Mentoring the Mentors

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Eternal Truth

He who does not use his endeavors to heal himself is brother to him who commits suicide.

Proverbs 18:96

Mentor goals:

- To declare what is possible and establish a commitment to that possibility
- Address personal and professional barriers limiting the ability to serve
- Evolution of vision/mission/ethics that drive success
- Create immediate action steps to apply learning and growth
- Construct the round table of applied trophologists
Mentoring the mentor:

- Who are the mentors? – Practitioners
- Who are we mentoring? – Patients and GAP
- What’s the purpose? – Optimized life
  - How does it work? – Whatever you learn you teach someone else (anyone else)
- Who’s is included? – Self selection, you pick yourself

Mentoring the mentor:

- Each participant attends monthly teleconferences (1 hour in duration, 4th Wednesday of every 2nd month) creating a round table discussion/exploration of the dynamics and details of a nutrition-based holistic practice
- Each participant chooses how to convey the notes and information to their world and community – no information squandering

Review - Distinguish yourself

- It is more apparent why people are choosing alternative health care professionals who specialize in a functional approach
- No matter you specialty or technique you must distinguish yourself as an expert – people are just seeking to understand and they need you to do so
- Typically in the healthcare industry people are receiving shallow answers that leave them puzzled with the mystery of “Why is this happening to me?” and “What can I do about it?”
- Trends research over 10 years ago identified a number of factors essential to being successful in the nutritional field – one of those was establishing yourself as an expert
The Immune Challenge

Modern epidemics, viruses jumping species

Antibiotic-resistant bacteria

High costs, long lead times for new antibiotics

Antibiotic-induced changes in human flora and the modern epidemic of Clostridium perfringens

The rising incidence of atopic allergy, for example anaphylaxis to peanuts

The rising incidence of many autoimmune diseases, including type 1 diabetes

Immunosenescence

According to your DNA, from all recorded learning and adaptation, the number one cause of death is infection.

All effort shall be to survive that.

Antibiotics – A brief history

In 1928 Alexander Fleming realized that mold on a discarded culture had an antibacterial action

The mold was ‘penicillin’ and the bacteria were Staphylococci

First antibiotics prescribed in the late 1930s

Bacterial infection, as a cause of death ↓↓↓. From 1944 to 1972 life expectancy ↑ by 8 years

In 1969 the then US Surgeon General stated time to “…close the books on infectious diseases”

By 1999 resistance had emerged for all known antibiotics in use

http://www.abc.net.au/science/slab/antibiotics/history.htm
Antibiotic Resistance

According to the World Health Organization (March 2012), “Antimicrobial resistance threatens a return to the pre-antibiotic era”

440,000 new cases of multidrug-resistant tuberculosis (MDR-TB) emerge annually (150,000 deaths). MDR-TB reported in 64 countries to date.

Resistance to earlier generation antimalarial medicines is widespread in most malaria-endemic countries

Antibiotic Resistance

Many hospital-acquired infections are caused by highly resistant bacteria such as methicillin-resistant S. aureus (MRSA) and vancomycin-resistant enterococci (VRE)\(^1\)

In the US, more than 18,000 people die each year (50 every day!) from MRSA\(^2\) and up to 30,000 from antibiotic-resistant Clostridium\(^3\)

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1 http://www.who.int/mediacentre/factsheets/fs194/en/index/html
2 Kleemans RM et al. JAMA 2007; 298(15): 1763-1771

Antibiotic Resistance

The first step in the emergence of resistance is a genetic change in the bacterium\(^1\)

Antibiotic resistant genes can then be transferred from one bacterium to another.

Resistance can also spread through movement of bacteria from one host to another.

Antibiotic resistance is an inevitable consequence of antibiotic use, the more you use the more resistance you get.

The US is one of the highest users of antibiotics in the world, especially in agriculture

Antibiotics in Agriculture

In December 2011 the FDA settled one of the central disputes in the debate about the use of antibiotics in food animals.

US livestock consumed about 29 million pounds of antibiotics in 2009, about 4 times human medical use.\(^1\)

In an effort to control this excessive use, in April 2012 the FDA announced that for the first time, farmers and ranchers will need a veterinarian’s prescription to give antibiotics to farm animals.\(^2\)

However, this move will require drug makers to voluntarily change their labels to require a prescription.


The Post-Antibiotic Era

Dr Margaret Chan, director general of WHO, “A post-antibiotic era means, in effect, an end to modern medicine as we know it. Things as common as Strep. throat or a child’s scratched knee could once again kill.

We are losing our first-line antimicrobials. Replacement treatments are more costly, more toxic, need much longer durations of treatment, and may require treatment in intensive care units.”


The Post-Antibiotic Era

“Hospitals have become hotbeds for highly-resistant pathogens, increasing the risk that hospitalization kills instead of cures.

In terms of new replacement antibiotics, the pipeline is virtually dry, especially for gram-negative bacteria. The cupboard is nearly bare.”
New Antibiotics?

Few companies are willing to invest in drugs designed for short term use.

According to Dr. William Schaffner, chairman of preventive medicine at Vanderbilt University Medical Centre in Nashville, “If you create a new drug to reduce cholesterol, people will be taking that drug every day for the rest of their lives. But you only take antibiotics for a week or maybe 10 days.”

http://abcnews.go.com/blogs/health/2012/03/16/antibiotic-resistance-could-bring-end-of-modern-medicine/

The Nutritional & Herbal Approach

It is now clear that we are approaching crisis point with infection control.

So, what can we offer?

What are the nutritional and herbal supports to support or preventing any type of infection?

IMMUNE ENHANCEMENT

Immune enhancement is our first-line treatment and is fundamental to infection control and treatment.

Immune System – Mammalian

Immune development increased survivability of organisms which promoted more sophisticated species evolution.

It permitted clarified DNA purity which increasingly 'got the message out.' Before immune development lifespans were brief and primarily unicellular.
**Immune – ‘Immun’ means free**

“If you’re not with us, then you’re against us”

IDRS – Immune Defense Repair System

It was always a competition for control of the creative DNA and the cellular machinery to support life

Functional term which includes the idea that the enabled immune system in addition to defending also repairs cellular structure and promotes DNA to proteomics to metabolomics translation accuracy

Immunity creates autonomy and selfhood

**Immune Organization -**

Innate Immunity (Nonspecific):
A lowly foot soldier responding within minutes to all foreign invaders.

Barricades (2 lines of defense):
1 Membranes – Skin & Mucosae creating barrier entrance prevention.
2 Inflammation mitigated through antimicrobial proteins, phagocytes and cells to inhibit movement through the body

Adaptive Immunity (Specific):
Infiltrating Barricade (3rd line of defense):
Requiring more time to mount this system was first revealed in the late 1800’s showing animals developed antibodies.

Antigen Specific – recognizing antigens
Systemic – not restricted to initial infection site
Memory – after initial exposure more severe defenses are mounted

**Innate & Acquired Immunity**

Primary roles of the healthy immune system are:

- Identify potentially injurious and infectious substances
- Distinguish self antigens (non-threatening) from non-self (threatening)
- Assess the potential level of threat posed by infectious, toxic, or non-self antigens
- Mount a response that is appropriate to the level of threat
- Repair any damage that ensues from adversarial encounters

- Too much response = inflammatory cascades
- Too little response = tolerance of danger

WBC is optimal 6-8, outside optimal range may suggest acute or chronic immune burden, under 4 indicates bone marrow fatigue
**Immune System – 2 Parts**

Generally recognized that there are 2 parts of the immune system:

- **Innate Immune System** – inborn initial response to eliminate microbes and infections, immediately or within hours – it is not in any locale or organ, it is in the WBC.
  - Each cell is equipped with different mechanisms that allow it to attack and eliminate pathogens from the body demonstrating immune versatility.
  - Non-specific defense against pathogens, activates the complement system of inflammatory response.
  - Identifies self vs. non-self, complement system triggers inflammation and identifies foreign substances, and activates the adaptive immune system.

**Innate Immune Cells include:**
- Mast Cells
- Natural Killer Cells
- Phagocytes – Monocytes, Macrophages, Dendritic cells
- Neutrophils – Neutrophils, Eosinophils, Basophils

**Adaptive Acquired Immune System** – learned response precisely addressing threat requiring 5-7 days for adaptive immune modulation to reach full activity and specific lymphocyte presence.

- Results in TH1 cellular phagocytosis or TH2 humoral antibodies.
- TH1 responds to living things (bacteria, fungus, virus)
- TH2 responds to non-living things (and parasites) including food, pollens, bad fats, heavy metals.

**Immune Structure**

- **Innate Immunity**
  - **Surface Barriers** – skin (keratinized) and mucosa line all exterior surfaces (Skin, Digestive, Respiratory, Urinary, Reproductive).
  - Acidity of skin/vagina is pH 3 to 5.
  - Stomach Acid.
  - Lysozymes in saliva and lacrimal fluid.
  - Sticky mucus traps/ antiseptic paint.
  - Ciliated surfaces.

- **Body has many nonspecific cellular and chemical devices for protection.**
  - **Phagocytes**
  - **Natural killer cells**
  - **Antimicrobial proteins**
  - **Inflammation targets immune system for defense and repair**
  - **Fever**
Innate Immunity

Innate immunity is responsible for the immediate response to a pathogen - within hours

During the initial stages of a viral infection the cytokines generated by the innate immune response account for most of the symptoms experienced

Antimicrobial peptides such as defensins are also released, interferons, iron-binding proteins

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Innate Immunity

Key cells of innate immunity

Phagocytes:
- Monocytes (in the tissue become macrophages)
- Macrophages (The big eaters – wandering/free and fixed Kupffer Cells in the liver and microglial brain) – in search of cellular debris or invaders
- Neutrophils (most abundant WBC)
- Eosinophils (position against Helminth and discharge destructive cytoplasmic granules over the invader)
- Basophil (Anti-parasitic)
- Mast cells (weakly phagocytic to wide range of invaders)
Innate Natural Killer Cells - Police
Larger granular lymphocytes capable of lysing and killing cancer cells and virus infected cells before the adaptive immune system is enlisted – ‘pit bulls’

Unlike lymphocytes, which can only react against specific antigens, the NK cells are less picky – by recognizing surface sugars they release cytolytic chemicals called ‘perforins’

Shortly after the target invaders reveal channels in their membrane and the nucleus disintegrates rapidly

Also secrete potent chemicals that promote the inflammatory response

Rationale:
Herbal extracts and combinations are formulated to promote gastrointestinal health by fending off microbial challenges and burdens (such as parasites, fungal/yeast overgrowth, dysbiosis, stealth, etc.)

Formulations includes a blend of botanicals and plant compounds that have antimicrobial and anti-parasitic properties.

The standard American lifestyle that consists of poor diet, high stress and over consumption of refined carbs and sugars leads to an opportunistic environment for microbes and parasites.

Epimune

Vitamin C 20 mg
Calcium 30 mg
Zinc 10 mg

Proprietary blend amount: 706 mg
Dried yeast fermentate (EpiCor®), turkey tail mushroom powder†, maitake mushroom powder†, and maitake mushroom extract (Maitake Gold 404®)†.
Ganoderma & Shiitake

- Calcium: 90 mg
- Shiitake mushroom 4:1 extract from *Lentinula edodes* 800 mg
- Reishi mushroom 66:1 extract from *Ganoderma lucidum* 6.6 g

**Thymex**

- Cholesterol: 5 mg
- Vitamin C: 5 mg

**Proprietary Blend: 370 mg**
Calcium lactate, bovine thymus Cytosol™ extract†, and magnesium citrate.

**Sesame Seed Oil**

- Sesame Seed Oil contains essential fatty acids, as well as naturally occurring vitamin E. Provides antioxidants.
- Supports healthy liver function.
- Supports immune system function.
Andrographis

- Calcium 40 mg
- Echinacea root 4:1 extract from *Echinacea angustifolia* root 125 mg
- Holy Basil 5:1 extract from *Ocimum tenuiflorum* herb 100 mg
- Andrographis herb 10:1 extract from *Andrographis paniculata* herb 1.0 g Containing andrographolide 10 mg
- Holy Basil (*Ocimum tenuiflorum*) herb essential oil 10 mg

Artemisinin

- support normal flushing of natural toxins from the body
- encourage healthy function of organs of elimination
- cleanse the blood
- encourage healthy bowel function
- support healthy digestion
- support a healthy intestinal environment*

Myrrh

- support healthy bowel function
- support healthy digestion
- support a healthy intestinal environment
- support gastrointestinal health
- support sinus and respiratory health*
### Echinacea Premium

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<tr>
<td>Calcium</td>
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<tr>
<td>Containing alkylamides</td>
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### Wormwood Complex

<table>
<thead>
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<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>Calcium</td>
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</tr>
<tr>
<td>Stemona root 5:1 extract from <em>Stemona sessilifolia</em> root</td>
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<tr>
<td>Black Walnut hull 4:1 extract from <em>Juglans nigra</em> hull</td>
<td>25 mg</td>
</tr>
<tr>
<td>Wormwood herb 4:1 extract from <em>Artemisia absinthium</em> herb</td>
<td>25 mg</td>
</tr>
</tbody>
</table>
### Garlic Forte

- Calcium: 80 mg
- Garlic bulb 12:1 extract from *Allium sativum* bulb: 3.6 g containing alliin 12 mg
- Garlic (*Allium sativum*) bulb powder: 45 mg

### Black Walnut Hulls

- Black Walnut hull 1:10 extract from *Juglans nigra* hull: 5 mL 500 mg

### Gut Flora Complex

- Anise (*Pimpinella anisum*) fruit essential oil: 125 mg
- Andrographis ariel parts 10:1 extract from *Andrographis paniculata* ariel parts: 1.0 g containing andrographolide 10 mg
- Phellodendron stem bark 20:1 extract from *Phellodendron amurense* stem bark: 1.6 g containing berberine 36 mg
- Oregano (*Origanum vulgare*) leaf essential oil: 75 mg
Adaptive Immunity

Adaptive immunity is based on the special properties of lymphocytes (T and B) which can respond selectively to different antigens (non-self).

This leads to specific memory and a permanently altered pattern of response—an adaptation.

Antigen-presenting cells (macrophages, dendritic cells) present antigen to helper T cells (Th cells) that recognize (signal 1) and verify (signal 2) that the antigen is indeed foreign.


An immune Response Requires

Non-self → Pathogen Associated Molecular Patterns (PAMPs)
Damaged-self → Damage/Danger Associated Molecular Patterns (DAMPs)
Cells undergoing injury or necrosis (as opposed to apoptosis) release DAMPs (also called alarmins)
Adaptive Immune Organization -
Specific Defensive System: Recognizes specific foreign substances and acts to immobilize, neutralize or destroy.
In the late 1800’s researchers demonstrated antibodies within animals:
1. Antigen Specificity – directed against particular antigens that activate the immune response ‘lock and key’
2. Systemic circulation – immunity not restricted to initial infection site
3. Memory – after initial exposure it ‘remembers’ and mounts even stronger defense

Humoral or Antibody-Mediated Immunity
Antibodies circulate freely in the system after production by lymphocytes where they bind to microbes, toxins or viruses to deactivate them and mark them for destruction by phagocytes.

Cellular or Cell-Mediated Immunity
Lymphocytes themselves defend by laying invaders or releasing chemical mediators that activate inflammation or call other lymphocytes or macrophages.

Antigens or Haptens -
Antigens (Foreign) – large complex molecules (natural and man-made) not normally present.
The word means ‘antibody generating’
Immunogenicity – stimulates proliferation of specific lymphocytes which produce antibodies.
Reactivity – able to react with lymphocytes and other antibodies.
Antigens include all foreign proteins (strongest antigen), nucleic acids, some fats, and large polysaccharides.

Haptens – small molecules like peptides, nucleotides and some hormones are not immunogenic unless they link up with normal proteins to alter them and be perceived as foreign.
Haptein = grasp
A lesser immune response is mounted which is called allergy.
Common haptens include penicillin, poison ivy, animal dander, detergents, cosmetics, man-made chemicals.

Cells of Adaptive Immunity -
Three crucial cell types:
APC – Antigen Presenting Cells are dendritic cells that engulf foreign particles and present fragments of the antigens like signal flags to the lymphocytes.
B Lymphocytes – Only humoral (antibody) defenses mature in the bone marrow (B).
T Lymphocytes – non-antibody producing cells that constitute the cell-mediated arm of defense, maturing in the thymus (T), which imparts as well to the bone marrow, spleen and lymph nodes in mature adults.

Lymphocytes – originate from hematopoietic stem cells and when released from the bone marrow are essentially identical.
They are differentiated into T cells, B cells and what we consider lymphoid organs (thymus, bone marrow).
T cells undergo a 2-3 day process under the direction of thymic hormones whereas they divide/cycle faster – negative selection weeds out the ones that react strongly accomplishing self-tolerance (autoimmune).
When they bind with antigens they are uniquely made for they mature completely.
**Immune Triad**

The human body does not have a single immune organ, however it is in itself an immune system comprised of:

- **Thymus** (where the immune cell matures)
- **Long bones** - Marrow (where the lymphocyte originates)
- **Spleen** (activity of the leukocytes)
- **Liver** (activity of inflammation and autoimmune response)
- **Stomach** (HCL is needed to destroy ingested bacteria, virus, and parasite)
- **Intestinal flora** (destroys pathogenic microbes, stimulates interferon production)

*It’s been said that 90% of our immune system is in our gut!*

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**The greatest use of your time**

**Think New Thoughts**

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**Indicators – Measure, Measure**

Indicator testing can be important in the determination of what to do and documenting improvement.

**Common Indicators:**

- Range of motion –
- Pain/Discomfort -
- Isolated muscular weakness -
- Postural assessment -
Indicators – Measure, Measure

- Infection/Infestation
- Immune escalation
- Cytokine Communication
- Neurological Excitation
- Muscular Hypertonicity

Hiatal Hernia and the Psoas

The Psoas takes its origin around the esophageal hiatus as the esophagus enters the abdomen.

Tension and inflammation at this site may cause spasm and various degrees of herniation resulting in profound psoas tonicity distortion and structural abnormality.

Testing for integrity by pulling down vs. pushing up can reveal if this is an issue.

Subsequent correction can occur by pulling the stomach down while exhaling as the diaphragm moves up – hold for 1-3 minutes.
IleoCecal Valve

This valve separates the actions of the small intestine from the colon.
And also prevents excessive bacterial activity and dysbiosis from backing into the small intestine – SIBO.
SIBO creates chronic immune burden and fatigue over time.

ICV – Open or Closed

Like scooping mashed potatoes you may manually open or close the ICV.
To open valve draw tissue from superior to inferior.
To close valve draw from inferior to superior diagonally towards the left shoulder.
The ICV gets stuck open or closed due to muscular spasm usually secondary to dysbiosis an infection.

Gastrex (6)
Okra Pepsin (6)
Golden Seal (4)
Prosynbiotic (4)
Cataplex AC (10)
Zymex (6)
Zymex II (4)
Gut Flora Complex (4)
Artemisinin (4)
Myrrh Forte (2)

Primary Infectious Gateway
The primary upstream entry of infection and stealth burden is the small intestine.

Start by closing the front (esophageal hiatus) and back door (ICV) to contamination of the small intestine.

Uniquely just doing this seems to neurologically immediately modulate immune virulence and ease suffering.

Who Let The Dog Out ...
We start by suckling at the breast for our nourishment from mother earth – and we spend the rest of our lives sucking from the small intestine from which we derive all nutrition.

Once the doors have been closed and we reinstate small intestine sanctity what may be done to repair the damage.

Gut Repair/Revitalization Program:
- Digest Forte 2 bid – providing bitters activation and parasite reduction
- Livton® 2 bid – bile production and subsequent recovery of alkalinity in the small intestine and proper motility
- HiPep 2 bid after food – lining repair

Antimicrobial:
- Golden Seal 2 bid – wide spectrum antimicrobial while also being tropho-restorative for all mucous lining membranes (urinary tract, digestive, respiratory, etc.)
- Gut Flora Complex – best antimicrobial
Okra Pepsin

Okra Pepsin E3 supports intestinal function.
Supports mucosal tissue in the intestines
Supports bowel function
Provides bowel cleansing*

Gut Flora Complex

Anise (Pimpinella anisum) fruit essential oil 125 mg
Andrographis ariel parts 10:1 extract from Andrographis paniculata ariel parts 1.0 g
Containing andrographolide 10 mg
Phellodendron stem bark 20:1 extract from Phellodendron amurense stem bark 1.6 g
Containing berberine 36 mg
Oregano (Origanum vulgare) leaf essential oil 75 mg

Cataplex® AC

Vitamin A 1,500 IU
Vitamin C 11 mg
Proprietary Blend: 400 mg Echinacea (root)†, calcium lactate, sweet potato†, carrot (root)†, bovine adrenal†, bovine kidney†, nutritional yeast†, magnesium citrate, alfalfa flour†, dried alfalfa (whole plant) juice†, mushroom†, dried buckwheat (leaf) juice†, buckwheat (seed)†, bovine bone†, defatted wheat (germ)†, oat flour†, sunflower lecithin†, veal bone†, vitamin E (sunflower), rice (bran)†, and carrot oil†.
**Enzycore**

**Proprietary Blend:** 538 mg L-glutamine†, kale (aerial parts)†, beet (root)†, and vegetarian enzyme blend (acid maltase [1MaltU], alpha-galactosidase [45 GaIU], amylase [1,800 DU], bromelain [32,880 FCCPU], glucoamylase [3 AGU], invertase [170 SU], lactase [325 ALU], lipase [230 FIP], peptidase [820 HUT], protease 3.0 [3 SAPU], protease 4.5 [4,930 HUT], protease 6.0 [1,640 HUT])†.

**Digest Forte**

- Gentian root 2:1 extract from *Gentiana lutea* root 200 mg
- Tangerine fruit peel 5:1 extract from *Citrus reticulata* fruit peel 500 mg
- Feverfew leaf 3:1 extract from *Tanacetum parthenium* leaf 200 mg
- Ginger rhizome 10:1 extract from *Zingiber officinale* rhizome 250 mg
- Wormwood herb 4:1 extract from *Artemisia absinthium* herb 100 mg

**HiPep**

- reduce occasional stomach acid secretions
- promote healthy mucosal tissue within the upper gastrointestinal tract
- promote healthy tone and function within the upper gastrointestinal tract
- assist the normal functioning of the esophageal sphincter*
Tracing

• There are multiple doorways to enter this body circuit testing

• 1 Somatic to visceral circuiting (been teaching this for years)

• 2 Visceral to visceral circuiting (new idea)

• 3 Choosing priority and finding visceral circuits

• 4 Limbic to visceral circuits (old idea, new way)

• 5 Body issue to visceral circuits (new idea)

• 6 Idea (chronic pattern) to circuits (new idea)

Teaching this tracing

• The intention is to teach this circuiting in intervals through the body of this academic seminar thus reinforcing the work and increasing familiarity.

• Through repetition this will become more facile and formulaic thus leaving the practitioner ready for whatever presents.

Evoking the innate healing response

When you have once seen the glow of happiness of the face of a beloved person, you know that a man can have no other vocation than to awaken that light on the faces surrounding him ...

- Albert Camus