



Immunity

Strategies to bring immune balance to your patients.



Tailored Solutions for Treating the Immune System

Balance Key Immune Functions

Factors that affect the health of the immune system contribute to inflammatory conditions, allergies and acute, recurrent and chronic infection. Addressing acute symptoms can help make your patients feel better, while correcting drivers such as nutritional deficiency, sleep, mitochondrial dysfunction, stress, infection, chronic inflammation and poor gut health will improve quality of life and mitigate against ongoing damage.

Specific nutritional and herbal formulas can help deliver anti-inflammatory support, immune regulation for allergic conditions or immune over-activity or immune stimulation for acute, recurrent or chronic presentations (Figure 1). Therapeutic formulations can also help address nutritional deficiencies, concurrently playing a role in preventative immune care health.

Address the Gut-Mediated Immune Response

Targeting gastrointestinal health is important for supporting the immune system. Evidence-based strain-specific probiotics, at the correct researched dose, exert specific actions to either regulate or stimulate the immune system. For example, *Lactobacillus paracasei* (LP-33®) modulates immune reactions by interacting directly with dendritic cells within gut-associated lymphoid tissue (GALT). By selecting the right immune probiotic strain for your patient, you can modulate or enhance immune function via the gut.

Regulate Immunity

Herbs such as BCM-95™ turmeric can provide pain relief through analgesic actions, while Specialised Pro-Resolving Mediators (SPMs) assist with resolution of chronic inflammatory issues. Patients affected by allergies can address allergic reactivity and build tolerance through the Metagenics Allergy and Reactivity Reduction Program.

Stimulate Immunity

Herbal support, such as *Andrographis paniculata* and EGCG (*epigallocatechin-gallate* standardised from Green Tea) can be a powerful tool for patients to reduce severity and duration of acute infections such as colds and flu. However, patients affected by recurrent infections or a chronic impaired immune response may benefit from medicinal mushrooms. Figure 1 outlines how key ingredients stimulate the immune system and support the body to combat infection.

Immune Prevention

Nature provides nutrients that are crucial building blocks for immune health function and prevention of acute or chronic issues. However, modern lifestyle and dietary practices continue to increase the prevalence of nutritional deficiencies. Research shows 1 in 4 Australians are at risk of vitamin D deficiency¹, while 23% of Australians do not meet adequate daily zinc intake, compromising immune health, while increasing risk of infection and impaired recovery. Metagenics provides nutritional options such as vitamin D and Meta Zinc® in capsule, liquid, powder or tablet format to address patient nutritional needs, preventing unwanted digestive side effects to ensure patient compliance.

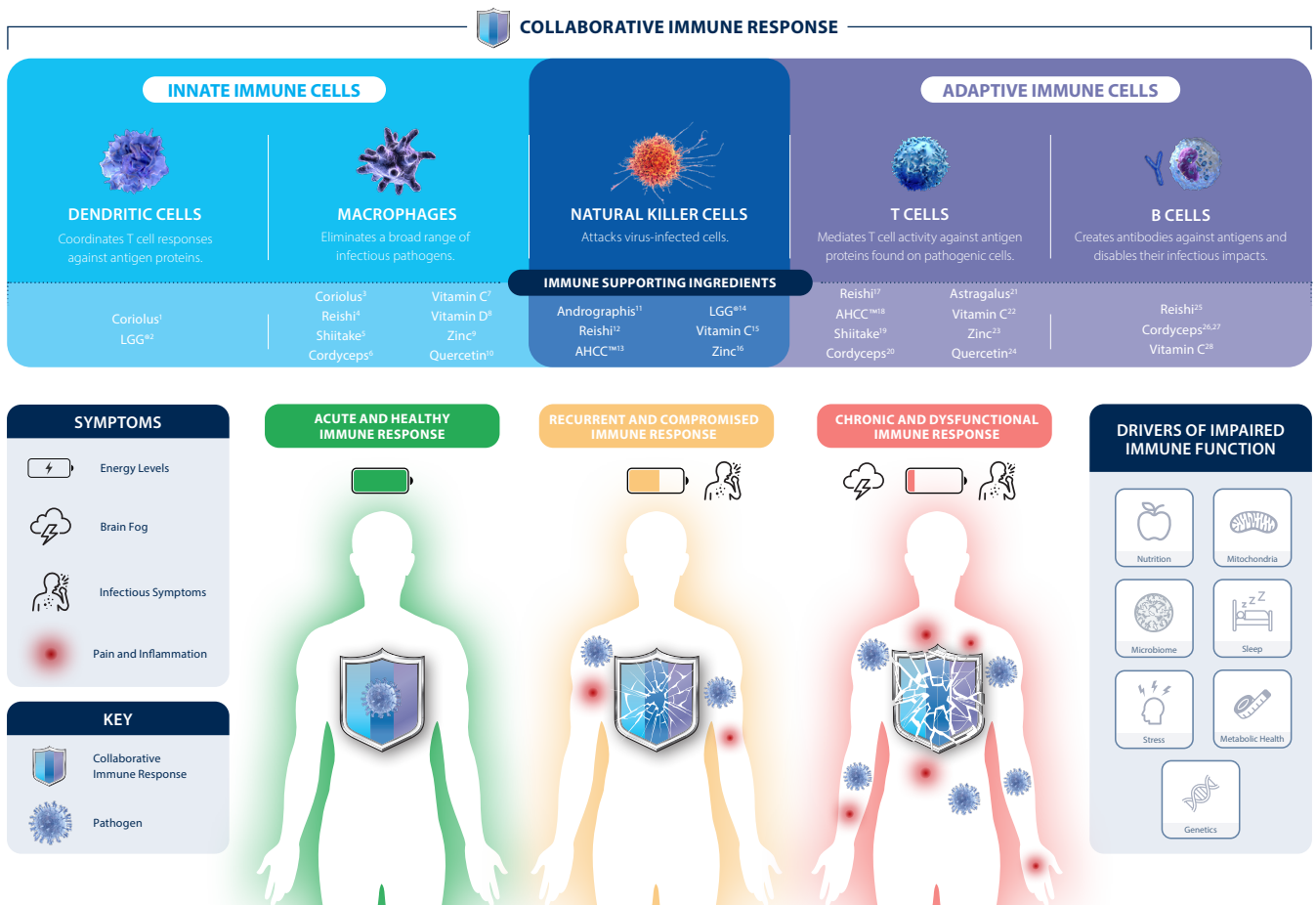


Figure 1: Immune Support for Combatting Infection.

Immune Solutions for All Your Patients' Needs

IMMUNE SOLUTIONS FOR ALL YOUR PATIENTS' NEEDS.

REGULATE		PREVENT	STIMULATE		
Allergies	Inflammatory Conditions	Key Immune Nutrients	Acute	Recurrent	Chronic
					
Ultra Flora Immune Control		Meta Zinc with Vitamin C and MetaZinc	Ultra Flora Immune Enhance		
					
Alergenics	Inflavonoid Sustained Care	Vitamin D3 Liquid and Capsules	Andro NK	Super Mushroom Complex	
					Immunogenics
Alergeze	SPM Active™	Quercetin Protect	Super Mushroom with Astragalus		



Ultra Flora Immune Control

A Probiotic Combination for Healthy Immune System Function.

Contents: 30 capsules (VegeCaps) (30 days) and 60 capsules (VegeCaps) (60 days)
Order Code: UFICT (30 capsules), UFICT60 (60 capsules)
Storage: Store at 2°C to 8°C (Refrigerate. Do not freeze.)

- Maintains healthy immune system regulation.¹
- Reduces occurrence of, and manage, allergy symptoms.^{2,3}
- Combination of two immune **modulating**, anti-inflammatory probiotic strains.

Each capsule contains:

22 billion live probiotic organisms:

<i>Lactobacillus rhamnosus</i> (LGG®)	20 billion CFU (organisms)
<i>Lactobacillus paracasei</i> (LP-33®)	5 billion CFU (organisms)

Directions for use (Adults and adolescents):

To support immune system function: Take 1 capsule daily.

To reduce symptoms of mild allergies: Take 1 capsule twice daily.

Clinical Benefits:

Regulate the immune system: *Lactobacillus rhamnosus* (LGG®) and *Lactobacillus paracasei* (LP-33®) help to promote immune regulation by interacting with dendritic cells within the gut associated lymphoid tissue (GALT), stimulating the production of regulatory T cells and increasing production of regulatory cytokines such as IL-10 and TGF-beta.⁵ LGG® also promotes a shift towards an enhanced anti-inflammatory response by a heightened secretion of anti-inflammatory cytokines and decreased secretion of pro-inflammatory cytokines.³

LGG® has bidirectional immunomodulatory effects – stimulatory when an increased response is needed and down-regulatory when attenuation is appropriate.⁶ 20 billion CFU of LGG® daily has been shown to reduce immune hyper-reactivity by strengthening gut mucosal barrier integrity.⁸

LP-33® modulates inflammation and immune reactions by interacting with these cells and, together with LGG®, inducing development of regulatory T cells which can down regulate IgE, a Th2 cytokine involved in allergy.² A double-blind, randomised, placebo-controlled trial on 425 subjects with allergic rhinitis compared the effects of LP-33® or placebo over a five week period. The LP-33® group demonstrated significant improvements in their Rhinitis Quality Of Life (RQLQ) score, as well as nasal and ocular symptoms.²

Free from animal products, dairy protein, lactose, eggs, wheat, nuts and soy protein. Free from artificial colours, sweeteners, flavours and preservatives.

LGG® is a registered trademark of Chr. Hansen A/S.



Ultra Flora Immune Enhance

A Probiotic Combination to Boost Immune System Function.

Contents: 30 capsules (VegeCaps) (30 days) and 60 capsules (VegeCaps) (60 days)
Order Code: UFIEN (30 capsules), UFIEN60 (60 capsules)
Storage: Store at 2°C to 8°C (Refrigerate. Do not freeze.)

- Enhances healthy immune system function.¹
- Reduces duration, severity and frequency of colds.^{2,3}
- Maintains healthy gastrointestinal immune function and support beneficial intestinal bacteria adherence.^{4,5}
- Exclusive combination of immune **stimulating** probiotic strains.

Each capsule contains:

6 billion live probiotic organisms:

<i>Lactobacillus rhamnosus</i> (LGG®)	5 billion CFU (organisms)
<i>Lactobacillus plantarum</i> (HEAL 9)	500 million CFU (organisms)
<i>Lactobacillus paracasei</i> (8700:2)	500 million CFU (organisms)

Directions for use (Adults only):

Adults: Take 1 capsule daily.

Clinical Benefits:

***Lactobacillus plantarum* (HEAL 9) and *Lactobacillus paracasei* (8700:2), reduce duration and severity of common colds:** Strains in Ultra Flora Immune Enhance have been clinically shown to induce specific (cell mediated) immunity.^{1,2} A randomised, parallel, double-blind, placebo-controlled study supplemented 272 subjects with either 500 million each of HEAL 9 and 8700:2 or a placebo for 12 weeks.¹ Those who were taking this exclusive probiotic combination experienced a 28% reduction in the duration of their cold and a reduction in total symptom score by 24%.¹

HEAL 9 and 8700:2 reduce the frequency of recurrent cold infections:

A randomised, double-blind, placebo-controlled 12-week winter study of 898 participants with a history of recurrent cold infections administered with HEAL 9 and 8700:2 or a placebo, found that the former group experienced a 30% reduction in the incidence of recurring colds and an 18% decline in concomitant analgesic use.⁷

LGG® has bidirectional immunomodulatory effects – stimulatory when an increased response is needed and down-regulatory when attenuation is appropriate.⁶

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, soy protein and salt. Free from artificial colours, flavours and preservatives.

LGG® is a registered trademark of Chr. Hansen A/S.

Table 1: Which Probiotic Does My Patient Need?

	Ultra Flora Immune Control	Ultra Flora Immune Enhance
	Regulate immune system function	Stimulate immune system function
Modulate non-specific immune response	✓	
Down regulate IgE (Th2 cytokine responsible for allergies)	✓	
Induce adaptive immune response		✓
Stimulate T regulatory cells	✓	✓
Promote secretion of regulatory cytokines	✓	✓
Anti-inflammatory	✓	✓
Improve gut barrier and terrain	✓	✓



Inflavonoid Sustained Care

For Management of Pain and Mild Inflammation.

Contents: 90 capsules (VegeCaps) (15 to 30 days)

Order Code: IFSC

Storage: Store below 30°C

Ingredients in Inflavonoid Sustained Care have been traditionally used or shown to:

- Relieves arthritis pain due to mild inflammation.²
- Assists with nerve, joint and muscle pain.^{3,4}
- Decreases the inflammatory response of the body.⁵
- A condition specific BCM-95™ product for use in chronic and painful conditions like mild arthritis.

Each capsule contains:

Dry herbal extracts:

Curcuma longa (BCM-95™ Turmeric), rhizome	167 mg
Derived from dry rhizome	4.2 g
Equivalent Curcumin	117 mg
Boswellia serrata (BosPure® Boswellia), gum oleoresin	150 mg
Derived from dry gum oleoresin	1.5 mg
Harpagophytum procumbens (Devil's claw), root	39 mg
Derived from dry root	867 mg
Piscidia piscipula (Jamaica dogwood), stem bark	63 mg
Derived from dry stem bark	250 mg

Directions for use: Adults: For the relief of pain, muscle aches and joint stiffness due to mild osteoarthritis: Take 3 capsules twice daily with food.

For the relief of mild inflammation: Take 2 capsules daily with food.

Clinical Benefits:

Relieves acute inflammation in the inflammatory cascade to decrease inflammation and pain associated with mild arthritis via the following mechanisms:

- Boswellia inhibits 5-lipoxygenase (5-LOX).¹
- White willow bark inhibits prostaglandin synthesis by inhibiting cyclooxygenase (COX-2) mediated prostaglandin release shown *in vitro*.
- Ginger suppresses prostaglandin synthesis through inhibition of COX and LOX.
- Quercetin inhibits the activation of NF-κB demonstrated *in vitro* studies.

Volatile oils, naturally found in BCM-95™ exhibit anti-inflammatory activity. BCM-95™ binds to the nuclear receptor, peroxisome proliferator-activated receptor γ (PPARγ), and inhibits production of both prostaglandin E2 (PGE2) inducible nitric oxide during the inflammation process.

**BCM-95™
TURMERIC:
The Proven
Extract**

- 15 published clinical trials
- 4 bioavailability trials
- Many more trials ongoing
- Clinically trialled in inflammatory conditions and more!

- ✓ As effective as NSAIDs
- ✓ Gut friendly
- ✓ Liver friendly
- ✓ Safe for long term use
- ✓ A natural extract preserving all turmeric compounds found in nature (phenolics, resins, essential oils and all three curcuminoids)
- ✓ Naturally enhanced, sustained bioavailability

Free from animal products, corn, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein, starches and salt. Free from artificial colours, flavours and preservatives.



SPM Active™

Specialised Pro-Resolving Mediators.

Contents: 60 capsules (30 days)

Order Code: SPM60

Storage: Store below 30°C

- Stimulate resolution of inflammation.¹
- Assist unresolved and chronic inflammatory processes by actively helping the body naturally restore homeostasis.²
- SPM Active™ contains standardised and concentrated specialised pro-resolving mediators (SPMs) exclusive to Metagenics.

Each capsule contains:

Concentrated fish Omega-3 triglycerides (LIPINOVA-11TG™)	498 mg
Equivalent Eicosapentaenoic acid (EPA)	50 mg
Equivalent Docosahexaenoic acid (DHA)	100 mg

Directions for use: Adults: Take 1 capsule twice daily.

Clinical Benefits:

SPM Active™ is a specific and targeted approach to facilitate the resolution phase in patients experiencing inflammation which may be failing to resolve in a timely manner. Unresolved inflammation can lead into low-grade, chronic inflammation that may worsen existing disease states, impair recovery/healing and negatively affect healthy ageing.³ Chronic disease is an increasing health burden and it is now estimated that 1 in 3 Australians live with at least one chronic inflammatory condition including arthritis and other musculoskeletal disorders, cardiovascular disease and diabetes mellitus.⁴

SPMs found in SPM Active™ are lipid mediators that occur naturally in the body and have been found in various human tissue (such as the brain, lymph nodes and synovial fluid).⁵ SPMs orchestrate resolution at the site of inflammation to assist tissue repair, healing, recovery and the return to homeostasis.⁶ These mediators help to:

- Activate the resolution phase.
- Signal to, and recruit certain immune cells and inflammatory mediators.
- Repair damage and clearance of pathogens.
- Prevent further pathological inflammation without immunosuppression.^{7,8}

Despite omega-3 EPA and DHA being precursors of SPMs, they do not possess significant pro-resolving properties.⁹ Metagenics, in collaboration with SPMs experts and world-renowned leaders in the field of resolution physiology, are the first to set the standard for defining SPMs within a therapeutic supplement. Using a refined, patent pending fractionation process, specific SPM fractions are standardised for consistent dosing and therapeutic patient outcomes. The special fraction and ratio is isolated, concentrated and measured for bioactivity to verify the active SPMs 17-HDHA and 18-HEPE. This process is exclusive to Metagenics, providing an inflammation-specific solution that is truly Practitioner-only.

Free from corn, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and starches. Free from artificial colours, sweeteners and flavours. Contains fish.

Lipinova™ is a trademark of SOLUTEX GC.

LIPINOVA
SPECIALIZED PRO-RESOLVING LIPID MEDIATORS

Patents: Australia/AU 2013259503
New Zealand/NZ 702325



Allergenics

Support for Mild Allergy Relief and Healthy Immune Activity.

Contents: 202 g oral powder (28 doses) Mixed Berry flavour

Order Code: ALS202

Storage: Store below 30°C

- Helps to support healthy immune regulation¹ and function.²
- Supports gastrointestinal immune function³ and liver detoxification processes.⁴
- The Metagenics Allergy and Reactivity Reduction Program may increase tolerance to allergens.

Each dose (7.2 g) contains:

Glutamine	3.5 g
Choline bitartrate	1.5 g
Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	30 mg
Equivalent Zinc	6 mg
Retinol palmitate	1.4 mg
Equivalent Vitamin A	750 micrograms RE
Colecalciferol	12.5 micrograms
Equivalent Vitamin D	500 IU
Dry herbal extracts:	
<i>Lentinula edodes</i> (Shiitake), fruiting body	375 mg
Derived from dry fruiting body	6 g
<i>Ganoderma lucidum</i> (Reishi), fruiting body	353 mg
Derived from dry fruiting body	6 g
<i>Silybum marianum</i> (Milk thistle), seed	86 mg
Derived from min. dry seed	6 g
Std. to flavanolignans calc. as silybin	72 mg
<i>Scutellaria baicalensis</i> (Baical skullcap), root	300 mg
Derived from dry root	3 g
<i>Perilla frutescens</i> (Perilla), leaf dry	208 mg
Derived from dry leaf	2.5 g

Directions for use:

Children 9 to 13 years: Add 1 level metric teaspoon (3.6 g) to 100 mL of water twice daily with food.

Adults and children over 13 years: Add 2 level metric teaspoons (7.2 g) to 200 mL of water twice daily with food.

Clinical Benefits:

Helps to increase allergic tolerance and reduce allergic reactions

by addressing underlying factors of allergy such as immune dysfunction, inflammation, detoxification processes and gut barrier function (Figure 1).

Supports immune regulation and function: Glutamine and Shiitake increase secretory IgA (sIgA) secretion to prevent antigen adhesion and translocation through the luminal epithelial surface.^{5,6} Baical skullcap and Reishi help to regulate T helper 1 (Th1) and T helper 2 (Th2) balance.^{7,8} Baical skullcap also exerts an anti-allergic effect by regulating T cell-mediated responses including decreasing IgE and increasing IgG2.⁹

Reduces intestinal permeability and inhibits allergen permeation. Baical skullcap¹⁰, glutamine, zinc, vitamin A and vitamin D act upon tight junctions of intestinal epithelium.¹¹ Baical skullcap may attenuate a food allergic response by inhibiting allergen permeation.¹²

Symptomatic relief of allergies via anti-inflammatory and mast cell stabilising mechanisms. Allergenics contains Baical skullcap, Milk thistle and Reishi which inhibit the release of histamine from mast cells.¹³ In a randomised controlled trial, *Perilla frutescens* leaf extract was shown to suppress immunoglobulin response and inflammation in mild allergic rhinitis.¹⁴ Choline intake leads to an increase in membrane phosphatidylcholine¹⁵ and may be effective in relieving urticaria and allergic rhinitis symptoms.¹⁶ Vitamin D may also exert an anti-inflammatory effect due to suppressing the production of matrix metalloproteinases (MMPs),¹⁷ which may play an active role in allergic rhinitis.¹⁸

Free from dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and salt. Free from artificial colours and flavours, and does not contain GMO ingredients.

Allergenics is sweetened with stevia.



Alergeze

With Aller-7® for Symptom Relief.

Contents: 60 tablets (15 days)

Order Code: ALZ60

Storage: Store below 30°C

- Assists in the symptomatic relief and management of seasonal and perennial allergic rhinitis.¹
- A unique combination of NRA2™ plus Bromelains and Quercetin.
- Used as part of the Metagenics Allergy and Reactivity Reduction Program.

Each tablet contains:

Quercetin dihydrate	500 mg
Bromelains	9 million PU (282 mg)
NRA2™ Proprietary Polyherbal Complex containing dry herbal extracts equivalent to:	
<i>Terminalia chebula</i> (Terminalia myrobalan), fruit pericarp	129 mg
Derived from dry fruit pericarp	644 mg
<i>Phyllanthus emblica</i> (Emblic), fruit pericarp	78 mg
Derived from dry fruit pericarp	391 mg
<i>Terminalia bellirica</i> (Myrobalan), fruit pericarp	76 mg
Derived from dry fruit pericarp	380 mg
<i>Albizia lebeck</i> (Albizia), stem bark	24 mg
Derived from dry stem bark	189 mg
<i>Piper longum</i> (Long pepper), fruit	11 mg
Derived from dry fruit	15 mg
<i>Zingiber officinale</i> (Ginger), rhizome	5.5 mg
Derived from dry rhizome	15 mg
<i>Piper nigrum</i> (Black pepper), fruit	7.1 mg
Derived from dry fruit	15 mg

Directions for use (Adults only): Take 2 tablets, twice daily with food.

Clinical Benefits:

For symptomatic relief of allergies and hay fever: A multicentre clinical trial involving 545 patients concluded that Aller-7® significantly reduced major symptoms of seasonal and perennial allergic rhinitis including sneezing, rhinorrhoea and nasal congestion.² Furthermore, absolute eosinophil count, mucociliary clearance time, peak expiratory flow rate and peak nasal flow rate also improved.³ In another trial, patients also reported a 70% improvement on quality of life parameters after 3 months.⁴ Aller-7® can be used alongside allergy medication without any additional adverse side effects.⁵

Modulates histamine release and inflammation associated with allergic reactions:

Alergeze contains a potent combination of ingredients that exhibit antihistamine, antioxidant and anti-inflammatory activity (Figure 1).⁶ Aller-7® and Quercetin assist with mast cell stabilisation to inhibit histamine release and down regulate the production of allergic cytokines, inflammatory leukotrienes and prostaglandins.⁸ Bromelains induces proteolytic activity during inflammation⁹ and is an effective mucolytic agent.¹⁰

Immune modulation: Quercetin may assist with immune tolerance by improving T helper 1 (Th1) and T helper 2 (Th2) balance.¹¹ Allergic sensitisation involves Th2 like adaptive immunity and production of antibodies.¹²

Aller-7® is a registered trademark of Network Nutrition.

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, and soy protein. Free from artificial colours and flavours.



Andro NK

For Cough Cold, Fever, Phlegm and Sore Throat.

Contents: 40 tablets (20 days)

Order Code: AND

Storage: Store below 30°C

Ingredients in Andro NK have been traditionally used or shown to:

- Reduce severity of infection and provide symptom relief, including fever, cough, sore throat, and phlegm.
- Features *Andrographis paniculata* to fight against and assist in the recovery of common cold infections and illness, helping patients feel better sooner.
- Combines standardised epigallocatechin gallate (EGCG) and zinc to assist the body's natural immune responses and support healthy immune function.

Each tablet contains:

Dry herbal extracts:

<i>Andrographis paniculata</i> (King of Bitters), herb top	394 mg
Derived from dry herb top	6.3 g
Equivalent to Andrographolides	55 mg
<i>Camellia sinensis</i> (Green Tea), leaf	152 mg
Derived from min. dry leaf	4.6 g
Std. to Catechins	126 mg
Std. to Epigallocatechin-3-O-gallate (EGCG)	76 mg
Calcium ascorbate dihydrate	242 mg
Equivalent Ascorbic acid (Vitamin C)	200 mg
Colecalciferol (Vitamin D3)	12.5 micrograms
Equivalent Vitamin D3	500 IU
Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	37.5 mg
Equivalent Zinc	7.5 mg

Directions for use: Adults: Take 2 tablets daily with food.

Clinical Benefits:

Andro NK combines herbs and nutrients to reduce symptom severity of common cold infections and illness, via viral control.^{1,2,3} Over 200 viruses are known drivers of respiratory tract infections, involving inflammatory responses⁴ and symptoms ranging from the common cold to more severe illness.^{5,6,7} Zinc is directly antiviral, and during infections, increased demands can compromise zinc status.^{8,9,10,11} Cellular uptake of zinc is enhanced when binding with EGCG to form compounds, called zinc ionophores*.^{12,13} Studies have shown a doubling of intracellular free zinc ions with ionophore delivery.^{14,15} Vitamin C inhibits viral replication via increased antiviral interferon production, as well as increasing proliferation of natural (NK) cells as part of the innate immune response.^{16,17} Clinical studies of *Andrographis paniculata* demonstrate immune stimulation,^{18,19,20} explaining the traditional use to relieve symptoms including sore throat, fever and cough.

Studies have shown that EGCG, vitamins C, D, and zinc play various roles to regulate inflammation and inflammasome activation.²¹ Inflammasomes are multiprotein Intracellular complexes that help initiate appropriate proinflammatory responses to pathogens.²² Prolonged or dysregulated inflammasome activation is associated with severe consequences, including tissue damage.²³ Restoration of inflammatory homeostatic mechanisms enables healthy recovery, helping patients feel better sooner and mitigates against ongoing health complications.

Andro NK features ingredients that stimulate immunity to support healthy function.^{24,25} Zinc, vitamin C and vitamin D are all critical to innate immunity, and deficiencies in one or more of these nutrients is associated with impaired immune responses and higher risk to infections.^{26,27,28,29,30,31,32} Furthermore, vitamins C, D, and zinc support structural and functional integrity of mucosal barriers against pathogens.³³ While, clinical studies confirm EGCG and andrographolides both inhibit viral activity through inhibiting viral absorption to host cells and preventing viral formation and maturation.^{34,35}

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, flavours and preservatives.



Quercetin Protect

Anti-inflammatory, Antioxidant and Immune Support.

Contents: 60 tablets (30 days)

Order Code: OG1

Storage: Store below 30°C

- Reduces free radical induced inflammation and damage¹.
- Supports immune health.
- Daily dose provides 1000 mg of quercetin.

Each tablet contains:

Quercetin	500 mg
Calcium ascorbate dihydrate	243 mg
Equivalent Ascorbic acid	199 mg
d-alpha-Tocopheryl acetate	41 mg
Dry herbal extracts:	
<i>Silybum marianum</i> (Milk Thistle), seed	76 mg
Derived from dry seed	1.9 g
<i>Vitis vinifera</i> (Grape), seed	30 mg
Derived from dry seed	1.2 g
<i>Camellia sinensis</i> (Green tea), leaf	25 mg
Derived from dry leaf	225 mg
Soft extract:	
<i>Dunaliella salina</i> , cell	40 mg
Derived from min. fresh cell	75 mg
Std. to carotenoids calculated as betacarotene	3.0 mg

Directions for use: Adults: Take 1 tablet twice daily with food.

Clinical Benefits:

Anti-inflammatory support: Quercetin reduces the risk of free radical induced inflammation and damage via several mechanisms. Grape seed contains constituents that down regulate NF k-β and MAPk pathway promoters of inflammation and cyclooxygenase activity². Milk thistle has been shown to contain anti-inflammatory and antioxidant properties³.

Allergy management: Quercetin may assist in the management of allergies through inhibition of leukotriene synthesis and histamine release⁴. Quercetin also has strong anti-inflammatory effects and has shown to inhibit LPS induced TNF-α production in macrophages and LPS-induced IL-8 production in lung cells⁵.

Antioxidant support: Quercetin contains a combination of ingredients to provide antioxidant protection during times of excessive free radical exposure such as inflammation. Constituents found in grape seed provide very effective scavengers of both hydrophilic and lipophilic radicals, shown in vitro⁶. These include super oxide, hydroxyl, peroxy and peroxy nitrite radicals thus reducing potential oxidative cellular damage⁴. Vitamin C is an important water-soluble antioxidant that directly scavenges free radical oxygen and nitrogen species⁷. As an antioxidant, vitamin E has been shown to inhibit reactions involving free radicals by destroying singlet molecular oxygen².

The recommended dose of this medicine provides small amounts of caffeine.

Free from dairy protein, lactose, eggs, wheat, nuts, yeast, soy protein and salt. Free from artificial colours, flavours and preservatives. The recommended dose of this medicine provides small amounts of caffeine.



Super Mushroom Complex

High Strength Mushroom Blend for Immune System Support.

Contents: 100 g (37 doses) and 200 g (74 doses) oral powder Pine Lime flavour
Order Code: MUSC (100 g), MUSCL (200 g)
Storage: Store below 30°C

Ingredients in Super Mushroom Complex have been traditionally used or shown to:

- Enhance the strength and function of the immune system.^{1,2}
- Provide symptomatic relief of upper respiratory tract infections including mucus congestion.^{3,4}
- Great tasting, concentrated powder with tiered dosing.

Each dose (2.7 g) contains:

Dry herbal extracts:

<i>Cordyceps sinensis</i> (Cordyceps), hyphae	267 mg
Derived from dry hyphae	4 g
<i>Trametes versicolor</i> (Coriolus/Kawaratake), fruiting body	145 mg
Derived from dry fruiting body	4 g
<i>Ganoderma lucidum</i> (Reishi), fruiting body	235 mg
Derived from dry fruiting body	4 g
<i>Lentinula edodes</i> (Shiitake), fruiting body	250 mg
Derived from dry fruiting body	4 g

Directions for use:

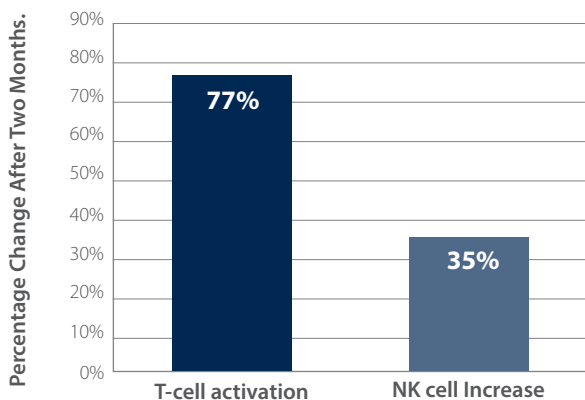
Adults: For acute: Add 1 level metric teaspoon (2.7 g) to 125 mL of water, three times daily for five days.

Adults: For chronic: Add 1 level metric teaspoon (2.7 g) to 125 mL of water daily.

Clinical Benefits:

Enhance and support the immune system: Coriolus can increase immune activation in those affected by mild viral infections.⁵ An intervention study on participants with viral antibodies showed a 77% T-cell activation plus an increase in natural killer cells (NK cells) of 35% after two months of treatment (Figure 1).⁵ *Ganoderma lucidum* proteoglycan (GLPG) has been shown, *in vitro*, to exhibit strong antiviral activity. These effects may be attributed to its ability to inhibit viral replication by interfering with the early events of viral absorption and entry into target cells.⁶

Reishi exerts immunomodulatory effects due to its ganoderma lucidum polysaccharides (GLPS).⁷ In particular, the active β -D-glucans have the potential to bind to lymphocyte receptors or specific proteins, leading to alteration of the activity of macrophages, T-helper, NK cells and other effector cells.⁸



Munroe JE. J Integrative Medicine; 8. p 101-108. 2004

Figure 1: Coriolus Versicolor Can Increase Immune Activation.

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and salt. Free from artificial colours and flavours. Sweetened with steviol glycosides.



Super Mushroom with Astragalus

Coriolus, Reishi and Astragalus Tablets for Immune Support.

Contents: 30 tablets (15 days)
Order Code: MUSWA
Storage: Store below 30°C

Ingredients in Super Mushroom with Astragalus have been traditionally used or shown to:

- Enhance and regulate immune system function.^{1,2}
- Provide symptomatic relief of upper respiratory tract infections, including mucus congestion.^{3,4}
- Provide support during times of fatigue and lack of strength.⁵
- Contains mushroom extracts high in polysaccharides.

Each tablet contains:

Dry herbal extracts:

<i>Astragalus membranaceus</i> (Astragalus), root	600 mg
Derived from dry root	6 g
<i>Trametes versicolor</i> (Coriolus/Kawaratake), fruiting body	327 mg
Derived from dry fruiting body	9 g
<i>Ganoderma lucidum</i> (Reishi), fruiting body	176 mg
Derived from dry fruiting body	3 g

Directions for use:

Adults: Take 1 tablet twice daily.

Clinical Benefits:

Enhance and regulate the immune system: Polysaccharide molecules may modulate the immune response due to the interaction with the intestinal ecosystem and gut associated lymphoid tissue (GALT).⁶ Coriolus exerts prebiotic activity which modulates the gastrointestinal microbiota⁷ and Reishi may protect against impaired intestinal permeability and dysbiosis.⁸ As well as medicinal mushrooms, Astragalus also contains polysaccharides that may enhance macrophage, B-cell and T-cell activity, leading to increased surveillance and defence against pathogens.⁹ Astragalus also increases the number and activity of T-regulatory cells¹⁰ and modulates inflammatory pathways.¹¹

Antiviral activity: Reishi contains the polysaccharides β -D-glucans that modulate the activity of macrophages, T-helper, NK cells and other effector cells.¹² *Ganoderma lucidum* Proteoglycan (GLPG) may inhibit viral replication and exerts strong antiviral activity.¹³ Coriolus can increase immune activation in those affected by mild viral infections.¹⁴

Beneficial during times of fatigue: Astragalus is used to support immune function, fatigue and a lack of strength in Traditional Chinese Medicine.^{15,16}

Free from animal products, corn, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, flavours and preservatives.



Immunogenics

AHCC™ and Ginger to Support Healthy Immune Function and Reduce Nausea.

Contents: 60 capsules (VegeCaps)

Order Code: IMG60

Storage: Store below 30°C

- Supports patients with an impaired immune response.
- Clinically trialled AHCC™ with an extensive safety and tolerance profile.
- Contains ginger to address nausea, vomiting and appetite, and to protect intestinal mucosa.

Each capsule contains:

Dry herbal extracts:

<i>Lentinula edodes</i> , (Shiitake) (AHCC™) hyphae	338 mg
Derived from fresh hyphae	3 g
<i>Zingiber officinale</i> , (Ginger) rhizome	38.5 mg
Derived from dry rhizome	1.6 g

Directions for use: Adults: Take 2 capsules twice daily.

Serving suggestion: Capsules may be opened and the powder mixed into a liquid of choice.

Clinical Benefits:

Immunogenics supports patients with an impaired immune response, assisting with immune system surveillance and modulation. Research into AHCC™ reveals positive effects on both innate and adaptive immunity. Specifically, AHCC™ has been shown to enhance natural killer (NK) cell activity, cytokine production, whilst promoting macrophage activity and increasing the number and activity of dendritic cells.^{1,2,3,4} Furthermore, research also indicates benefits for the adaptive immune response pertaining to both B and T cell lymphocytes.^{5,6,7,8} AHCC™ is well tolerated, making it suitable as an adjunct for immunosuppressed patients during and in between treatments to reduce possible side effects.

Ginger assists with nausea, vomiting, gut barrier function, and also exerts anti-ulcer, anti-inflammatory and immunomodulatory effects.^{9,10}

Supporting gastrointestinal health is paramount to optimal functioning of the immune system. Ginger provides a protective action on the intestinal mucosa¹¹ and has been shown to ameliorate intestinal damage by reducing neutrophil infiltration and the pro-inflammatory response, while reducing oxidant stress and lipid peroxidation.¹² Ginger compounds are also able to elicit an anti-inflammatory effect via inhibition of key inflammatory response mediators, such as Nuclear factor kappa B (NFkB), Cyclooxygenase (COX) enzymes, and 5-Lipoxygenase (5-Lox).¹³ Furthermore, ginger is able to support a healthy appetite thereby supporting energy production and reduce fatigue.^{14,15}

Having been studied in hundreds of clinical trials, AHCC™ is used in more than 600 international hospitals and institutions for an array of medical conditions.^{16,17} Immunogenics has been formulated to match the amount of AHCC™ used in human clinical trials. AHCC™ itself is a mixture of amino acids, lipids, and minerals extracted from a culture of Shiitake mushroom (*Lentinula edodes*), with polysaccharides being an active component. AHCC™ research in human populations has also shown improved immune parameters in immunocompromised people.¹⁸ AHCC™ has demonstrable safety and a history of being well tolerated since it's launched in 1989, with hundreds of thousands of users reporting no serious side effects.¹⁹

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and salt. Free from artificial colours, flavours and preservatives.

AHCC™ is a registered trademark of Amino Up Chemical Co. Ltd Japan.



Vitamin D3 1000IU

For Strong Bones and Immune Health.

Contents: 90 capsules (90 days) and 270 capsules (270 days)

Order Code: VITD90 (90 capsules), VITD270 (270 capsules)

Storage: Store below 30°C

- Maintains healthy immune function.¹
- To support strong, healthy bones and muscle strength.²
- Provides 1000 IU of vitamin D3 per capsule.

Each capsule contains:

Colecalciferol (Vitamin D3)	25 µg
Equivalent Vitamin D3	1000 IU

Directions for use: Take 1 capsule daily with food.

Clinical Benefits:

Maintains healthy immune function: Vitamin D has been shown to play an important role in regulating the immune system. 1,25 (OH)₂D₃ suppresses most elements of the adaptive immune system whilst inducing most elements of the innate immune system.¹ By inducing the innate immune system, vitamin D enhances the response to both bacterial and viral agents, by promoting differentiation and activity of macrophages. Vitamin D has also been shown to influence the cytokine production of immune cells, suppressing the release of IL-2, IFN-γ and TNF-α, the products of the Th1 line of cells.²

A meta-analysis of 12 randomised controlled trials has shown vitamin D to reduce the risk of fractures in the elderly. Vitamin D significantly reduced the risk of hip fracture by 26% and non-vertebral fracture by 23%.³ Alongside adequate calcium consumption, vitamin D may help to reduce the risk of falls that lead to fractures, by playing a role in musculoskeletal function. Vitamin D has been shown to have direct effects on muscular function, modulated by specific vitamin D receptors present on human muscle tissue. In a separate, double-blind randomised controlled trial, vitamin D taken with calcium significantly improved musculoskeletal function, reducing the amount of falls in older adults by 49% over three months.⁴

Free from dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein, starches and salt. Free from artificial colours and flavours.



Also available in liquid form:

Vitamin D3 Liquid

Contents: 90 mL oral liquid (360 days)

Order Code: VITDL

Storage: Store below 30°C. After opening store at 2°C to 8°C. (Refrigerate. Do not freeze.)

- Stable vitamin D3 liquid in Medium Chain Triglycerides.
- Easy, accurate, graduated dropper with 0.25 mL to 1 mL marks.
- Great value and convenience.

Colecalciferol (Vitamin D3)	25 micrograms
Equivalent Vitamin D3	1000 IU
Per 0.25 mL	

Directions for use: Shake well before use.

Adults: Take 0.25 mL (by measuring dropper) daily with food.

Free from corn, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and starches. Free from artificial colours, sweeteners and flavours.



Meta Zinc with Vitamin C

High Strength, Bioavailable Zinc Powder with Vitamin C and Activated B6.

Contents: 114 g powder (30 days) and 228 g powder (60 days)

Order Code:* Orange: MZOS (114 g), MZOL (228 g) Raspberry: MZRS (114 g), MZRL (228 g)

Storage: Store below 30°C

- Prevent zinc deficiency.¹
- Reduce duration of colds.^{2,3}
- Exclusive Meta Zn® - Zinc bisglycinate powder is easily absorbed. It's high strength, great tasting, and suitable for use in children.

Each dose (1.9 g) contains:

Calcium ascorbate dihydrate	605 mg
Equivalent Ascorbic acid (Vitamin C)	500 mg
Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	125 mg
Equivalent Zinc	25 mg
Pyridoxal 5-phosphate monohydrate (Vitamin B6)	10 mg
Betacarotene	2.0 mg
Colecalciferol	12.5 micrograms
Equivalent Vitamin D3	500 IU

Directions for use:**

Children 4 to 8 years: Acute: Add ¼ metric teaspoon (0.95 g) to 100 mL of water once daily with food.

Children 9 to 13 years: Acute: Add ¼ metric teaspoon (0.95 g) to 100 mL of water twice daily with food.

Maintenance: Add ¼ metric teaspoon (0.95 g) to 100 mL of water once daily with food.

Adults and children over 14 years: Acute: Add ½ metric teaspoon (1.9 g) to 200 mL of water twice daily with food.

Maintenance: Add ½ metric teaspoon (1.9 g) to 200 mL of water once daily with food.

Clinical Benefits:

Meta Zinc with Vitamin C provides superior absorption and bioavailability, without the side effects, such as nausea. Zinc in Meta Zn® - Zinc bisglycinate is covalently bound to two glycine molecules. As glycine is the smallest amino acid, the whole Meta Zn® - Zinc bisglycinate molecule is small enough to be absorbed through abundant protein absorption channels instead of competing for few mineral absorption channels. The covalent bond is strong enough that it is not affected by stomach acid, therefore preventing interactions with the gastro-intestinal lumen, where other forms of zinc may irritate and cause nausea and stomach upsets.⁴

Deficiencies of vitamin C and zinc severely suppress immune response.

Low zinc status may increase susceptibility to infectious diseases, such as diarrheal diseases or viral infections, as well as impact both T and B lymphocyte function, and the production of thymic hormone in the thymus.¹ Vitamin C and zinc support epithelial barriers, cellular proliferation and antibody production.¹ Vitamin C is necessary for leucocyte and macrophage functions, neutrophil motility and phagocytosis, antimicrobial activity, interferon synthesis and antihistamine properties.¹

Children need zinc for brain growth and development.⁴ Zinc is required for regulating protein synthesis and tissue growth, as well as cellular signalling.^{4,5} During early development, cellular activity may be particularly sensitive to zinc deficiency, which has been shown to compromise cognitive function.⁴

Meta Zinc with Vitamin C is also used for male health, particularly sperm health and testosterone production.⁶ Zinc plays an important role in wound healing and the management of acne.⁷

Free from dairy protein, lactose, eggs, gluten, wheat, nuts, yeast, soy protein and salt. Free from artificial colours, flavours and preservatives.

*New Zealand stocks Orange 114 g only. Order code: NZMZOS.

**Directions differ in New Zealand. Contact NZ Clinical Support on 0508 227 744 for further information.



MetaZinc

High Strength, Bioavailable Zinc Tablets.

Contents: 60 tablets (60 days) and 120 tablets (120 days)

Order Code:* MZ1S (60 tablets), MZ1L (120 tablets)

Storage: Store below 30°C

- Support healthy immune system function.¹
- Assist in the management of mild acne and minor wound healing.^{2,3}
- Support healthy sperm function.
- Contains easily absorbed, low nausea, exclusive Meta Zn® with co-factors manganese and activated B6.
- High strength tablet with a break bar to allow for flexible dosing.

Each tablet contains:

Zinc amino acid chelate (Meta Zn® - Zinc bisglycinate)	250 mg
Equivalent Zinc	50 mg
Pyridoxal 5-phosphate monohydrate (Vitamin B6)	50 mg
Manganese amino acid chelate	19 mg
Equivalent Manganese	3.0 mg

Directions for use:

Adults and children over 14 years:

Acute: Take 1 tablet daily with food.

Maintenance: Take ½ tablet daily with food.

Clinical Benefits:

Supports healthy immune function. Zinc deficiency can affect the healthy functioning of cells necessary for normal immune function, particularly the T lymphocytes which require zinc for numerous processes.⁵ This can lead to reduced antibody production and compromised cellular function of the innate immune system, including alteration of natural killer cell activity, phagocytosis and the generation of oxidative burst.⁶ These alterations are considered to be important contributors to increased susceptibility to infections.⁷

Adequate zinc status is essential for optimising male reproductive health.

Zinc is required to support testosterone production and spermatogenesis.⁸ Oxidative stress may cause structural damage to sperm DNA, reduced sperm motility and defective sperm membrane integrity.⁹ The antioxidant action of zinc, due to its membrane stabilising activity, may inhibit lipid peroxidation of sperm and prevent against free radical damage.¹⁰

Wound healing and skin integrity: Zinc and manganese both play crucial roles in wound healing and connective tissue repair due to collagen synthesis.¹¹ Key mechanisms of zinc in acne management include anti-inflammatory effect on granulocytes, regulation of androgen metabolism and retinol-binding protein synthesis.¹²

Zinc bisglycinate has been shown to have superior absorption compared to other forms of zinc:¹³ Zinc bisglycinate is absorbed intact and not ionised like other forms of zinc, resulting in less side effects such as nausea, commonly experienced with zinc supplementation.¹⁴

Free from animal products, dairy protein, lactose, eggs, gluten, wheat, nuts, yeast and soy protein. Free from artificial colours, flavours and preservatives.

*Not available in New Zealand.

Clinical Tools and Resources

All clinical tools and resources are available on **Metagenics Institute™**

Visit metagenicsinstitute.com.au or metagenicsinstitute.co.nz and you will find a wealth of information readily available, to assist you in your practice.



Clinical Tools



Technical Data



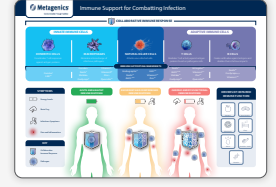
Treatment Protocols



Health Appraisal Questionnaire



Immune Questionnaire



Immune Support for Combating Infection



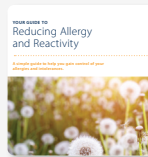
Patient Resources



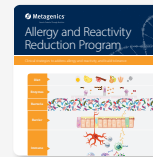
Immunity Brochure
(Pack of 15)



Natural Anti-Inflammatories
Brochure
(Pack of 15)



Patient Booklet
(Pack of 10)



Allergy and Reactivity
Reduction Program



Public Facebook Page
facebook.com/metagenics

Also available: Autoimmunity Brochure, Zinc Brochure and other Patient Booklet health categories.
Available to order through your Territory Manager.



Education



The Pathogen Puzzle: Navigating
Chronic Infection and the
Disease Connection



Integrative Oncology:
Implementing
Patient-Centred Care



Functional Foundations:
Immune Module



Metagenics Institute
Podcast



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Metagenics Clinical Support

Delivering Practitioner to Practitioner support and access to an industry leading Clinical team with 202 years of combined clinical experience. Available to help save you time and support your business and patient needs.

- Clinical support (i.e. treatment plans/product prescriptions/test results and interpretation/contraindications);
- Writing resources (technical/patient/digital tools);
- Education;
- Researching cases (providing information and evidence to support your research/patient treatment needs).

Our Clinical Support team can be reached on:

AUSTRALIA
1800 777 648
8:00 am – 5:00 pm AEST

NEW ZEALAND
0508 227 744
8:00 am – 5:00 pm



Immune Range Summary

	Product Highlights	Page
	Ultra Flora Immune Control <i>A Probiotic Combination for Healthy Immune System Function.</i> Clinically trialled LP-33® in 425 subjects to significantly improve symptoms of allergic rhinitis.	4
	Ultra Flora Immune Enhance <i>A Probiotic Combination to Boost Immune System Function.</i> Clinically trialled combination (HEAL 9 and 8700:2) in 272 subjects to reduce cold and flu duration and frequency.	4
	Inflavonoid Sustained Care <i>For Management of Pain and Mild Inflammation.</i> 4.2 g BCM-95™ Turmeric 1.5 g BosPure® Boswellia 867 mg Devil's claw	5
	SPM Active™ <i>Specialised Pro-Resolving Mediators.</i> Contains standardised and concentrated SPMs.	5
	Alergenics <i>Support for Mild Allergy Relief and Healthy Immune Activity.</i> 6 g Shiitake 6 g Reishi 6 g Milk thistle - Unique blend of herbs and nutrients to build tolerance.	6
	Alergeze <i>With Aller-7® for Symptom Relief.</i> - Clinically trialled Aller-7® 500 mg Quercetin 200 mg Bromelains	6
	Andro NK <i>For Cough, Cold, Fever, Phlegm and Sore Throat.</i> 6.3 g <i>Andrographis paniculata</i> - Green Tea standardised to contain EGCGs - Vitamins D, C and Zinc	7
	Quercetin Protect <i>Anti-inflammatory, Antioxidant and Immune Support</i> 500 mg Quercetin - Antioxidants	7

	Product Highlights	Page
	Super Mushroom Complex <i>High Strength Mushroom Blend for Immune System Support.</i> 4 g Cordyceps 4 g Coriolus - Pine Lime flavour	8
	Super Mushroom with Astragalus <i>Coriolus, Reishi and Astragalus Tablets for Immune Support.</i> 9 g Coriolus 6 g Astragalus 3 g Reishi	8
	Immunogenics <i>AHCC™ and Ginger to Support Healthy Immune Function and Reduce Nausea.</i> - Clinically trialled AHCC™ 38.5 mg Ginger rhizome	9
	Vitamin D3 1000IU <i>For Strong Bones and Immune Health.</i> 1000 IU Vitamin D3 - Tracked for stability	9
	Vitamin D3 Liquid <i>Purity, Stability, Convenience.</i> 1000 IU Vitamin D3 - For patients who prefer liquids.	9
	Meta Zinc with Vitamin C <i>High Strength, Bioavailable Zinc Powder with Vitamin C and Activated B6.</i> 25 mg Zinc per dose - Orange or Raspberry flavour	10
	MetaZinc <i>High Strength, Bioavailable Zinc Tablets.</i> 50 mg Zinc per tablet - B6 and Selenium - One-a-day dose	10

View This Practitioner Guide Online:



References available on request.

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