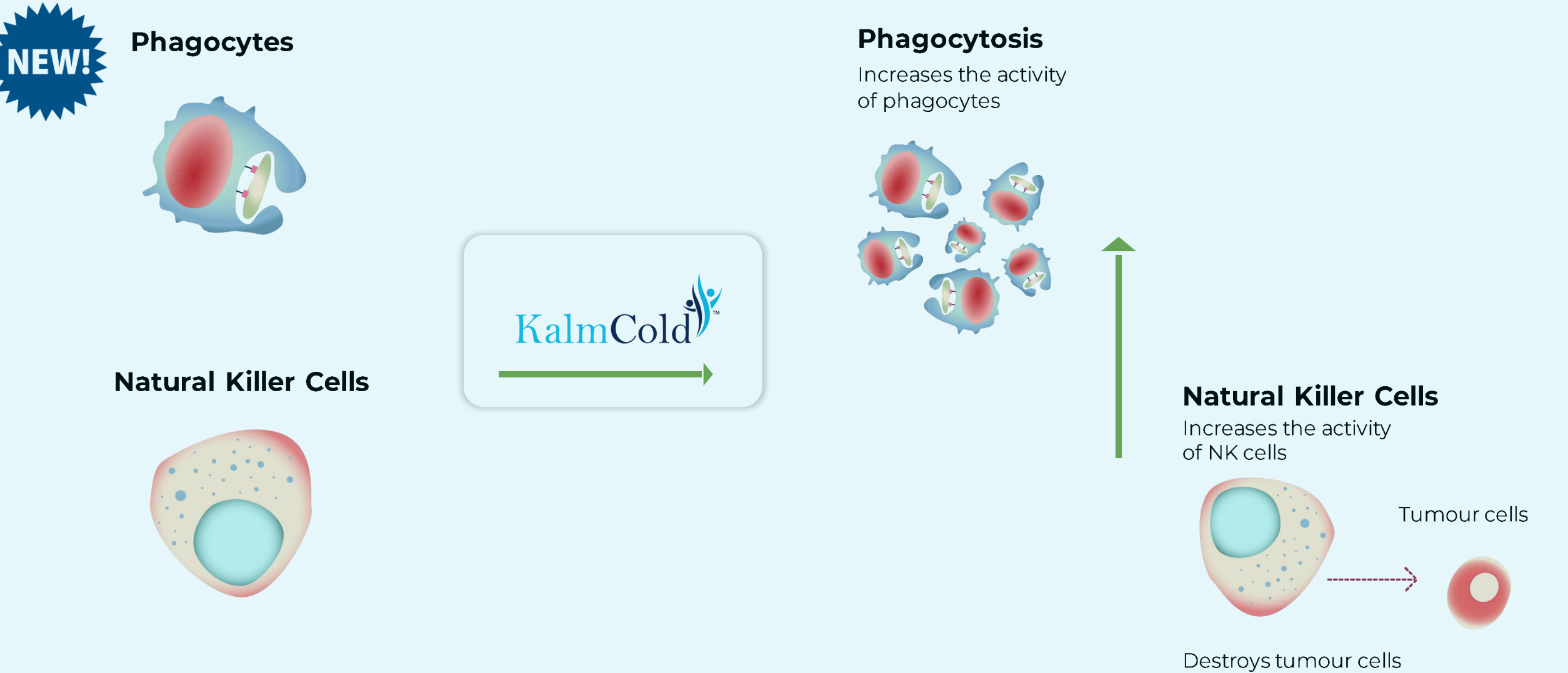
Interleukin 2



Preclinical Study



KalmCold® increases the activity of phagocytes and NK cells



Safety of KalmCold®



Safety study

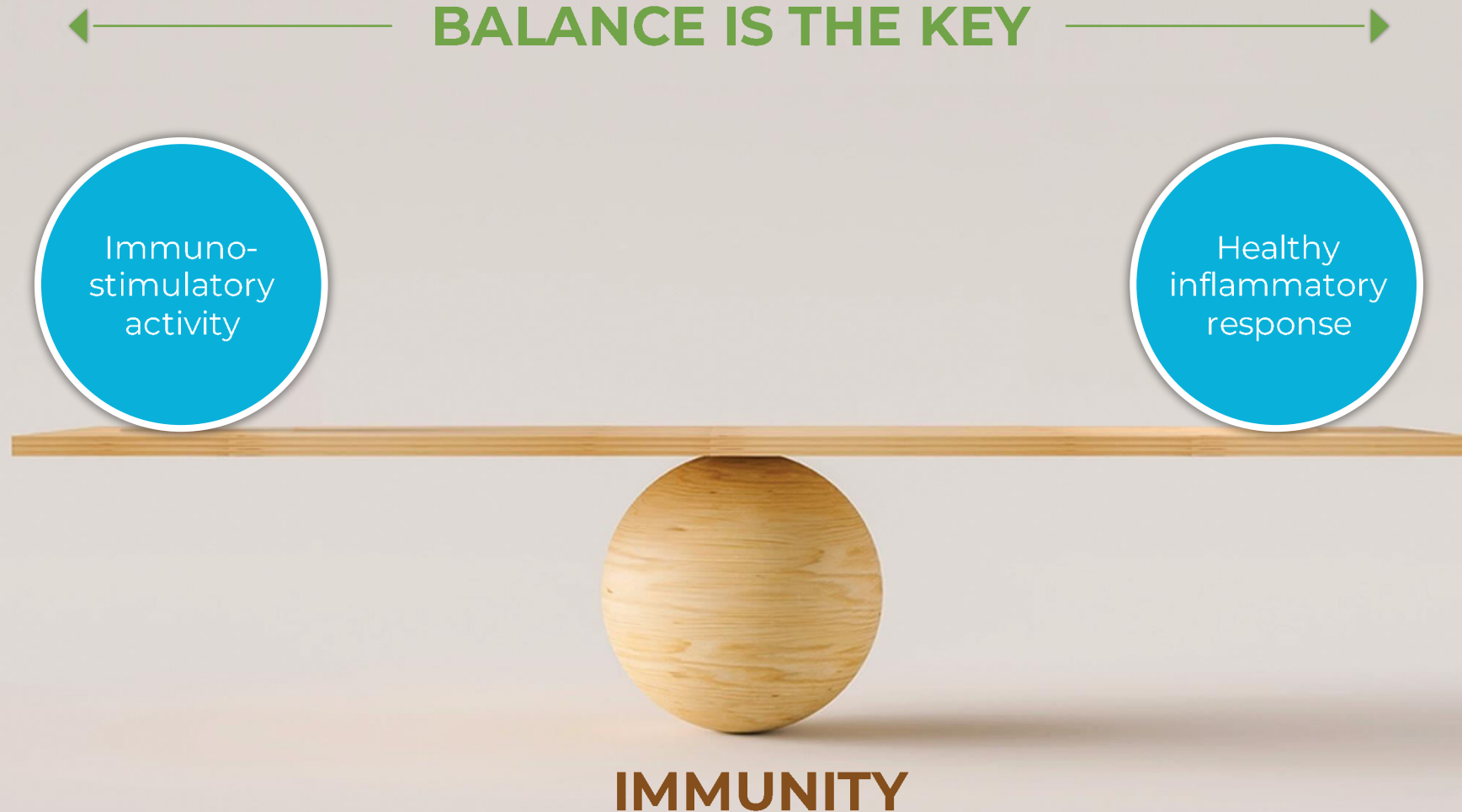
Non-mutagenic (battery of in vitro tests)⁴ Non-toxic (up to 5000 mg/kg, p.o. in rats)⁴

A large white shield with a blue border is centered on the page. Inside the shield, the KalmCold logo is displayed. The logo consists of the text "KalmCold" in a serif font, followed by a stylized blue figure with arms raised, and a small "TM" trademark symbol.

KalmCold™

KalmCold® is safe for human consumption

KalmCold® supports immune health by immuno-stimulatory and healthy- inflammatory balance



Possible health claims and Dose of KalmCold®:

- Supports immunity*
- Positively modulates immune response*
- Helps to reduce symptoms of common cold and upper respiratory tract infections, such as sore throat, cough, runny nose, fatigue and fever*
- Support immune function and to relieve symptoms of mild fever, common cold and sore throat*
- Maintains healthy inflammatory response & immuno-stimulatory balance*

Dosage

200 – 400 mg per day



Making a difference at every step through sustainability



Andrographis for KalmCold® is cultivated using Good Agricultural Practices. . We procure our seeds from a government-approved agency, which assures their authenticity. Plants are not harvested until they are fully grown and flowering, ensuring their optimal phytochemical composition.



We minimize our carbon footprint by cultivating mostly with non-fossil fuels and without machinery that uses the fossil fuels. We reuse the water used for growing the botanical crop.

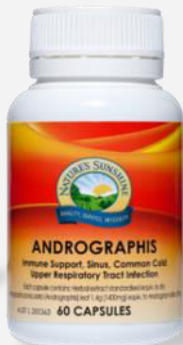
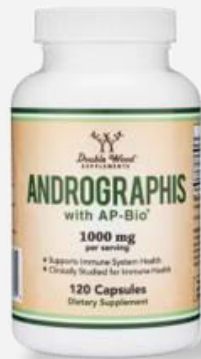
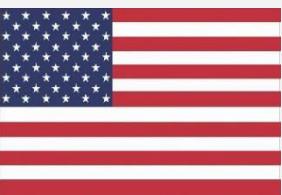


During manufacturing / processing, most of the power utilized is from hydro and solar energy sources.



We are an ISO14001-certified (environmental management) organization, and our manufacturing facility is surrounded by trees to provide a green belt.

Top brands containing KalmCold®/ AP-Bio®



Top brands containing KalmCold®/ AP-Bio®



Cost per Dose and Million doses sold of KalmCold®

Cost per dose:

>800 **Million** doses sold
till date

Scientific publications on KalmCold®

01

Saxena et al. Phytomedicine
2010,17(3-4): 178-85.

03

Chandrasekaran et al. Journal of
Ethnopharmacology 2010,129(2): 203-207.

02

Chandrasekaran et al. International
Immunopharmacology 2011,11(1): 79-84.

04

Chandrasekaran et al. Food and Chemical
Toxicology 2009, 47(8): 1892-02.

Accreditations, certifications, and registration for KalmCold®



Quality



Manufacturing Facility



USFDA inspected site



Product



Non Irradiated

Pesticide residue
complies to USP

Heavy metal
complies to USP



Product Registrations

TGA



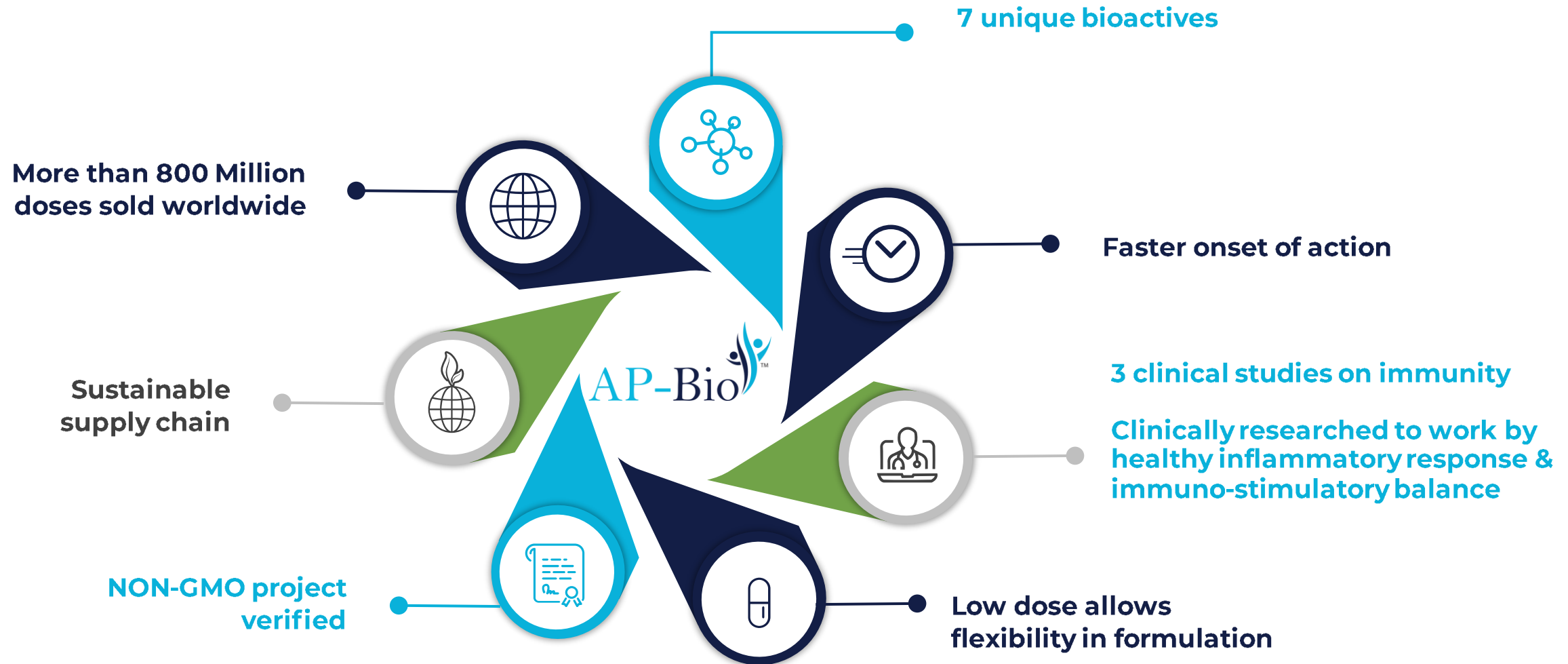
Other Credentials



Certificate No.:
TC-5527

GLP certified testing
facility

Why choose KalmCold®?



Watch this video to learn more



<https://www.youtube.com/watch?v=oxbtuTAbwTc&t=2s>



KalmColdTM

Thank you

This is a business to business communication material and the statements used here have not been evaluated by any regulatory authorities. The ingredients mentioned here are not intended to diagnose, treat, cure or prevent any disease.