ESTABLISHED 1992, A4M REPRESENTS 24,000 PHYSICIANS AND SCIENTISTS FROM 110 COUNTRIES WORLDWIDE

VOLUME V

THE AMERICAN ACADEMY OF ANTI-AGING MEDICINE

EDUCATIONAL CURRICULUM GUIDE

The Future of Medicine Today

Dear Medical Professionals,

Healthcare is now at its most critical crossroad and Anti-Aging medicine is transforming healthcare, one practice at a time. Anti-Aging medicine is the fastest growing medical specialty. The worldwide Anti-Aging marketplace was valued at $96.89 billion in 2008 and it's expected to reach $292 billion by 2015.

The American Academy of Anti-Aging Medicine (A4M), established in 1992, represents 24,000 physicians and scientists from 110 countries worldwide. Each year, A4M hosts dozens of conferences around the world with more than 30,000 attendees. These conferences provide physicians continuing education and hands-on workshop opportunities. At these conferences you'll receive the latest cutting edge treatment modalities in Anti-Aging, regenerative and functional medicine.

The A4M has created avenues for you to incorporate Anti-Aging into your existing practice. A4M offers exclusive membership to all medical professionals where they gain access to over two decades of established Anti-Aging expertise. To further your knowledge base, A4M encourages you to become a Board Certified and Fellowship Trained Anti-Aging physician or healthcare practitioner.

The A4M offers co-sponsored post-graduate educational programs that provide intensive, hands-on training from experts in the field. We invite you to participate in our Fellowship programs:

The Fellowship in Anti-Aging, Regenerative and Functional Medicine

The Fellowship in Integrative Cancer Therapies

The Aesthetic Anti-Aging Fellowship

The Fellowship in Stem Cell Therapies

It is important to arm yourself with the proper knowledge in this area of medical specialty. This education will set you apart from all other physicians and practitioners who are practicing in this specialty without proper education. You will gain the knowledge that will allow you to be competent to practice in your area of medical specialty without any supervision.

Please contact us and ask how you can become an exclusive A4M Member, Board Certified medical professional and Fellowship trained in the fastest growing medical specialty.

Sincerely,

Doreen J. Brown, MBA
CEO, A4M and Medical Conferences International

A4M Executive Officers and Special Advisors

Ronald Klatz, MD, DO
Co-Founder & President
Dr. Ronald Klatz coined the term " Anti-Aging medicine" and is recognized as a leading authority in the new clinical science of Anti-Aging medicine. Since 1981, Dr. Klatz has been integral in pioneering the exploration of new therapies for the treatment and prevention of age-related degenerative diseases. In his capacity as A4M President, Dr. Klatz oversees AMA/ACCME-approved continuing medical education programs for more than 100,000 physicians, health practitioners, and scientists from over 105 countries worldwide. Held in high regard for his continuing medical education lectures on the demographics of aging and the impact of biomedical technologies on longevity, Dr. Klatz has published scientific articles appearing in Resident and Staff Physician, "British Journal of Sports Medicine", "Medical Times/The Journal of Family Medicine", "Osteopathic Annals", and "American Medical Association News" (partial list).

Robert M. Goldman MD, PhD, DO, FAASP
Co-Founder & Chairman of the Board
Dr. Robert Goldman is physician co-founder and Chairman of the Board of the A4M and Chairman of the World Anti-Aging Academy of Medicine (WAAAM; www.waaam.net). Dr. Goldman serves as Chairman of the International Medical Commission overseeing sports medicine committees in over 184 nations. He also is President Emeritus of the National Academy of Sports Medicine (NASM; www.nasm.org). Dr. Goldman has served as a Senior Fellow at the Lincoln Filene Center, Tufts University; as an Affiliate at the Philosophy of Education Research Center, Graduate School of Education, Harvard University. He is: Clinical Consultant, Department of Obstetrics and Gynecology, Korea Medical University; and Professor, Department of Internal Medicine at the University of Central America Health Sciences, Department of Internal Medicine. Dr. Goldman holds the positions of Visiting Professor, Udayana University School of Medicine, Indonesia; Visiting Professor, Huazhong University of Science & Technology Tong Ji Medical School, China; Visiting Professor, The Wuhan Institute of Science & Technology, China; and Visiting Professor at Hainan Medical College, China.

Joseph C. Maroon, MD
Senior Vice-President
Dr. Joseph Maroon is a board certified Professor and Vice Chairman of Neurological Surgery at the University of Pittsburgh School of Medicine and the Heindl Scholar in Neuroscience. With more than 250 published scientific papers, Dr. Maroon's clinical and research interests have been in the areas of the development of minimally invasive surgical procedures to the brain and spine, the prevention and treatment of traumatic injuries to the central nervous system, innovative approaches to pituitary and other brain tumors and more recently complementary approaches to inflammatory diseases associated with aging.

Nicholas A. DiNubile, MD
Vice-President
Dr. Nicholas DiNubile, an Orthopaedic Surgeon specializing in sports medicine in private practice in Havertown, Pennsylvania, serves as orthopaedic consultant to the Philadelphia 76ers Basketball Team and Pennsylvania Ballet. He is author of the bestselling book, "FrameWork" - Your 7 Step Program for Healthy Muscles, Bones & Joints, from which an award-winning national PBS television special was derived. Dr. DiNubile is also an advisor to Yahoo! Health, where he hosts "The Training Room" Blog.

Fellowship Directors

Fellowship Directors

Pamela W. Smith, MD, MPH
Director, Fellowship in Anti-Aging, Regenerative and Functional Medicine
Pamela Wartian Smith, MD, MPH spent her first twenty years of practice as an emergency room physician with the Detroit Medical Center. She is a diplomat of the Board of the American Academy of Anti-Aging Physicians and is an internationally known speaker and author on the subject of Metabolic, Anti-Aging and Functional Medicine. She has been featured on CNN, PBS, and other television channels, has been interviewed in numerous consumer magazines, and has hosted her own radio show. She is currently the Director of the Center for Healthy Living and Longevity and the founder and Director of The Fellowship in Metabolic, Anti-Aging and Functional Medicine. Dr. Smith is also the director of the Master's Program in Metabolic and Nutritional Medicine at the University of South Florida School of Medicine. She is the author of the best-selling books, "HRT: The Answers," "Vitamins Hype or Hope," "Demystifying Weight Loss," "What You Must Know About Vitamins, Minerals, Herbs & More," and "What You Must Know about Women's Hormones." Her newest book, "Why You Can't Lose Weight," was released in May of 2011.

Mark Rosenberg, MD
Director, Fellowship in Integrative Cancer Therapies
Dr. Rosenberg has been involved with drug research since 1991. Having studied the mechanisms of cancer treatment failure, the following concept has become blatantly apparent to Dr. Rosenberg: There are many substances that are toxic to cancer cells in vitro (outside of the body, in a culture medium), including chemotherapy and intravenous antioxidant therapy. These therapies, however, are more often than not, ineffective in vivo (inside the body). The primary reason for the ineffectiveness is that tumor blood flow is poor, resulting in a tumor that actually receives very little of the cytotoxic therapy that is being administered. In addition, poor tumor blood flow is associated with higher grade tumors and greater incidence of metastasis. Dr. Rosenberg has since concentrated his efforts on improving blood flow to the cancer, while administering cytotoxic intravenous antioxidant therapy. In addition to using vasodilating therapy such as carbogen and isosorbide dinitrate, Dr. Rosenberg has just been granted approval status for an IND (investigational new drug) using Angiotensin II. Angiotensin II is frequently used in Japan in conjunction with chemotherapy to improve tumor blood flow.

Dipnarine Maharaj, MD, FACP
Director, Fellowship in Stem Cell Therapies
Dr. Dipnarine Maharaj is the Medical Director and founder of the South Florida Bone Marrow/ Stem Cell Transplant Institute, one of the few completely outpatient bone marrow/stem cell transplant facilities in the country. He was also involved in the establishment of bone marrow/ stem cell transplant programs at the University of Miami and for other communities in Florida. He has been involved with clinical research studies using stem cells in the areas of cardiac regeneration, neurodegenerative diseases, and cancer treatments. Most recently, he has secured an investigator-initiated IND from the FDA to study a novel treatment of solid tumors using only healthy white blood cells. His innovative approach to medicine has earned him international recognition. "The harder I work and the more dedicated my care, the closer we all get to beating cancer. The constant strides in science, research and technology have given new hope to patients who, as recently as ten years ago, may have had none. The treatments are getting more effective, the success rates are getting higher, and it's because doctors like me simply refuse to rest." Dr. Maharaj earned both his medical degree and research doctorate at the University of Glasgow Medical School. He is also certified in Internal Medicine by the Royal College of Physicians of the UK, and has accreditations in hematology, specializing in oncology and bone marrow transplantation. He has been a lecturer on internal medicine, hematology, and bone marrow transplantation at medical schools and universities in the US and Europe, and is currently Professor at the Charles E. Schmidt College of Biomedical Science of Florida Atlantic University. Dr. Maharaj maintains professional memberships in the American Medical Association, American Society of Clinical Oncology, American Society of Hematology, International Bone Marrow Transplant Registry, American Society of Blood and Bone Marrow Transplantation, and the American Society of Internal Medicine.

Fellowship Directors

Sharon McQuillan, MD

Director, Aesthetic Fellowship

Dr. McQuillan is a board certified physician who specializes in aesthetic, anti-aging, and regenerative medicine. She founded The Ageless Aesthetic Institute, a level 4 ACCME accredited aesthetic training program for medical professionals in order to standardize and elevate the practice of aesthetic medicine. Dr. McQuillan has educated thousands of medical professionals in the art and science of aesthetic and anti-aging treatments for over a decade. Dr. McQuillan lectures internationally on aesthetic and regenerative medicine for many organizations and is the medical director of The Aesthetic Fellowship, hosted by the American Academy of Anti-Aging Medicine. The fellowship is a six-part didactic plus hands-on clinical experience medical education program in aesthetic procedures, offering certification via written and case study examination for its attendees.

Dr. McQuillan has been featured in "Dermatology Times", "Vogue", "Medical Spa Report", "Medesthetic", "Miami Herald", "Aesthetic Guide" and on "Telemundo" and "Good Morning America".

Dr. McQuillan owns and operates the Ageless Institute in Aventura, FL, offering anti-aging, aesthetic, regenerative, and weight loss treatments. In 2009, Dr. McQuillan formed the Ageless Regenerative Institute in conjunction with a team of experts in stem cell therapies. This expert team has developed an approved method and protocol for the harvesting and isolation of adipose-derived stem cells for autologous transplantation.

Dr. Maria Angelo-Khattar, PhD (UAE)

Director, International Aesthetics Fellowship - Clinical Training Director & Chief Lecturer (Dubai Program)

Dr. Angelo-Khattar's international background combined with her expert knowledge of the aesthetic industry in Dubai makes her the ideal physician for supervising the hands-on aesthetic training recently introduced in Dubai. Dr. Angelo-Khattar is not only a renowned worldwide lecturer on the topic of minimally invasive aesthetic procedures but also a leading aesthetic practitioner in Dubai.

Dr. Angelo-Khattar obtained her B.Sc. Honours and PhD from King's College and St. Mary's Hospital Medical School, University of London. She is a Fellow of Royal Society of Medicine, UK. Dr. Angelo-Khattar served as an Assistant and then Associate Professor at the Department of Pharmacology and Toxicology at the Faculty of Medicine, University of Kuwait. In 1984, Dr. Angelo-Khattar established the Toxicology Unit, a joint venture between the Ministry of Health and the Faculty of Medicine, Kuwait University. Dr. Angelo-Khattar has published 40 papers in international journals.

Currently, Dr. Angelo-Khattar runs Aesthetica Clinic, now located in three different areas of Dubai (DHCC, Jumeirah and Deira).

About A4M

About A4M

The American Academy of Anti-Aging Medicine, Inc. (A4M) is a U.S. federally registered 501(c)3 non-profit medical organization. Established in 1992, the A4M is dedicated to the advancement of technology to detect, prevent and treat age-related disease and to promote research into methods to optimize the aging process. The organization is also committed to educating its 24,000 members on treatment modalities, breaking technologies, practical knowledge skills and evolving medical perspectives. Although the A4M seeks to disseminate information on many types of medical treatments, it does not promote or endorse any specific treatment, nor does it sell or endorse any commercial product.

Mission

The A4M is a global medical-education provider specializing in Anti-Aging, regenerative, functional and metabolic medicines. Through live conferences and online programming, we offer the latest and best content—based on advanced scientific research—for physicians and healthcare practitioners to implement into their practices, ultimately enhancing patient care. Welcome to the future of medicine today.

Objectives

- Make available life-extending information about the multiple benefits of Anti-Aging therapeutics to practicing physicians and health practitioners
- Assist in developing therapeutic protocols and innovative diagnostic tools to aid physicians and health practitioners in the implementation of effective longevity treatment
- Act as an information center for valid and effective Anti-Aging medical protocols
- Assist in obtaining and disseminating funding for scientifically sound and innovative research in Anti-Aging medicine
- Assist in the funding and promotion of critical Anti-Aging, clinically based research
- Promote outreach, education, and advocacy for Anti-Aging medicine in the governmental and public arenas
- Provide continuing medical education and training for over 100,000 physicians, health practitioners, and scientists at dozens of scientific conferences taking place in the United States and in venues worldwide, in the Anti-Aging and regenerative medical sciences

A4M Membership

Member Benefits

Becoming a member of the A4M gives you unparalleled access to industry-leading experts, research and resources. The A4M is committed to continually improving and expanding the benefits of your membership. We are pleased to announce these exclusive member benefits—tools to help your practice reach its full potential.

- Framed member certificate: Receive a personalized certificate upon joining.
- Discounts on conferences: Save up to 50% on event registration.
- Discounts on educational materials: Choose from our library of the latest educational books, video and other media.
- Directory listing on A4M.com, including:
  - Name and contact information
  - Contact form that is directly emailed to physician-provided address
  - Search engine optimized content
- Learning Center: Gain access to educational videos featuring industry news and views.
- Virtual Community, including:
  - Pin Board for sharing job postings, articles, events and more
  - "Ask Questions" section
  - Networking with your peers
- Free monthly professional e-newsletter: Receive practical information from leading experts to help expand your practice.
- Discounts on hotels and flights when traveling to A4M conferences
- Medical Legal Defense Program: Work with a team of medical and legal experts to prepare for a medical review board meeting.

For inquiries, contact A4M Membership Department, Tel: (561) 997-0112, Fax (561) 997-0287, or e-mail info@a4m.com

Board Certification
Physicians Program (ABAARM)

Overview of the Certification Process

The American Board of Anti-Aging and Regenerative Medicine (ABAARM) is a certification program of the American Academy of Anti-Aging Medicine. Together, the A4M and ABAARM represent over 24,000 physicians from 110 nations in the new clinical specialty of Anti-Aging medicine.

The American Board of Anti-Aging and Regenerative Medicine was founded in 1997 as a professional physician certification and review board for individuals with MD (Doctor of Medicine), DO (Doctor of Osteopathic Medicine), MBBS (Bachelor of Medicine/Bachelor of Science), or DPM (Doctor of Podiatric Medicine) degrees. ABAARM offers these medical professionals with recognition of their specialty knowledge and clinical practice of Anti-Aging medical care. The long-term objective of ABAARM is to achieve formal sub-specialty recognition and a new status for Anti-Aging medicine and for those practicing it as qualified clinicians.

The ABAARM program consists of Part I (Written Examination) and Part II (Oral Examination). Typically, many examinees complete both steps within a year, but ABAARM permits a timeframe of up to two years to complete Part II after passing Part I. After taking the oral exam you have six months to complete the certification. A4M strongly recommends that all interested candidates sign up as far in advance of the examination date as possible. For ABAARM Part I, all candidates will benefit from permitting themselves with a maximum timeframe to review the study materials. A complete ABAARM study guide is available for purchase direct from A4M.

Part I. Written Examination

In ABAARM Part I, a three-hour multiple-choice written examination, assesses proficiency in several areas of Anti-Aging clinical care, with a predominant focus on practical knowledge skills in diagnostic and therapeutic interventions, nutritional therapies, and pharmaceuticals, as well as sound textbook knowledge of endocrinology, neurophysiology, and cancer. After passing the exam, completing all requirements for Part I and receiving acknowledgement from the Board, a physician may refer to him/herself as a “Diplomate” in Anti-Aging medicine.

NOTE: ABAARM Written Exam is available in English, Spanish and Brazilian Portuguese.

Part II. Chart Review and Oral Examination

The Chart Review portion of Part II involves the submission of six (6) summary patient charts, which are then evaluated by ABAARM to determine the doctor's skills in utilizing Anti-Aging diagnostic and treatment interventions in their practices. They can be submitted either before or after the exam.

In the Oral Examination portion of Part II, candidates are questioned by one or two oral examiners during an in-person, private exam interview. Each exam will be audio recorded for quality assurance. Generally, the oral exam takes 40 to 60 minutes and consists of one or two standardized mock cases and related clinical questions. After passing Part II and verification by ABAARM of completion of the physician's certification criteria, and receipt of signed certificate from the Board, she/he may refer to her/himself as "Board Certified" in Anti-Aging medicine.

To maintain ABAARM certification, you must continue active membership in good standing in A4M.

Criteria for ABAARM Board Certification Completion

PART I (Written Test):

- Membership in the American Academy of Anti-Aging Medicine (A4M)
- Attendance at two or more consecutive A4M approved/sponsored conferences
- An MD, DO, DPM or MBBS degree from an accredited medical school
- An active medical license in the state, province, or nation where the applicant resides
- Curriculum Vitae (Resume) demonstrating a minimum of 5 years of clinical practice experience (residency training applicable)

- Passing score on written exam
- At least 200 hours of Continuing Medical Education (CME) credits (or equivalent study) referable to the clinical practice and some aspect of preventive medicine, Anti-Aging medicine, nutritional medicine or diagnostic medicine during the past eight years. In nations where CME is not offered, exception to this requisite may be granted on an individual basis, as determined by case-by-case review by the ABAARM Board.

PART II (Oral Test):

- No significant disciplinary actions against the applicant, or a written appeal including full disclosure of all disciplinary actions accompanied by a full explanation of those actions accompanied by a request for a waiver of this requirement
- Submission of 5 multiple-choice examination questions, with correct answers supported by medical/scientific references
- Passing scores on oral exam
- Completion of the oral portion of the examination within 24 months of passing the written exam
- Six (6) patient charts to be reviewed by ABAARM board. To request a sample email boards@A4M.com
- Annual certification maintenance fee

Written Exam Details

DURATION OF EXAM: 3 hours

OFFICIAL LANGUAGE OF EXAM: English

KNOWLEDGE AREA:

• Mechanisms of Aging and Disease & Lifespan Research	7%
• Endocrinology	13%
• Cardiovascular Disease: Diagnostics, Prevention, and Therapeutic Interventions	13%
• Cancer: Epidemiology, Assessment, and Risk Factors	9%
• Cognitive Diseases & Impairments: Diagnostics, Prevention, and Therapeutic Interventions	8%
• Diabetes, Metabolic Syndrome, and Obesity: Diagnostics, Prevention, and Therapeutic Interventions	7%
• Respiratory Diseases: Diagnostics, Prevention, and Therapeutic Interventions	7%
• Musculoskeletal Diseases & Impairments: Diagnostics, Prevention, and Therapeutic Interventions	6%
• Skin Aging: Assessment and Therapeutic Interventions	6%
• Regenerative Medicine & Advanced Biomedical Technologies	8%
• Demographics and Trends in Aging & Disease	8%
• Nutritional Interventions	8%

RECOMMENDED RESOURCES: The ABAARM Review Kit (available from A4M)

Board Certification
Physicians Program (ABAARM)

Frequently Asked Questions

What is the value of being Board Certified in Anti-Aging medicine?
It is a significant professional landmark. ABAARM certification denotes peer recognition in the fastest-growing new high-tech medical specialty. ABAARM-certified physicians can readily establish their practices as leading facilities for Anti-Aging healthcare, by receiving new patient referrals from patients seeking qualified Anti-Aging doctors via A4M and the World Health Network (www.A4M.com). Most importantly, the growing number of ABAARM-certified physicians will help A4M to achieve formal sub-specialty recognition and a new status for Anti-Aging medicine and for those practicing it as qualified clinicians.

How should I prepare for the exam?
It is highly recommended that you purchase the ABAARM Review Materials. Read all of the books and media supplied in the review kit, then establish a confident comprehension of the Study Guide. Finally, practice by taking the test review questions in the study workbook. Based on the decision of the Board of Directors, past examination questions will not be available in order to safeguard the integrity of the exam process.

Do I have to complete all the requirements before I take the exam?
No, membership with good standing in A4M, your application, and payment will start the process and you can sit for the exam. The Board Registrar will work with you in obtaining the remainder of your requirements.

I took the exam. When will I know my score?
Grading of the ABAARM Written Exam and the ABAARM Oral Exam are completed within 4 to 6 weeks of the date on which the exam was administered. The Board Registrar notifies each examinee of their score. On a case-by-case basis for examinees who fail the written exam, the examinee may request (at additional cost to examinee) the ABAARM Review Committee to conduct a Deficiency Analysis. This analysis presents a segmented summary of the knowledge deficits of the examinee as demonstrated by performance on the exam.

What is my status after I pass the written exam?
A physician who passes the written exam (Part I) and has met the requirements may refer to him/her self as a Diplomate in Anti-Aging and Regenerative Medicine through the American Academy of Anti-Aging Medicine. The physician maintains "Diplomate" status as long as he/she is a current member of the A4M and has yet to pass the Oral Exam (Part I).

How does being a Diplomate in Anti-Aging Medicine benefit me?
It demonstrates to your patients that you have taken an active interest in the science of longevity. In addition, the exam helps to ensure Anti-Aging physicians have grasped the essentials relating to the clinical application of Anti-Aging medical care. Because the criteria for maintaining ABAARM credentials include attending Anti-Aging scientific conferences and completing 200 hours of CME credit, Diplomate status underscores and enhances the physician's commitment to receiving ongoing medical education.

What is my status after I pass the Oral Exam (Part II)?
After passing Part II, verification by ABAARM of completion of the physician's certification and receipt of a signed certificate from the board, s/he may refer to her/himself as "Board Certified" in Anti-Aging Medicine by the American Board of Anti-Aging & Regenerative Medicine.

NOTE: To maintain ABAARM certification, you must keep your membership in good standing with the A4M.

Testimonial

Peggy Watson, MD
Land O' Lakes, FL

I recently completed both the Fellowship with the A4M as well as the new Master's in Metabolic and Nutritional Medicine from the University of South Florida. It is difficult to express in words how profoundly positive this experience has been. I find that previously difficult clinical situations are now welcome challenges with my new skills. This brand of medicine has sent more new patients to my office than anything in the previous 20 years. They are grateful, happy patients that are sending their friends, relatives and coworkers.

From a personal perspective, my interest in medicine has been renewed and I have never in my professional career wanted to continue studying so much. I previously looked forward to when I could retire from the madness of a typical primary care office; I now look forward to wanting to practice for decades.

With the new Master's degree that can be earned, this emerging field of medicine can no longer be described as alternative or complementary. University backing of the science behind the medicine has instantaneously validated in the public eye all that we have learned and will be appropriately challenging the old definitions of standard of care. I would like to publicly thank all the pioneers in this field that have so arduously paved the way to this momentous time in medicine; the new brand of medicine that has been created will indeed be the future of the best health care available to man.

Become Board Certified in Anti-Aging Medicine
(561) 997-0112
info@a4m.com
www.a4m.com

Diplomate Certification
Health Practitioners Program (ABAAHP)

Overview of the Certification Process

The American Board of Anti-Aging Health Practitioners (ABAAHP) is a certification program of the American Academy of Anti-Aging Medicine. ABAAHP issues Diplomate Certification to Doctors of Chiropractic (DC), Doctors of Dentistry (DDS), Naturopathic Doctors (ND), Registered Pharmacists (RPh), Scientists (PhD and similar), Registered Nurses (RN), Nurse Practitioners (NP), Physician Assistants (PA), Doctors of Pharmacy (PharmD) and Acupuncturists.

The American Board of Anti-Aging Health Practitioners was founded in 1999 to provide advanced education, representation, and specialty recognition of scientific and healthcare professionals. The long-term objective of ABAAHP is to achieve formal sub-specialty recognition and a new status for Anti-Aging medicine and for those practicing it as qualified clinicians. Together, the A4M and ABAAHP represent over 24,000 physicians and healthcare practitioners from 110 nations. The process involves the single step of a written examination, which demonstrates proficiency in several key areas of Anti-Aging medicine. After passing the written exam and completion of certification criteria, a certificate is issued to the healthcare practitioner his or her status as a Diplomate of Anti-Aging Medicine.

A4M strongly recommends that all interested candidates sign up as far in advance of the examination date as possible. All ABAAHP examinees will benefit by a maximum timeframe during which you may familiarize yourself with study materials provided.

The ABAAHP program is the first certification program of its kind. It raises the standard of professional care and recognition offered by practitioners delivering integrative, complementary, and alternative healthcare as well as allied health professionals. By completing the ABAAHP process, you receive specialty certification as a Diplomate practicing Anti-Aging medicine.

Promote yourself as an ABAAHP Diplomate in your listing at the online Physician's Directory on The World Health Network, www.a4m.com – the Internet's leading Anti-Aging portal and official web site of the A4M. Secure new patients who are seeking the service you provide and the credentials you possess.

Criteria for ABAAHP Diplomate Status

The following criteria must be completed before diploma is issued, however, candidates can sit for the board exam prior to completion:

- Membership in the American Academy of Anti-Aging Medicine (A4M)
- Attendance at two or more consecutive A4M- approved/sponsored conferences.
- An active, licensed Health Care Professional registration with any state, or a PhD with a University affiliation, or a PhD actively pursuing research in the field of medicine
- Curriculum Vitae (Resume) demonstrating a minimum of 5 years of clinical practice experience (residency training applicable)
- No significant disciplinary actions against the applicant, or a written appeal including full disclosure of all disciplinary actions accompanied by a full explanation of those actions accompanied by a request for a waiver of this requirement
- At least 150 hours of Continuing Medical Education (CME)/ CEU credits referable to the clinical practice and some aspect of preventive medicine, Anti-Aging medicine, nutritional medicine or diagnostic medicine during the past eight years. In nations where CME is not offered, exception to this requisite may be granted on an individual basis, as determined by case-by-case review by the ABAAHP Board

- Submission of 5 multiple-choice examination questions, with correct answers supported by medical/scientific references
- Passing score on written examination
- Annual certification maintenance fee

To maintain ABAAHP certification, you must continue active membership in good standing in A4M.

Written Exam Details

DURATION OF EXAM: 3 hours

OFFICIAL LANGUAGE OF EXAM: English

KNOWLEDGE AREA:

• Mechanisms of Aging and Disease & Lifespan Research	7%
• Cardiovascular Disease: Diagnostics, Prevention, and Therapeutic Interventions	14%
• Cancer: Epidemiology, Assessment, and Risk Factors	10%
• Cognitive Diseases & Impairments: Diagnostics, Prevention, and Therapeutic Interventions	9%
• Diabetes, Metabolic Syndrome, and Obesity: Diagnostics, Prevention, and Therapeutic Interventions	8%
• Respiratory Diseases: Diagnostics, Prevention, and Therapeutic Interventions	9%
• Musculoskeletal Diseases & Impairments: Diagnostics, Prevention, and Therapeutic Interventions	7%
• Skin Aging: Assessment and Therapeutic Interventions	7%
• Regenerative Medicine & Advanced Biomedical Technologies	10%
• Demographics and Trends in Aging & Disease	9%
• Nutritional Interventions	10%

RECOMMENDED RESOURCES: The ABAAHP Review Kit (available from A4M)

Diplomate Certification
Health Practitioners Program (ABAAHP)

Frequently Asked Questions

What is the value of being a Diplomate in Anti-Aging Medicine?
ABAAHP certification denotes recognition in the fastest-growing new high-tech medical specialty. It demonstrates to your patients that you have taken an active interest in the science of longevity. In addition, the exam helps to ensure Anti-Aging healthcare practitioners have grasped the essentials relating to the clinical application of Anti-Aging medical care. Because the criteria for maintaining ABAAHP credentials include attending Anti-Aging scientific conferences and completing 150 hours of CME credits, Diplomate status underscores and enhances the physician's commitment to receiving ongoing medical education. ABAAHP Diplomates can readily establish their practices as leading facilities for Anti-Aging healthcare, by receiving new patient referrals from patients seeking qualified Anti-Aging healthcare practitioners via A4M and the World Health Network (www.a4m.com).

How should I prepare for the exam?
It is highly recommended that you purchase the ABAAHP Review Kit. Read all of the books and media supplied in the review kit, then establish a confident comprehension of the Study Guide. Finally, practice by taking the test review questions in the study workbook. Based on the decision of the Board of Directors, past examination questions will not be available in order to safeguard the integrity of the exam process.

Do I have to complete all the requirements before I take the exam?
No, membership with good standing in A4M, your application, and payment will start the process and you can sit for the exam. The Board Registrar will work with you in obtaining the remainder of your requirements.

I took the exam. When will I know my score?
Grading of ABAAHP Written Exam is completed within 4 to 6 weeks of the date on which the exam was administered. The Board Registrar notifies each examinee of their score. On a case-by-case basis for examinees who fail the written exam, the examinee may request (at additional cost to examinee) the ABAAM Review Committee to conduct a Deficiency Analysis. This analysis presents a segmented summary of the knowledge deficits of the examinee as demonstrated by performance on the exam.

Do I have to take an oral exam as well?
ABAAHP only requires completion of a written exam and additional criteria to achieve Diplomate certification.

(561) 997-0112
info@a4m.com
www.a4m.com

Testimonial

Susan MacPherson, ARNP

In 1984, I began working in the field of plastic & reconstructive surgery as a Registered Nurse First Assist and Certified Plastic Surgery Nurse. I have always had a deep passion for being able to help my patient's look and feel better through the application of aesthetic and Anti-Aging therapies. I established Beauté Therapies, Inc. in 1997. My practice has grown tremendously as I strive to improve the quality of care through the application of cutting edge technologies. After receiving my MSN degree in 2004, my vision was to develop a Holistic Health, Beauté, and one of the most advanced Anti-Aging Centers in Palm Beach County, FL. I began the Fellowship in Anti-Aging, Regenerative & Functional Medicine through A4M in 2009. I absolutely love it because it is everything that I believe in! I am currently a Diplomate in Anti-Aging and enrolled in the Master's Program. Thanks to the valuable evidence based research provided to me through the fellowship, I have gained much knowledge to provide natural hormone restoration and micro nutrient counseling to my aesthetic clientele. Learning how to prevent disease is the wave of the future. We are on the forefront of a whole new way to practice medicine.

Become a Diplomate in Anti-Aging Medicine

(561) 997-0112

info@a4m.com

www.a4m.com

Fellowship in Anti-Aging, Regenerative and Functional Medicine (FAARFM)

What is Anti-Aging Medicine?

Anti-Aging Medicine is a clinical/medical specialty in the field of scientific research aimed at the early detection, prevention, treatment, and reversal of age-related decline. It is well documented by peer-reviewed medical and scientific journals and employs evidence-based methodologies to conduct patient assessments. The American Academy of Anti-Aging Medicine was established in 1992 as a professional physician certification and review board, which offers physician recognition in the form of specialty-based examination in Anti-Aging Medicine. It represents 24,000 physicians, scientists and health professionals from 110 countries worldwide.

What is Regenerative Medicine?

Regenerative Medicine optimizes the body's endogenous mechanisms of self-repair and adds proven and near future exogenous treatments and technologies. Adult stem cells appear to be our most powerful tool at this time. Previous dogma concerning adult stem cells taught that neurons and myocytes did not have stem cells and the cells present at birth just declined in quantity and quality. It was also believed that hematopoietic stem cells in the bone marrow lacked plasticity and could not transform to other tissues. Current medical literature proves that adult stem cells exist in most tissues including brain, heart, muscles and liver. Hematopoietic stem cells (HSC) and endothelial progenitor cells (EPC) in the bone marrow have plasticity to potentially transform and repair all tissues and organs.

- In the hormone optimization component of Anti-Aging Medicine, we are already optimizing stem cells. Progesterone via its metabolite allopregnenolone stimulates neural stem cells, testosterone stimulates muscle stem cells and EPC's, which can improve erectile function; growth hormone treatment for adult growth hormone deficiency improves the quantity and quality of EPC; and estradiol improves incorporation and mobilization of EPC.
- In the lifestyle component of Anti-Aging Medicine, we are optimizing our adult stem cells with exercise and control of glucose and insulin.
- In the neutraceutical component of Anti-Aging Medicine, we are optimizing our adult stem cells with Resveratrol as we turn on genes such as SIR1 and with blueberry, green tea and vitamin D3. DHA in omega 3 fish oil promotes neurogenesis from neuronal stem cells.

A new phase of Regenerative Medicine has recently commenced with cryogenic preservation of adult stem cells in healthy patients for future use. These patients are the same pro-active population who follow Anti-Aging programs. After stimulation with granulocyte colony stimulating factor, adult stem cells can be collected by aphaeresis and stored in separate aliquots for treatment of specific pathologies such as acute myocardial infarction or for overall immune system reconstitution. This paradigm shift is referred to as bio-insurance.

What is Functional Medicine?

Functional Medicine is an integrative, science-based healthcare approach that treats illness and promotes wellness by focusing on the bio-chemically unique aspects of each patient, and then individually tailoring interventions to restore physiological, psychological, and structural balance.

Functional Medicine focuses on understanding the fundamental physiological processes, the environmental inputs, and the genetic predispositions that influence health and disease so that interventions are focused on treating the cause of the problem, not just masking the symptoms.

There are seven basic principles underlying Functional Medicine, which include the following:

- Science-based medicine that connects the emerging research base to clinical practice
- Biochemical individuality based on genetic and environmental uniqueness
- Patient-centered care rather than disease-focused treatment

- Dynamic balance of internal and external factors that affect total functioning
- Web-like interconnections among the body's physiological processes also affect every aspect of functionality
- Health as a positive vitality, not merely the absence of disease
- Promotion of organ reserve

The Fellowship in Anti-Aging, Regenerative and Functional Medicine

Functional Medicine is an integrative, science-based healthcare approach that treats illness and promotes wellness by focusing on the bio-chemically unique aspects of each patient, and then individually tailoring interventions to restore physiological, psychological, and structural balance.

- Participant will leave the Fellowship competent to practice Anti-Aging, Regenerative, and Functional Medicine without supervision in his or her area of medical specialty
- Participant will be involved in web broadcasts so that he or she will have on going feedback from experienced clinicians
- Extensive case studies will be included with each module
- Open to physicians, PhD's, physician assistants, nurse clinicians, pharmacists, nurse practitioners, nutritionists, chiropractors, Bachelor of Medicine, Bachelor of Surgery, Doctor of Dental Surgery and more

Requirements

- Modules I-V are required to be a Fellow. Your diploma would read "Fellow in Anti-Aging and Regenerative Medicine".
- Modules I-VIII are required to be an Advanced Fellow. Your Diploma would read "Fellow in Anti-Aging, Regenerative and Functional Medicine".
- Modules IX–XXIII are optional electives
- Complete A4M ABAARM/ABAAHP Board Certifications
- 40 webinars
- A4M Membership

This modular training program includes hands on clinical training and web broadcasts to discuss topics and experience with other trainees and experienced clinicians. Open to physicians, PhD's, physician assistants, nurse clinicians, pharmacists, nurse practitioners, nutritionists, chiropractors, Bachelor of Medicine, Bachelor of Surgery, Doctor of Dental Surgery and more, participants will leave the fellowship competent to practice Anti-Aging and regenerative medicine without supervision in his or her medical specialty.

- Modules do not need to be completed in numerical order
- Each live module has been approved for 24 AMA PRA Category 1 Credits™ except Module V
- CME Credits are not available for any online modules

Fellowship (FAARM) Module Overview

Module I: A Metabolic, Anti-Aging and Functional Approach to Endocrinology

This module provides a functional overview of hormonal changes that manifest in men and women with aging, including the functions and interplay of specific hormones in the body. It discusses how best to identify, test for and treat hormonal deficiencies and dysfunctions, such as with hormone replacement and medication compounding.

Objectives:

Upon completion of this module, the participant will:

- Recognize the hormonal changes that women and men manifest with aging
- Discuss the functions of estrogen, progesterone, testosterone, and DHEA in the body
- Know the structure of the sex hormones and their metabolism
- Understand the intricate web that the hormones are in the body
- Discuss the risks and benefits of estrogen, progesterone, testosterone, DHEA, pregnenolone and melatonin
- Know the symptoms of estrogen, progesterone, testosterone, and DHEA loss
- Learn the symptoms of estrogen, progesterone, testosterone, and DHEA excess
- Understand the differences between synthetic and bio-identical hormones
- Review the literature on synthetic, and bio-identical hormone replacement
- Understand the adrenal system and its affects on other sex hormones and hormone replacement
- Initiate or suggest hormone replacement treatment
- Understand reasons bio-identical hormone replacement should be considered
- Monitor treatment, adjust dosages, alleviate side effects of BHRT
- Recognize the clinical manifestations of hypothyroidism
- Know the factors that cause decreased production of T4, affect 5'diodinase production, cause an inability to convert T4 to T3, and causes associated with decreased T3 or increased reverse T3
- Learn factors that increase the conversion of T4 to T3
- Understand the crucial role that iodine has in the function of the thyroid gland
- Prescribe or suggest treatment for hormone replacement including compounded thyroid medications
- Review of the key signs and symptoms of adrenal fatigue
- Know the physical examination findings present in adrenal fatigue
- Learn the laboratory tests that aid in the diagnosis of adrenal fatigue
- Discuss the Women's Health Initiative findings and its clinical implications
- Understand the limitations of serum testing for steroid hormone levels and FSH
- Understand the importance of measuring tissue level of hormones, in diagnosing hormonal imbalances and in monitoring bio-identical hormone replacement
- Understand the impact of stress on the body
- Understand the physiology of the stress response
- Learn what tests best measure the physiologic response to stress
- Understand how to identify and treat adrenal dysfunction

Module I Objectives Continued

- Understand how stress affects the cardiovascular system, insulin resistance, immune dysfunction, neurotransmitter balance, hormone balance, and thyroid function
- Review information on safe and effective therapies to correct adrenal dysfunction
- Discuss innovative testing that identifies thyroid dysfunction when TSH is normal
- Differentiate between progesterone and synthetic progestins relating to structure, pharmacologic actions and risks
- Explain the literature concerning the risk of breast cancer as it relates to differences in progesterone and synthetic progestins
- Explain research and clinical studies suggesting that progesterone therapy protects against breast cancer
- Discuss the advantages and disadvantages of testing hormone levels in different body fluids
- Discuss the methodology of scientific support for, and the differences in, saliva, urine and blood testing of hormones
- Present scientific and clinical studies that suggest conventional venipuncture serum testing underestimates tissue uptake of sex-steroids delivered topically
- Be familiar with the basis of steroid synthesis
- Understand the urine monitoring of hormone levels and metabolites. Specific algorithms will be shared to facilitate ease of use in clinical practice
- Know the hormonal changes that occur with aging in males
- Know the cardiovascular, cognitive, bone, sexual, and emotional effects of hormone depletion and hormone restoration in males
- Learn to monitor and restore optimal hormone levels in males
- Discuss the differences between compounding and manufacturing medications
- Review the various licensure needs to compound medications
- Discuss the various patient care areas that involve specialized compounding
- Review various medication dosage forms that can be compounded
- Discuss the various types of equipment needed in compounding
- Learn how to evaluate a patient for iodine deficiency
- Review the roles iodine plays in the body
- Discover how to treat iodine deficiency
- Recognize the symptoms of PMS
- Study treatment modalities for PMS
- Learn the criterion required to make the diagnosis of PCOS
- Learn conventional and metabolic treatments for PCOS
- Learn the different bases that hormones can be placed in along with their advantages and disadvantages

Fellowship (FAARM) Module Overview

Module II: A Metabolic, Anti-Aging and Functional Approach to the Treatment of Hypertension, Diabetes, Coronary Artery Disease and Metabolic Syndrome

Discussed in this module are causes and mechanisms of hypertension, diabetes, coronary artery disease and metabolic syndrome, as well as how these conditions are inter-related. Methods of diagnosis and evaluation are discussed, in addition to laboratory evaluations, nutritional treatments and lifestyle recommendations for treatment.

Objectives:

Upon completion of this module, the participant will:

- Understand the glycemic index and its use in determining the glycemic index and glycemic load of foods
- Identify patients with syndrome X/metabolic syndrome
- Learn nutritional supplements and lifestyle recommendations for treatment of the components of metabolic syndrome
- Establish a treatment course and treat patients with insulin resistance, diabetes, and neuropathy
- Discuss risk factors for heart disease including elevated cholesterol, triglycerides, lipid fractionation, homocysteine, lipoprotein (a), ferritin, fibrinogen and c-reactive protein
- Look at interventions for chronic endothelial inflammation
- Understand the role of inflammation in cardiovascular inflammatory disease
- Discuss free radical production, glycation, and oxidation and apply to patient treatment
- Understand the causes of endothelial dysfunction
- Know botanical treatments to augment the care of insulin resistant patients
- Evaluate the link between oxidative stress and glycemic control
- Know which laboratory tests to order and how to properly evaluate insulin resistance, diabetes mellitus, and risk factors for heart disease
- Discuss the role insulin has in the development of hypertension
- Learn nutritional treatments for hypertension
- Learn laboratory evaluations to aid in the diagnosis and treatment of heart disease risk factors
- Describe several interactive mechanisms that tie together various components of metabolic syndrome and cardiovascular disease
- Review diet, lifestyle and nutraceutical options for clinically managing dyslipidemia, cardiovascular inflammation, homocysteine, insulin resistence and related conditions
- Understand how various nutrient deficiencies lead/support metabolic syndrome
- Learn what lifestyle factors to modify in order to treat/prevent metabolic syndrome
- Review the complete physiology of hypertension
- Examine metabolic and Anti-Aging approaches to hypertension through nutrition and supplementation
- Review cholesterol physiology and its contribution to atherosclerosis
- Assess the current literature on dyslipidemia
- Examine effective nutrition and nutritional supplementation strategies for dyslipidemia

Module II Objectives Continued

- Review a model of cardio metabolic disease
- Access the current literature on the complex physiologic relationships underlying cardio metabolic disease
- Examine effective nutritional strategies and nutritional supplementation on cardio metabolic disease
- Learn the difference between insulin sensitivity, insulin resistance, and Type II diabetes
- Understand glucose homeostasis
- Understand the counter-regulatory hormones and how their normal functions contribute/cause insulin resistance
- Understand why only some patients with insulin resistance develop Type II diabetes
- Redirect the focus of the treatment of Type II diabetes from the insulin perspective to the point of view of the counter-regulatory hormones
- Understand the consequences of increased sugar intake to the body
- Learn the numerous diseases that are linked to a high sugar diet
- Discover hidden sugars
- Study sugar substitutes, their use, and possible side effects
- Learn the symptoms of reactive hypoglycemia
- Know the diseases associated with insulin resistance
- Learn causes of elevated insulin levels
- Learn the interplay between metabolic syndrome and psychiatric illnesses
- Understand that medications that are commonly used to treat depression and other mental health diseases may increase the patient's risk of metabolic syndrome
- Investigate how targeted nutraceuticals can support cardiovascular function
- Define toxic blood syndrome and discuss interventions to improve
- Identify the inflammatory index and how to investigate silent inflammation
- Discuss the role of energy medicine in optimum health
- List five nutraceuticals that promote favorable vibrational frequencies in the body
- Discuss how electrical medicine assists in optimizing cellular function
- Define the complex role of energy and the heart
- Learn how the new triad of bioenergetic energy in cardiac health, i.e., coenzyme Q10, L-carnitine and D-ribose, can help prevent and overcome heart disease
- Discover why ATP is so essential in optimizing diastolic function of the heart
- Learn about the most 20 common toxins that are found in our everyday life
- Explore the relationship between chemical toxins, inflammation, and disease
- Discover the role that heavy metals play in heart disease

Fellowship (FAARM) Module Overview

Module III: A Metabolic, Anti-Aging and Functional Approach to Gastroenterology, Neurotransmitters, and Neurology

The crucial relationships between the gastrointestinal system, the immune system and neurotransmitter function are explored. The causes, physiologies and treatments of related dysfunctions – such as dysbiosis, irritable bowel syndrome and celiac disease – are outlined, in addition to how such conditions relate to weight loss in the individual.

Objectives:

Upon completion of this module, the participant will:

- Learn new treatment modalities for multiple sclerosis, stroke recovery, Parkinson's disease, ALS, and Alzheimer's disease
- Evaluate the energy producing ability of the mitochondria and their role in revitalizing neurological tissue
- Learn factors associated with intestinal permeability
- Discuss the consequences of inflammation on the neurological system
- Look at the effect endocytic receptors, scavenger receptors, and RAGEs have on the inflammatory response
- Understand the importance of the gastrointestinal tract's role in the immune system
- Understand the crucial role that neurotransmitters have in the body and how they impact various organ systems
- Learn the many reasons why patients have a difficult time losing weight and keeping it off
- Have a comprehensive understanding of the relationship between the GI tract and neurotransmitter function
- Evaluate the role of diet and antibiotics in the management of gastrointestinal dysfunction
- Demonstrate the unique biochemistry of individual patients and examine the ramifications of nutrition, medications, and stress on the immune system during the first years of life
- Explain the gastro-intestinal system's interface with the environment
- Discuss the role of nutrition and digestion in the balancing of gut flora
- Identify the symptoms and diseases associated with yeast overgrowth
- Learn the causes of yeast overgrowth
- Be knowledgeable about the treatments of yeast overgrowth
- Know the symptoms associated with dysbiosis
- Recognize signs of poor digestion
- Know the causes of dysbiosis
- Learn the common conditions associated with leaky gut syndrome
- Learn the 4R program
- Determine the common signs and symptoms of low gastric acidity
- Know the diseases associated with low gastric acidity
- Learn the protocol for HCL acid supplementation
- Realize the symptoms and diseases associated with food allergy
- Ascertain the symptoms of pancreatic insufficiency
- Learn how to replace bile salts
- Determine the symptoms of bile salts deficiency

Module III Objectives Continued

- Know the causes of gas and bloating
- Learn the causes of heartburn
- Find out new treatments for hiatal hernia
- Learn the causes of chronic diarrhea
- Learn the treatment of chronic diarrhea
- Learn the causes and treatment of hemorrhoids
- Look at the risk factors for IBS
- Learn the treatment for inflammatory bowel disorders
- Realize the symptoms of acute and chronic gallbladder problems
- Find out how to treat gallbladder disease
- Know the incidence of celiac disease
- Understand the increased mortality associated with celiac disease
- Understand the changes that occur in the bowel with celiac disease
- Learn testing methods to evaluate if a patient has celiac disease
- Discover the false positives and false negatives that can occur with antibody testing for celiac disease
- Recognize the reasons for false positive results that can occur with biopsy when evaluating a patient for celiac disease
- Learn about dermatitis herpetiformis
- Know the extraintestinal manifestations that can occur with celiac disease besides dermatitis herpetiformis
- Learn treatment methods for all forms of celiac disease
- Recognize other autoimmune diseases that are associated with celiac disease
- Know the differential diagnosis for celiac disease
- Know the definition of probiotics
- Recognize that gastrointestinal and vaginal flora change with age
- Learn the mechanism of action of probiotics
- Know which bacteria that occur in the gastrointestinal tract are friendly and which are pathogens
- Learn about bacteriocins
- Learn the desirable characteristics of an effective probiotic
- Recognize what foods can be used as probiotics
- Understand the beneficial effects of normal gut flora
- Learn which disease processes can be treated with probiotics
- Learn the differential diagnosis of irritable bowel disease
- Learn treatment modalities for irritable bowel disease
- Understand what an allergy elimination diet is and be able use this treatment modality with a patient
- Learn the role of probiotics in the treatment of antibiotic-associated diarrhea

Fellowship (FAARM) Module Overview

Module III Objectives Continued

- Know the definition of prebiotics
- Understand the criteria to be a prebiotic
- Review the medical literature on the use of prebiotics
- Learn food sources of prebiotics
- Recognize prebiotic substances and the organisms they work on
- Understand that protozoan infections of the gastrointestinal tract may be the cause of unrecognized systemic illnesses
- Learn conventional and natural therapies for parasitic infections
- Know the role that neurotransmitters play in weight loss
- Recognize the importance of hormonal imbalance in weight loss
- Understand that the ingestion of foods that the patient is allergic to can cause weight gain
- Recognize the role that sleep deprivation plays in weight issues
- Understand that the body's ability to effectively detoxify also plays a role in weight gain
- Learn that weight gain creates an inflammatory response in the body
- Know the chemistry behind why some foods are addicting
- Review the scientific literature on nutrients that can aid in weight loss
- Know the role that yeast overgrowth plays in weight gain
- Have an understanding of basic neurochemistry as it relates to mood and cognition
- Recognize common neurotransmitter imbalances and how to diagnose them
- Discuss the major neurotransmitters in brain function and their understood roles in behavior and in neurological disorders
- Understand the function of receptors for these substances and factors which impact their regulation
- Discuss the metabolism of these substances within the body, including the precursors and substrates necessary for function in the nervous system as well as how they are metabolized in the body
- Understand the limitations of measurement of the neurotransmitters and the role that the blood brain barrier plays in controlling access of substrates and cofactors to the brain
- Recognize circumstances where functional imaging techniques may aid in diagnosis and therapy of conditions related to neurotransmitter dysfunction
- Recognize some of the many interactions of neurotransmitters with hormonal function and dysfunction
- Recognize the parameters within the Functional Medicine Matrix that would indicate the need for attention to neurotransmitter function and identify common antecedents, triggers and mediators when an imbalance or dysfunction is suspected
- Learn metabolic and Anti-Aging treatment options to improve mood and cognition

Module IV Objectives: A Metabolic and Anti-Aging Approach to Amino Acid and Fatty Acid Metabolism, Drug Induced Nutrient Depletion, Stem Cells and Regenerative Medicine, Spirituality and Osteoporosis

This module discusses the roles of amino acids and fatty acids, as well as the causes and ramifications of their deficiencies. Other topics include the concepts of metabolomics and nutrigenomics; toxin-related disease and the processes of Phase I and Phase II detoxification; and new pain control options.

Objectives:

Upon completion of this module, the participant will:

- Know the role of nutrition in maintaining optimal health as the patient ages
- Learn phase I and phase II detoxification and the consequences of the body's inability to detoxify
- Learn nutritional depletions caused by medications
- Understand the relationships among the biotransformation enzyme systems
- Know the common warning signs indicating that toxicity may be a factor for the patient
- Understand the roles of physical, psychological, and spiritual health in Metabolic and Anti-Aging Medicine
- Know essential, conditionally essential, and non-essential amino acids and symptoms of amino acid deficiencies
- Learn new treatment plans for osteoporosis
- Look at pharmaceutical inhibitors of Phase 1 cytochrome P450 enzymes
- Learn treatment modalities for the dietary and nutritional support of detoxification
- Know the risk factors for osteoporosis
- Look at metallothioneins and genetic polymorphisms
- Know the function of fatty acids in the body
- Know treatments for amino acid deficiencies
- Learn disease processes that have amino acid deficiencies as an antecedent
- Be aware of the diseases that can be treated with fatty acid replacement
- Understand that fatty acid intake can change the amount of medication that a patient may need
- Teach new pain control options used in Metabolic and Anti-Aging Medicine
- Understand fatty acids may have profound effects on the network of inflammatory mediators altering prostanoid synthesis, PPAR activity, and the response to cytokines
- Review the basic concepts behind the disciplines of metabolomics and nutrigenomics
- Define the critical steps involved in signal transduction and intracellular signaling, with emphasis on transmembrane receptors, intracellular kinases, transcription factors and DNA response elements
- Learn how DNA expression can be modified by specific dietary and lifestyle factors
- Identify the differences between types of stem cells
- Learn how stem cells are harvested for autologous use
- Learn about the current applications of stem cells from literature review
- Identify future applications for autologous stem cells

Fellowship (FAARM) Module Overview

Module IV Objectives Continued

- Understanding of basic pathophysiology of thyroid metabolism as it relates to cardiac function
- Evaluate the current myths regarding thyroid replacement therapy
- Understanding of how thyroid deficiency can directly relate to cardiac disease, hypertension, hyperlipidemia, arrhythmia and heart failure
- Look at the role that genomics, pharmacogenomics, proteomics, and nutrigenomics has in Metabolic and Anti-Aging Medicine
- Look at a patient-centric system of health care that addresses biochemical individuality and genetic uniqueness to improve health and function of the patient
- Understand the relationships among the biotransformation enzyme systems
- Understand the value of a preconception medical evaluation
- Learn what tests to order on a patient for a preconception medicine evaluation
- Aid the participant in the interpretation of labs results in a preconception medicine consult
- Learn the importance of EPA/DHA supplementation use in the mother and how it later affects the health of her child
- Study implementation modalities for patients with fatty acid deficiencies
- Learn the symptoms of toxic build up
- Discover how patients are exposed to toxins
- Realize what nutrients aid in phase I detoxification of the liver
- Understand that a toxic metabolite can build up between Phase I and Phase II detoxification that may be more toxic than the original metabolite
- Learn the six phases of Phase II detoxification
- Ascertain how to treat a patient with abnormal phase I or phase II detoxification
- Explain how amino acid insufficiencies can manifest among a population that over-consumers dietary protein
- Demonstrate expertise in strategies for planning corrective interventions with amino acids
- Explain how fatty acid insufficiencies can manifest among a population that over-consumers dietary fat
- Explain the types of toxicants and their respective levels of health threats
- Describe methods of assessment for xenotoxin exposures and endotoxin burdens
- Demonstrate expertise in strategies for planning corrective interventions to reduce toxin loads and improve detoxification function
- Achieve an expanded awareness of the common environmental toxins and their impact on the body; this awareness can then be used to help patients make informed decisions about healthy lifestyle choices
- Gain a working knowledge of the scientific evidence supporting the role of environmental and endogenous toxins in initiating and perpetuating chronic disease and accelerated aging; this information can then be used to enhance the practitioner's diagnostic skills in the recognition of toxin-related disease
- Gain an understanding of current knowledge regarding the biotransformation and elimination of environmental toxins and the scientific basis supporting the use of nutrients and plant-derived factors for enhancing these processes as a strategy for treating toxin-related disease and improving overall health; practitioners will be able to use this information to expand their therapeutic repertoire

Module IV Objectives Continued

- Identify risks associated with non-pharmaceutical grade fish oils
- Basic understanding of the pathophysiology of Vitamin D
- Knowledge of the implications of Vitamin D deficiency
- Learn new lab normals for Vitamin D
- Explain the symptoms of the various headache types
- Identify non-pharmacological treatments for head pain
- Describe the mechanism of action of Butterburr in reducing the frequency of migraine
- Outline a treatment plan utilizing various treatment options for the migraine patient
- Review the pathophysiology of peripheral pain transmission and the various receptors involved
- Review the use of topical pain medications and the rationale for use
- Review various herbs and supplements that can help in the management of the chronic pain patient
- Know the mechanisms of how Vitamin K works in the body
- Learn the forms of Vitamin K
- Review the importance of Vitamin K in vascular health
- Know the causes of Vitamin K deficiency
- Understand the use of Vitamin K supplementation in patients taking Warfarin

Module V - Clinical Intensives

This module examines various case histories to provide the knowledge for instantly implementing the latest nutritional treatment modalities for more than 50 conditions, ranging from the cardiovascular and immune systems to mental health and lifestyle-specific nutrition.

Objectives:

Upon completion of this module, the participant will:

- Review hundreds of case histories so the practitioner leaves the module with a comprehensive approach on how to treat the patient the next day from a Metabolic and Anti-Aging Medicine approach
- Learn new nutritional treatment modalities for osteoporosis, ADD/ADHD, allergies, asthma, anorexia, anxiety, arthritis, cancer, candidiasis, dysbiosis, Alzheimer's disease, heart health, closed head injury, URI, congestive, heart failure, diabetes mellitus, neuropathy, depression, eye health, chronic fatigue syndrome/fibromyalgia, energy enhancing, prevention of migraine headaches, lipid management, hepatitis C, hypertension, IBS, Crohn's disease, ulcerative colitis, immune building, insomnia, restless leg syndrome, liver health, periodontal disease, BPH, skin disorders, stroke recovery, sports nutrition, stress reduction, hypothyroidism, hyperthyroidism, varicose veins, weight loss, PMS, polycystic ovarian syndrome, dysmenorrhea, cervical dysplasia, wound healing, nutritional needs for vegetarians, and much more

Fellowship (FAARM) Module Overview

Module VI: Herbology and The Functional Regenerative Matrix

This module discusses various topics of herbology, from its history, treatment modalities and side effects to dosing, standardization and ongoing questions. It also comprises an understanding of the functional medicine tree and matrix, metabolic therapies for specific diseases and the use of botanicals for combating viruses and infectious diseases.

Objectives:

Upon completion of this module, the participant will:

- Learn the botanical treatments of many major disease processes
- Know the side effects of botanical medicines
- Understand antecedents, triggers, and mediators of illness
- Learn the interaction that herbs may have with medications
- Understand and be able to treat infectious diseases such as hepatitis from a metabolic approach
- Learn functional clinical imbalances that can occur in the body
- Learn how nutrition affects gene expression
- Review history and traditional uses of common herbs
- Review the medical literature on herbal therapies
- Define the frontiers of research for botanical medicines: identify key ongoing questions regarding evidence-based effectiveness, consistency of preparations and concerns regarding safety
- Learn to utilize readily available databases to make informed evidence-based decisions regarding botanical medicines
- Gain an understanding of the rationale and proposed mechanisms behind the potential therapeutic use of selective herbal supplements for specific health disorders including chronic inflammation, immune dysfunction and minor infections
- Understand extraction and dosage forms of herbal therapies
- Review the DSHEA act and labeling
- Understand and explain standardization of herbal extractions
- Comprehend the necessary requirements for a quality herbal extraction
- Learn clinical synergistic effects of drug therapy and herbal therapies where applicable
- Be aware of potential adverse interactions with drug-herb prescribing
- Have a working knowledge of the dosing required to gain a therapeutic endpoint with herbal remedies
- Gain basic understanding of the functional medicine principles including the functional medicine tree and matrix
- Identify the core clinical, functional medicine imbalances with examples
- Apply the functional medicine matrix in a clinical setting when addressing complex patients
- Understand the importance that B Vitamins play in the prevention of disease
- Learn in case history format the symptoms of all of the B Vitamin deficiencies
- Know the diseases and disorders that can be treated with different B Vitamins
- Learn the prevalence of Lyme disease

Module VI Objectives Continued

- Know the signs and symptoms of Lyme disease
- Understand that Lyme disease may be a contributing factor for other diseases
- Discover the testing methods to diagnose Lyme disease
- Realize the commonly used antibiotics to treat Lyme disease
- Learn metabolic therapies for the treatment of Lyme disease
- Find out co-infections that may occur with Lyme disease
- Learn about resistant Lyme disease
- Learn the history of restless leg syndrome
- Know the definition of restless leg syndrome versus the definition of periodic limb movement disorder
- Realize the risk factors for the development of restless leg syndrome
- Discover the difference between the primary and secondary causes of restless leg syndrome
- Know the coexisting diseases that may occur with restless leg syndrome
- Study the symptoms of restless leg syndrome
- Know the symptoms of periodic limb movement disorder
- Know the four essential diagnostic criteria for restless leg syndrome
- Find out the lab studies that need to be ordered to diagnose restless leg syndrome
- Learn the differential diagnosis of restless leg syndrome
- Gain knowledge of the drug therapies that are available to treat restless leg syndrome
- Know the difference between tolerance and augmentation in the treatment of restless leg syndrome
- Ascertain the different treatments for intermittent restless leg syndrome, daily restless leg syndrome, and refractory restless leg syndrome
- Learn non-drug therapies for restless leg syndrome
- Recognize that arthritis is one of the most common diseases
- Know the radiologic findings seen on x-ray to diagnosis osteoarthritis
- Find out about the two forms of osteoarthritis
- Understand conventional therapies for osteoarthritis
- Learn metabolic therapies for osteoarthritis
- Know common foods that are linked to allergies and arthritis
- Recognize the side effects of different treatment options
- Learn treatment options for ankylosing spondylitis
- Know the symptoms of ankylosing spondylitis
- Identify specific plants and plant compounds as effective antivirals
- Understand the mechanism of action of specific plants and plant compounds as antivirals
- Become proficient in recommending plants and plant compounds for specific human viruses

Fellowship (FAARM) Module Overview

Module VI Objectives Continued

- Identify botanicals that are effective for infectious disease
- Understand the mechanism of action of specific botanicals in their ability to modulate infectious disease
- Become proficient in recommending botanicals for specific infectious diseases

Module VII: Mitochondropathy, Heavy Metal Toxicities, A Metabolic, Anti-Aging and Functional Approach to Autoimmune Diseases, Cognition Enhancement, and Fatigue

The cellular and molecular biology of immunity and inflammation are reviewed, including mitochondrial damage, as well as the external causes of cognitive dysfunction (e.g., heavy metals, sugar and medications). The module also focuses on autoimmune disease, such as how environmental toxins play a role and how early detection can be implemented.

Objectives:

Upon completion of this module, the participant will:

- Understand the molecular triggers of the immune response and their receptors
- Look at intracellular signaling pathways and their gene products
- Look at the cellular and molecular biology of immunity and inflammation
- Learn clinical approaches to immune imbalance and inflammation
- Understand that micronutrient insufficiency leads to DNA and mitochondrial damage
- Look at disorders of mitochondrial function
- Understand the nutritional and environmental regulation of toxic metals
- Know the role that heavy metal toxicity places in disease
- Recognize the role that excitotoxins play in the developing brain
- Learn treatment plans to help a patient maintain their memory
- Learn new treatment modalities for patients with memory loss
- Learn the role that excitotoxins play in disease
- Understand the role of antioxidants in cellular redox control
- Recognize the clinical manifestations of chronic fatigue and fibromyalgia
- Review the role of cytokines as organizers of the inflammatory response
- Learn the cellular and molecular biology of immunity and inflammation
- Look at the molecular triggers of the immune response and their receptors
- Understand the loss of tolerance, Th1/th2/Th3/Th4 imbalance and the role of normal gut flora
- Explore the role of altered bioenergetics in the diathesis of chronic disease
- Learn the counter-regulatory control points of immune imbalances
- Learn an approach to autoimmune diseases and cognition enhancement
- Define and differentiate the various clinical profiles associated with fatigue
- Understand key biochemical features that underlie energy deficits in patients

Module VII Objectives Continued

- Understand fundamental tools of laboratory assessment in patients with fatigue
- Create an understanding of the physiology of the glutamate receptors system
- Demonstrate how the immune system interacts with glutamate receptors to induce human disease
- Discuss specific CNS diseases and the role played by glutamate receptor dysfunction in these diseases
- Discuss the glutamate receptor system in peripheral disorders
- Discuss ways to protect the brain and systemic system from glutamate receptor over-activity
- Understand how to measure all components of memory, including P300, WMS, CNSVS and other related factors
- Know the connection between the brain's testing results and the appropriate diagnosis
- Learn how to approach treatment for memory loss and how to prevent it
- Understand toxic metal exposure from the environment
- Recognize the symptoms and conditions related to toxic metals exposure
- Design a protocol with appropriate chelation agents for heavy metal toxicities
- Learn the risk factors for Alzheimer's disease
- Know the role of heavy metals in memory loss
- Recognize the effects of fluoride on the brain
- Understand the role stress plays on cognition
- Know the role hormonal balance plays in memory maintenance
- Recognize the effects of sugar on cognitive decline
- Learn nutrients that may help maintain cognition
- Recognize medications that may affect memory
- Learn symptoms of chronic mercury poisoning
- Examine the research on the safety of mercury amalgams
- Look at the diseases related to mercury poisoning
- Examine the diseases aggravated by allergies to metals
- Learn mechanisms of mercury toxicity
- Learn nutritional detoxification methods for mercury toxicity
- Examine symptom improvement after amalgam removal
- Look at the role that environmental toxins may play in autoimmune diseases
- Know metabolic/ Anti-Aging treatments for lupus
- Learn metabolic/ Anti-Aging treatments for Raynaud's phenomenon
- Lean new diagnostic tests for rheumatoid arthritis
- Know the differential diagnosis for high anti-CCP
- Know metabolic/ Anti-Aging treatments for rheumatoid arthritis
- Learn how to evaluate and work up a patient with chronic fatigue syndrome (CFS) and fibromyalgia (FM)

Fellowship (FAARM) Module Overview

Module VII Objectives Continued

- Recognize the brain imaging changes that occur with CFS and FM
- Recognize the autonomic and cardiac manifestations in CFS and FM
- Understand the impaired mitochondrial function that occurs in CFS and FM
- Learn the immune dysfunction that is present in CFS and FM
- Recognize the symptoms of fibromyalgia
- Look at conventional treatments of fibromyalgia
- Learn the numerous metabolic/ Anti-Aging treatment modalities for fibromyalgia
- Find out the how to treat mitochondrial dysfunction
- Understand the role Guaifenesin plays in the treatment of fibromyalgia
- Understand that salicylates affect the efficacy of Guaifenesin
- Learn common medications and natural products that contain salicylates
- Study the SHIN protocol
- Discover what physical modalities can be used in the treatment of fibromyalgia
- Study the differential diagnosis of CFS
- Learn the factors suspected of promoting CFS
- Discover immune abnormalities that can be present in CFS
- Realize the nutritional treatments for CFS
- Understand the role that hypothyroidism and adrenal fatigue play in CFS and FM
- Review the evolution in thought regarding the pathophysiology of autoimmune diseases from genetically determined, static disorders of adaptive immunity (T & B lymphocytes) to a dynamic process involving defective programming of regulatory and Th17 lymphocytes by cells of the innate immune system (dendritic cells and macrophages)
- Review the mechanisms by which infections, imbalances in gut flora, food antigens, toxins, and other environmental factors can trigger the breakdown in immune tolerance that leads to autoimmune disease in susceptible individuals
- Explore the practical applications of this model for detecting autoimmune disease at an earlier stage, recognizing potential environmental triggers, and making appropriate recommendations for lifestyle changes and non-pharmaceutical interventions
- Know the demographics of autoimmunity
- Understand some of the important interactions of the endocrine system with immunity
- Learn how the endocrine system can affect autoimmunity
- Know several laboratory tests that can be used in addition to the standard tests for autoimmunity
- Know the treatment options to augment usual and customary treatment of autoimmunity

Module VIII: A Metabolic, Anti-Aging and Functional Approach to Psychiatry and Cancer Therapies, Nutrition and the Athlete, A Metabolic and Functional Approach to Laboratory Evaluations

Varying forms of clinical analysis and methods for ensuring quality results are presented. The module also comprises the basic principles of functional medicine, fundamental functional imbalances and the relationship between genes and the environment. Integrative approaches to cancer therapies, metabolic treatments for psychiatric illness and nutritional programs for athletes are also reviewed.

Objectives:

Upon completion of this module, the participant will:

- Learn advanced integrative approaches to cancer therapies
- Explore clinical approaches to structural imbalances
- Learn what determines test result accuracy, sources of error and what is involved in the management of quality assurance systems in a clinical laboratory
- Understand how reference ranges are established and displayed
- Understand organic acid metabolism and how this relates to evaluating nutrient insufficiency and toxic imbalances
- Learn how to evaluate a patient's level of oxidative stress
- Understand how urinary porphyrin analysis can evaluate functional effects of environmental toxins
- Learn how to evaluate a patient's level of vitamins, minerals, and toxic metals
- Understand the use and advantages of DNA identification of stool microbes
- Learn the use of genomic analysis in the management of patient health risks
- Learn how to evaluate patient levels of phthalates and other bioactive plasticizers and how this can affect steroid hormone interactions and potential health risks
- Learn how analysis of stool microbes, chemistry, immunology and enzymology can be used to evaluate and treat intestinal disorders
- Know treatments for psychiatric illnesses from an Anti-Aging and Metabolic approach
- Learn nutritional support programs for the competitive athlete
- Learn the role that nutrients play in the treatment of psychiatric illness
- Write prescriptions for exercise plans for healthy patients and those with special needs
- Learn new treatment modalities in the area of sports medicine from a an Anti-Aging and Metabolic approach
- Learn how to wean a patient successfully off of prescription medications such as hypnotics and antidepressants
- Review the biochemical basis of psychiatric diseases
- Discuss the neurobiology and chemistry of the sleep wake cycle in the context of circadian rhythms and identify treatable disorders that can interrupt restorative sleep
- Explain the role of the orexin secreting neurons in sleep disorders, including narcolepsy/cataplexy
- Map a treatment or interventional plan to optimize restorative sleep
- Introduce the principles of functional medicine, focusing on biochemical individuality

Fellowship (FAARM) Module Overview

Module VIII Objectives Continued

- Explore the relationship between genes and environment as risk factors for disease, as well as opportunities to optimize health and well-being
- Discuss the importance of laboratory testing that emphasizes optimal wellness and looks at factors that change before the outward manifestation of disease. Case histories will be discussed
- Emphasize the fundamental functional imbalances that every clinician should consider when seeing a patient: environmental inputs, immune and inflammatory imbalance, energy production/oxidative stress, gastro-intestinal imbalance, detoxification and biotransformation, hormonal and neurotransmitter imbalance, structural imbalance and emotional imbalance
- Apply the new-found understanding of the gene-environment interaction in clinical practice
- Understand the reasons for the failure of traditional chemotherapy
- Learn how to use targeted chemotherapy
- Learn new protocols for advanced stage cancers
- Have a basic understanding of how clinical lab tests are run
- Learn how to detect and treat food allergies and how this can affect health
- Understand how to evaluate a patient's level of vitamins, minerals and toxic metals
- Understand organic acid metabolism and how this relates to evaluating nutrient insufficiency and toxic imbalances
- Learn how analysis of stool microbes, chemistry, immunology and enzymology can be used to evaluate and treat intestinal disorders
- Understand the use and advantages of DNA identification of stool microbes
- Learn how anaerobic bacterial imbalances in the gut can affect health and treatments
- Learn the use of genomic analysis in the management of patient health risks
- Learn how to evaluate patient levels of phthalates and other bioactive plasticizers, how this can affect steroid hormone interactions and potential health risks
- Recommend appropriate mineral and vitamin repletion based on exercise needs
- Recommend the correct protein to carbohydrate ratios and specific sources to optimize nutrient timing depending on age
- Recommend amino acids that are evidenced based to improve recovery from a strenuous exercise program
- Recommend nutraceuticals and herbal compounds that will reduce lactate loading and reperfusion injury
- Recommend the appropriate nutrients to support inflammation and post surgery recovery
- Investigate the role that diet has in cancer prevention
- Review existing and new research on metabolic therapies for the treatment of cancer
- Identify scientific rationale for using antioxidant/micronutrient/ phytochemical combinations with standard conventional cancer therapies
- Review literature concerning nutriceuticals and if they can be used as complementing cancer therapies
- Address alternative treatment of specific cancer types
- Learn therapies that may prevent or treat the side effects of radiation or chemotherapy
- Develop a step-by-step guide to the safe and gradual withdrawal from tranquilizers, anti-depressants, and sleeping aids

Module VIII Objectives Continued

- Identify the symptoms of anti-depressant and hypnotic medication withdrawal
- Learn nutritional support for benzodiazepine withdrawal
- Learn the effects that anti-depressants have on the brain
- Learn nutritional support for discontinuation of SSRIs, tricyclic and MAO inhibitor anti-depressants
- Learn nutritional support for hypnotic withdrawal
- Know the anti-depressant-induced mental, behavioral, and cerebral abnormalities that can occur with their use
- Learn metabolic treatments for depression, anxiety, OCD, schizophrenia, and manic depression
- Recognize the biochemical imbalances that result in a mental illness
- Understand the decline in endocrine function that occurs in all organs with age
- Know the behavioral effects of endocrine disorders and their application to geriatric psychiatry
- Lean laboratory abnormalities that occur with hyperparathyroidism
- Learn the mechanisms of action of PTH
- Recognize the drug effects that occur in bone strength
- Understand how the mode of delivery of PTH determines the skeletal response to PTH
- Review the literature on the effect PTH treatment has on the risk of vertebral fractures in postmenopausal women with osteoporosis

Module IX: A Metabolic and Functional Approach to Children's Health

This module discusses the effects of prenatal health on childhood development and metabolic approaches to prenatal care. The development and treatment of ADD/ADHD and the symptoms and factors of Autism Spectrum Disorder are explored. Also discussed are the causes and metabolic treatment of specific childhood conditions, like obesity and allergies.

Objectives:

Upon completion of this module, the participant will:

- Understand that the health of the mother when she is pregnant greatly impacts the health of the child
- Review the literature on metabolic approaches to prenatal health
- Learn antecedents and mediators that affect the development of ADD/ADHD
- Learn nutrients that have been shown in medical trials to aid in the treatment of ADD/ADHD
- Understand the importance that gastrointestinal health plays in ADD/ADHD
- Learn the side effects of conventional treatments for ADD/ADHD
- Recognize the behaviors and symptoms of a child with Autism Spectrum Disorder (ASD)
- Learn the common factors present in ASD children
- Discover laboratory profiles to identify unique treatment options available for ASD
- Review the literature on the history of vaccinations

Fellowship (FAARM) Module Overview

Module IX Objectives Continued

- Understand the role that detoxification plays in ASD
- Recognize the role oxidative stress plays in ASD
- Look at microglial activation in ASD
- Ascertain the possible role allergies may play in ASD
- Look at nutritional supplementation that has been found successful in the literature in the treatment of ASD
- Review a new study on hyperbaric treatment for children with autism
- Look at the role of antibiotic use in children
- Learn herbal therapies that may function as antibiotics
- Review the current statistics on childhood obesity
- Gather new information on metabolic modalities to treat and prevent childhood obesity
- Review a metabolic approach to the treatment of childhood allergies
- Realize that insulin resistance may begin in childhood
- Understand the role that exercise plays in overall health in childhood
- Learn metabolic approaches for the treatment of infections
- Know detoxification therapies for children
- Learn treatment modalities for teens with aggressive behaviors
- Recognize the role diet plays in the psychological health of a child
- Learn metabolic treatments for childhood depression
- Understand the importance of bowel health in a child
- Learn metabolic and functional treatments for asthma
- Know metabolic therapies for learning disabilities

Module X: Homeopathic Applications to Metabolic Medicine

The development of homeopathy in a historical context is presented, as well as fundamental principles of homeopathic pharmacology, including legality of homeopathic medicines, nomenclature, manufacturing and prescribing. The module demonstrates how to select and dose homeopathic medicines for specific conditions – including GI problems, behavior issues and common ailments – as part of an integrative approach.

Objectives:

Upon completion of this module, the participant will:

- Gain an understanding of historical development of homeopathy
- Understand the concept of homeopathic pharmacology
- Define the legal status and prescribing rights of homeopathic medicines in regards to OTC and RX status
- Describe the nomenclature for homeopathic medicine doses
- Review homeopathic medicine manufacturing and the process of succession
- Describe the differences between a Materia Medica and Repertory

Module X Objectives Continued

- Understand the thought process and rationale for selection of homeopathic medicines
- Learn the basics of Constitutional, Complex and Clinical homeopathic prescribing
- Be able to to select homeopathic medicines as a part of the integrative model for healthcare
- Comprehend homeopathic medicine dosing for common complaints such as arthritis, headaches, migraines, sinusitis, allergies and other common chronic complaints
- Review homeopathic medicines for more acute conditions such as sore throat, colds, flu and adjunctive support for traditional medicines
- Learn homeopathic medicine dosing and application of topical and oral and Injectable forms of homeopathic for the management of soft tissue injury, reactivation of metabolism and enhancement of detoxification pathways
- Be familiar with homeopathic medicine dosing and selection for common cold & flu and allergy complaints
- Understand homeopathic medicine dosing and selection for common GI complaints such as diarrhea and constipation
- Learn homeopathic medicine dosing and selection for upper respiratory conditions such as cough, sinusitis, and mucolytic support
- Understand homeopathic medicine and selection for behavior issues, night terrors and bedwetting
- Review homeopathic medicine dosing and selection for common bumps, bruises and scrapes
- Familiarize the student with the theory and research related to homotoxicolgy
- Gain a working knowledge of the six phase process of chronic illness and the definition of each of the phases
- Learn the immunity model for homeopathic medicine
- Be able to apply homotoxicologic preparations for recoupling of oxidative phosphorylation and retarding the chronic inflammatory cascade
- Understand application of homotoxicology in the geriatric population
- Grasp the concept of gemmotherapy to the student
- Gain a working knowledge of dosage and application of gemmotherapy medicines so that the student as to apply this information clinically
- Review the concept of diathesis and the theory behind oligo therapy
- Gain a working knowledge of dosage, protocol and application of oligo therapy so as to apply this information clinically

Fellowship (FAARM) Module Overview

Module XI: IV Therapies

This module discusses various aspects of IV therapies, including when to use such therapies and condition-specific protocols. Other subjects in this module include pre-work-up evaluations of patients, safety protocols and side effects of IV therapies. Also discussed are approaches utilizing chelation and those targeting infectious disease.

Objectives:

Upon completion of this module, the participant will:

- Learn pre work-up evaluations of IV therapy patients
- Know when to use IV therapies
- Learn how to set up an office to do IV therapies
- Learn safety protocols for IV therapies
- Learn how to follow a patient during IV therapy treatment
- Recognize side effects of IV therapies
- Learn IV protocols for medical conditions
- Learn IV chelation therapies for heavy metal toxicities
- Learn oral and rectal chelation therapies
- Understand the side effects of chelation
- Learn IV protocols for nutritional therapies
- Know IV therapies for infectious diseases

Module XII: Toxic Metals and Functional Toxicology

This module discusses the symptoms, evaluation and treatment of toxic metal exposure, as well as common toxins, mechanisms of injury and potentially related disruptions. The module also discusses the organs of detoxification in the body, how to modify toxic metal susceptibility in patients and how to have a detoxified lifestyle.

Objectives:

Upon completion of this module, the participant will:

- Learn how to assess a patient for toxic metal exposure
- Look at the incidence of exposure to toxic metals
- Discover treatment modalities for retention of toxic metals including EDTA, DMPS, DMSA
- Learn nonpharmaceutical agents that chelate out heavy metals
- Understand the importance of adequate mineral status before testing a patient for heavy metal toxicity
- Learn the symptoms of heavy metal exposure
- Study the common toxins that affect health including organohalogens, organophosphates, organic solvents, and heavy metals
- Know the mechanisms of toxic injury including disturbances in cell signaling, alterations in structural entities such as the mitochondria, and impaired synthesis of specific molecules such as fatty acids, proteins, nucleotides, glutathione, and phospholipids
- Discover hormonal disruption that can occur with toxin exposure

Module XII Objectives Continued

- Understand the biotransformation that can occur with drugs, metals, and xenobiotics before they are excreted from the body
- Find out how biotransformation by cytochrome P-450 enzymes affects the toxic nature of compounds
- Study the mechanism of oxidative stress caused by toxins
- Learn about detoxifying enzymes and genetic polymorphism
- Know about metallothioneins and genetic polymorphism
- Discover nutritional and environmental factors that modify susceptibility to environmental toxins
- Learn how to assess the toxicologically affected patient
- Gather information on how to teach a patient how to have a detoxified lifestyle
- Discover the five organs of detoxification in the body and how to aid a patient in detoxifying these organs

Module XIII: A Metabolic Approach To Pain Management

This module examines integrative treatments in pain management and underlying physiological processes. Topical, herbal, supplemental, opiate and OMT/acupuncture pain treatments are discussed, as well as specific approaches to migraine headaches, fibromyalgia, back pain and addiction. The influences of psychiatric disorders in the treatment of pain are also explored.

Objectives:

Upon completion of this module, the participant will:

- Understand the literature on integrative treatments in Pain Management.
- Examine cases in depth and link the presentation to underlying physiologic processes framed with the Anti-Aging context
- Learn therapeutic substitutions to the cases
- Know the pathophysiology of peripheral pain transmission and the various receptors involved
- Know the use of topical pain medications and the rationale for use
- Understand the various herbs and supplements that can help in the management of the chronic pain patient
- Comprehend the new medical treatments for migraine headaches
- Understand CAM treatments for migraine headaches
- Learn the various opiate medications available and rationale for use
- Learn the pathophysiology and treatment for fibromyalgia.
- Review the role of addiction and various treatment approaches as it relates to opiates and smoking cessation.
- Know the interplay of psychiatric disorders in the chronic pain patient
- Review chronic back pain and various treatment approaches
- Review the use of OMT/acupuncture for chronic pain syndromes and various treatment approaches

Fellowship (FAARM) Module Overview

Module XIV (A): Weight Management

The complex causes of weight gain – and individualized therapies – are the focus of this module, which examines the roles of several factors on weight gain: inflammation, allergies, sleep deprivation, neurotransmitter function, psychological dysfunction and more. Also covered are the science of food addiction and how to recognize genetic markers for effective recommendations.

Objectives:

Upon completion of this module, the participant will:

- Understand the multi-factorial causes of weight gain
- Evaluate genetic markers for particular foods that show benefits in weight loss
- Evaluate genetic markers for exercise recommendations bases on genetics
- Know nutritional depletions that are caused by bariatric surgery
- Learn how to replace nutrients in patients that have had bariatric surgery
- Learn individualized therapies for weight management
- Understand the role of inflammation in weight gain
- Understand the importance that allergies play in gaining weight
- Recognized that hormonal imbalances can cause weight gain including: sex hormones, thyroid, insulin, and cortisol
- Understand the value of sleep deprivation and weight management
- Appreciate the value that detoxification plays in weight management
- Know how to detoxify a patient
- Comprehend the role yeast infections may play in weight gain
- Evaluate the role of neurotransmitter function in weight gain
- Appreciate the importance psychological dysfunction has in weight gain and weight loss
- Learn nutrients that aid in weight loss
- Understand the science behind why some foods are addicting
- Know the role that stress plays in weight gain and whether a patient can successfully lose weight
- Review healthy eating programs for weight management that are individualized to the patient's needs
- Understand the importance of energy metabolism and production in weight management

Module XIV (B)

The prevalence and risk factors of obesity are discussed, as well as how the body processes nutrients. Several nutritional plans are reviewed, including testing for metabolic and digestive issues in applying weight loss therapies. The module also explores the influence of hormonal imbalances, eating disorders, inflammation, allergies and sleep disorders on weight changes.

Objectives:

Upon completion of this module, the participant will:

- Recognize and understand the prevalence of Adult Obesity and the risk factors involved
- Understand the bio-chemistry of how the body breaks down proteins, fats and carbohydrates
- Have knowledge of the various nutritional plans to help your patients lose weight including Very Low Calorie Deficit (VLCD) and LCD programs.
- Review of use of Ketosis to achieve successful weight loss along with the risks and benefits of programs such as HCG diets
- Be precise in which specialty testing to recommend for digestive issues/analysis and how to apply the appropriate therapies for weight loss success
- Comprehend the unique relationship between Adrenal Dysfunction/stress with Hormonal Imbalance and weight gain plus weight loss plateaus
- Understand the relationship between male weight gain and testosterone deficiency, testing and treating
- Recognize the clinical manifestations of hypothyroidism in relationship to weight gain with the appropriate compounded thyroid medications
- Understand inflammation barriers to weight loss and treatment utilizing food allergy testing, elimination and rotational diets
- Know the mechanisms of Hunger and Satiety and their biochemical signals
- Understand eating disorders such as Binge Eating and Night Eating Disorder and how to treat these patients
- Comprehend the effects of sleep disorders and weight gain, plus which testing can be utilized depending upon specific issues
- Utilize nutritional testing to provide for deficiency replacement
- Utilize metabolic analysis both during the active weight loss phase and for maintenance
- Apply the energy psychology for both weight loss and maintenance with the application of sports and fitness
- Advise patients on testing such as Body Composition Analysis, Resting Energy Expenditure and VO2 Max Analysis to differentiate your practice from generic weight loss clinics
- Utilize various specialties such as acupuncture and cognitive hypnotherapy plus motivational behavior therapy for weight loss and weight maintenance
- Understand how to approach and reduce lapses and relapses which lead to regaining weight
- Review metabolic blockages and the ability to clear metabolic burning in the body

Fellowship (FAARM)
Module Overview

XIV (C)

This module explores the body's immediate and cumulative responses to exercise intervention programs. The skeletal muscular changes that take place in obese and diabetic patients are presented, in addition to the maintenance of gastrointestinal health (via the 4R program, probiotics, etc.) and its role in energy and weight changes.

Objectives:

Upon completion of this module, the participant will:

- Learn the effects that exercise intervention programs have on weight loss
- Know the exercise mediated effects in skeletal muscle
- Know the metabolic response to exercise
- Learn nutrients that are expended with a vigorous exercise program
- Know how to replenish nutrients that are depleted with vigorous exercise
- Examine the immediate effects that a single episode of exercise has on the body
- Understand the impairments that have been found in skeletal muscle glucose and fatty acid metabolism in patients that are obese and/or have type II diabetes
- Learn the medical evidence that suggests that decreased insulin-mediated glucose transport is a main defect in skeletal muscle
- Learn the changes in mitochondrial function in skeletal muscle that affects glucose metabolism in some obese patients and patients with type II diabetes
- Learn that genetic variation may determine exercise response
- Learn exercise recommendations as part of the management of obesity and type II diabetes
- Examine which exercise-regulated pathways mediate changes in muscle metabolism
- Know the definition of human microbiome
- Learn the 4R program for gut restoration
- Know the definition and action of probiotics
- Learn the definition and action of prebiotics
- Understand the effect that diet has on the GI tract microbiome
- Learn how GI microbes are able to do all of their functions simultaneously through the sensing system found in the intestinal cells that use pathogen recognition receptors
- Know the definition of toll-like receptors and their function
- Understand the role that the microbes of the intestinal tract have on energy balance in the body and consequently their effect upon weight gain and loss
- Learn how gluten intolerance and sensitivity may play a role in weight gain

Module XIV (D)

The goal of "Getting Healthy Together" is to teach clinicians how to consult with organizations on placing weight loss and health programs into groups of people, including houses of worship, schools, businesses, and communities.

Objectives:

Upon completion of this module, the participant will:

- Learn the main components of losing weight and getting better together
- Understand the 8 circles of health/healing
- Know ways to boost group motivation
- Learn specific important health numbers to measure
- Know specific steps in helping people lose weight and change
- Comprehend specific steps to enhance decision making skills
- Understand the impact of ADD, anxiety, depression and addiction on group function
- Learn specific behaviors to avoid for health
- Review specific weight loss and health actions to take
- Learn 4 questions for optimal mental health
- Know how to implement the program's principles during travel
- Learn 4 ways to influence loved ones, community and world to lose weight and get healthy

Module XV (A): Brain Fitness

This module discusses the factors that help or hinder cognitive functioning, specifically memory. Negative influences such as toxins, medications, stress and inflammation are outlined, while pro-cognitive factors like exercise, nutrients, good sleep hygiene and fatty acids are presented. Cognitive testing, relevant brain anatomy and risk factors for Alzheimer's and dementia are also covered.

Objectives:

Upon completion of this module, the participant will:

- Evaluate genetic markers for memory loss
- Understand the role that toxins have in memory loss
- Appreciate how exercise helps maintain cognition
- Learn commonly used medications that may cause memory loss
- Identify nutrients that help maintain memory and focus
- Comprehend exercises that help maintain memory
- Learn cognitive testing
- Understand the affect that psychotropic and pain medications have on memory
- Understand the role recreational drugs have on memory loss
- Value the role sex hormones have in maintaining memory and focus including pregnenolone, estrogens, progesterone, testosterone and DHEA

Module XV Objectives Continued

- Learn how optimal thyroid function helps maintain memory and focus
- Understand how stress affects memory
- Comprehend the role that insulin dysfunction plays in memory loss
- Learn the risk factors for Alzheimer's disease
- Recognize the effects of fluoride on the brain
- Know elevated plasma homocysteine levels are a risk factor for dementia
- Understand the value of sleep hygiene and its affect on memory
- Realize the key role stress has on cognition
- Understand the relationship between health status and cognitive functioning
- Identify the fatty acids that aid in memory maintenance
- Understand the role that inflammation plays in memory loss
- Learn that level of education affects memory
- Understand that intake of foods that the patient is allergic to can affect cognition
- Learn that dysbiosis can affect memory
- Identify toxic metals that can affect cognition
- Understand the role neurotransmitters have on memory
- Learn the parts of the brain that affect memory

Module XV (B)

An in-depth look at the biology, anatomy and physiology of the brain is taken, specifically how it processes information. The stages and types of memory are reviewed, as well as factors that affect retention and learning, including gender differences. Other topics include Bloom's Taxonomy, the brain and the arts, human attention and healthy brain aging.

Objectives:

Upon completion of this module, the participant will:

- Learn the biology of the brain
- Understand the anatomy of the brain
- Know the physiology of the brain
- Know how the brain processes information
- Recognize the stages and types of memory
- Recognize factors that affect retention and learning
- Understand transfer of learning
- Understand the cause of gender differences in learning
- Understand the brain and the arts
- Know Bloom's Taxonomy
- Know the molecular origins of human attention and the dopamine folate connection
- Recognize healthy brain aging

Module XV (C)

This module teaches how to evaluate memory loss in patients and how to make a differential diagnosis, comprising such conditions as Alzheimer's disease, vascular dementia and vascular cognitive impairment, frontotemporal dementia, normal pressure hydrocephalus and more. The behavioral and psychological symptoms of dementia are discussed, as well as medications for memory loss.

Objectives:

Upon completion of this module, the participant will:

- Know how to evaluate the patient with memory loss
- Recognize the differential diagnosis of memory loss including Alzheimer's disease, mild cognitive impairment, dementia with Lewy Bodies (including Parkinson's Disease dementia), vascular dementia and vascular cognitive impairment, frontotemporal dementia, progressive supranuclear palsy, corticobasal degeneration, normal pressure hydrocephalus, Cretzfeldt, Jakob Disease and other disorders
- Know the behavioral and psychological symptoms of dementia
- Learn medications that are disease-modifying treatments for memory loss

Module XV (D)

This module outlines a road map for healthy brain aging, including implementing factors such as nutrients, sleep, diet, exercise and creative engagement to preserve cognitive function. The link between cardiovascular risk factors and cerebrovascular disease, and the role of excitotoxins in memory loss are also covered.

Objectives:

Upon completion of this module, the participant will:

- Review clinical trials on nutrients that help preserve cognitive function
- Learn how good sleep hygiene helps maintain memory
- Understand the role that exercise and physical activity have in preserving memory
- Learn which nutritional deficiencies can lead to memory loss
- Recognize potential future neuroprotective therapies for neurodegenerative disorders and stroke
- Study creative engagement and how it helps support resilience and neuroprotection
- Learn a road map for healthy brain aging
- Review how cardiovascular risk factors and cerebrovascular disease burden is associated with memory loss including hypertension, obesity, smoking, hypercholesterolemia, diabetes mellitus, depression, and hyperhomocysteinemia
- Learn new treatment modalities to prevent and treat cardiovascular and cerebrovascular disease in relationship to memory maintenance
- Acquire knowledge on the effect that head injury, alcohol, and environmental toxins have on memory
- Discover preventative measures and treatments for patients with head injuries, excessive alcohol intake, and exposure to environmental toxins
- Study optimal foods for patients to eat that help with brain fitness
- Review the role that excitotoxins play in memory loss and how to prevent exposure

Fellowship (FAARM) Module Overview

Module XV Objectives Continued

- Learn brain exercises to maintain and improve memory
- Review the role that excessive sugar intake has on the genesis of cognitive decline
- Discover the part that allergies may play in memory loss and how to treat them effectively
- Recognize medications that can cause cognitive decline and how to decrease their side effects
- Learn the role that stress plays in memory loss and new therapies to help the patient manage stress

Module XVI (A): Metabolic Cardiovascular Medicine

Vascular biology, vascular aging and vascular disease are the focus here. The module teaches how to apply nutrition, exercise and weight management programs in treating such conditions, as well as the clinical presentation and cardiovascular relationships among vascular biology, vascular aging and vascular disease. Laboratory testing and new, noninvasive diagnostic cardiovascular tests are also reviewed.

Objectives:

Upon completion of this module, the participant will:

- Understand, review and apply in clinical practice the pathophysiology of vascular biology, vascular aging and vascular disease.
- Understand, review and apply to patient care nutrition, nutritional supplements, exercise and weight management in the treatment of vascular biology, vascular aging and vascular disease.
- Understand, review and discuss the clinical presentation and cardiovascular relationships of vascular biology, vascular aging and vascular disease.
- Understand, review, discuss, select and apply laboratory testing and new noninvasive diagnostic cardiovascular tests to identify vascular aging and cardiovascular disease

Module XVI (B)

The pathophysiology of hypertension, dyslipidemia, cardiovascular disease and heavy metal toxicity in CVD are explored, as well as methods of patient care through weight management, nutrition and exercise. Also covered are the cardiovascular relationships and clinical presentation of such conditions, in addition to the selection and implementation of laboratory testing and noninvasive diagnostic tests.

Objectives:

Upon completion of this module, the participant will:

- Understand, review and apply in clinical practice the pathophysiology of hypertension, dyslipidemia, cardiovascular disease and heavy metal toxicity in CVD
- Understand, review and apply to patient care nutrition, nutritional supplements, exercise and weight management in the treatment of hypertension, dyslipidemia, cardiovascular disease and heavy metal toxicity in CVD
- Understand, review and discuss the clinical presentation and cardiovascular relationships of hypertension, dyslipidemia, cardiovascular disease and heavy metal toxicity
- Understand, review, discuss, select and apply laboratory testing and new noninvasive diagnostic cardiovascular tests to identify hypertension, dyslipidemia, cardiovascular disease and heavy metal toxicity

Module XVI (C)

Immunologic vascular disease is reviewed in depth, including pathophysiology, clinical presentation, prevention and treatment. Factors that impact cardiovascular disease, such as nutragenomics, anxiety and hormonal balance, are explored, as well as methods of testing. The module also discusses nutritional and dietary therapies for prevention and treatment of cardiovascular disease.

Objectives:
Upon completion of this module, the participant will:

- Review and understand the pathophysiology, clinical presentation, prevention, and treatment of immunologic vascular disease
- Discuss, review, and understand invasive and non-invasive cardiovascular testing
- Review and discuss the role of nutrition in cardiovascular disease
- Learn, review, and discuss the role of nutragenomics, proteomics and genetic SNPs in cardiovascular disease
- Understand, review, and discuss the role of stress, anxiety, depression, and sleep in the prevention and treatment of cardiovascular disease
- Understand the importance of optimal sex hormonal balance and function in cardiovascular protection in both men and women
- Review the protective and treatment roles that optimal thyroid function plays in cardiovascular health
- Understand the role of nutrition and dietary patterns in a lifestyle approach for prevention and treatment of cardiovascular disease
- Know how specific macronutrients, micronutrients, and phytonutrients impact prevention and treatment of cardiovascular disease
- Review the scientific rationale and mechanisms for the clinical application of nutritional therapies in cardiovascular disease

Module XVI (D)

The roles of various conditions in cardiovascular disease—such as dysglycemia, insulin resistance and diabetes mellitus—are presented. Methods for the prevention and treatment of cardiovascular disease, including stem cells and chelation therapy, are explored, in addition to occupational risk factors for heart disease, the effects of toxins in the heart and the role of solvents in the development of arrhythmias.

Objectives:
Upon completion of this module, the participant will:

- Review in detail, discuss, and learn the issues surrounding dysglycemia in cardiovascular disease
- Review and learn the role of insulin resistance in cardiovascular disease
- Understand, review, and learn the role of metabolic syndrome in cardiovascular disease
- Learn, review, and discuss how diabetes mellitus influences the consequences of cardiovascular disease
- Review the details of drug-nutrient interactions in cardiovascular drugs
- Understand and discuss stem cells in the prevention and treatment of cardiovascular disease

Fellowship (FAARM) Module Overview

Module XVI Objectives Continued

- Discuss chelation therapy as a possible means to prevent and treat cardiovascular disease
- Learn occupational risk factors for heart disease
- Know the effects of cadmium, cobalt, lead, and other toxins on the heart
- Understand the role that solvents may play in the development of arrhythmias

Module XVII - ACUP: Medical Acupuncture for the Integrative Physician/Practitioner

This module focuses on the history and development of Chinese acupuncture, as well at its standing with medical organizations. Acupuncture training, certification, standards and practice are reviewed; effects on bodily systems and conditions are presented; and different microsystems and techniques are explored. Classic and contemporary understandings of the method are referenced throughout.

Objectives:

Upon completion of this module, the participant will:

- Review the classic and modern developments of Chinese acupuncture.
- Review the ancient and contemporary development of acupuncture globally
- Review the past and current development of acupuncture in the US
- Review the US and WHO status on education and training, certification and practice of acupuncture in the US
- Review the NIH statements regarding application of acupuncture in medicine
- Review the ICMART statements regarding application of acupuncture in medicine
- Review the WHO statements regarding application of acupuncture in traditional and conventional biomedicine.
- Review the professional organizations representing physicians and other practitioners of acupuncture in North America
- Review the education and training opportunities for practitioners to further their knowledge of acupuncture.
- Review professional standards of practice and certification in North America
- Review contemporary physiological effects of acupuncture stimulation
- Review the nervous, vascular, humoral and organ effects of acupuncture and their implications for treatment of various illnesses
- Review the classic and contemporary interpretations of the acupuncture channels.
- Review the classic and contemporary theories of acupuncture points
- Review basic acupuncture physiology regarding points and channels from a classical and contemporary understanding
- Review TCM acupuncture as a common model of acupuncture commonly practiced today.
- Review classic Chinese acupuncture theories and concepts
- Review classic energetic acupuncture paradigms from other parts of the world
- Review multiple contemporary neuro-anatomic models of acupuncture commonly taught and practiced in the US today

Module XVII Objectives Continued

- Review Auricular Therapy as an acupuncture microsystem
- Review Hand Reflex Therapy as an acupuncture microsystem
- Review Scalp Therapy as an acupuncture microsystem
- Review classic and modern considerations and use of acupuncture needles
- Review the current understanding of Clean Needle Technique
- Review the use and indications for moxibustion
- Review the use and indications of cupping and scraping
- Review the use and indications of various electrical stimulators
- Review the use and indications of laser light acupuncture stimulation
- Review common points used in acupuncture therapy
- Review classic considerations for the major acupuncture points
- Review modern considerations for the major acupuncture points
- Review acupuncture treatments for musculoskeletal pain of the head and neck
- Review acupuncture treatments for muscle tension and vascular headaches
- Review acupuncture treatments for musculoskeletal pain of the shoulders and upper extremities
- Review acupuncture treatments for musculoskeletal pain of the waist, buttocks and hips
- Review acupuncture treatments for musculoskeletal pain of the lower extremities
- Review acupuncture treatments for gastrointestinal illnesses
- Review acupuncture treatments for pulmonary illnesses
- Review acupuncture treatments for gynecological illnesses
- Review acupuncture treatments for urological illnesses
- Review acupuncture treatments for immune illnesses
- Review the various psycho-behavioral, cognitive and addiction disorders that are often effectively treated with acupuncture
- Review the considerations for body acupuncture and microsystem acupuncture for these treatments
- Review the theories and indications of Prolotherapy in treating pain and sports injuries
- Review the theories and indications of Neural Therapy in treating pain and sports injuries

Fellowship (FAARM) Module Overview

Module XVIII: Neuropsychiatry

This module focuses on principles of integrative neuropsychiatry, in addition to the functions, problems and treatment of brain systems. Subtyping of conditions (e.g., anxiety, addiction, Alzheimer's, obesity) is covered, as well as neuroimaging, hormones and lab testing. Also reviewed are drug interactions, toxins in the brain, the role of neurotransmitters, lifestyle interventions, forms of psychotherapy and innovative treatments.

Objectives:

Upon completion of this module, the participant will:

- Learn the 9 principles of integrative neuropsychiatry
- Understand the functions, problems and treatment of 7 brain systems
- Learn how to subtype ADD, anxiety, depression, addictions, obesity and aggression based on a brain system approach
- Understand the practical role of neuroimaging in clinical practice, including indications of when to order
- Comprehend the role of specific hormones and lab testing in integrative neuropsychiatry
- Understand drug-drug-nutrient, drug herb interactions *Module XIIIV Objectives Continued*
- Appreciate the role of food in optimizing diet in neuropsychiatry
- Learn how to work up a toxic brain, including metals, organo-pollutants, viruses, substances
- Understand the role of neurotransmitters, genetic testing in dementia, Parkinson's and neuropsychiatry
- Comprehend the rational use of supplements in integrative neuropsychiatry
- Learn lifestyle interventions to boost overall mental health and treat mental illnesses
- Understand the role of various forms of psychotherapy, including hypnosis, cognitive therapy, EMDR and DBT
- Gain a basic knowledge of innovative treatments, including hyperbaric oxygen therapy, repetitive transcranial magnetic stimulation, neurofeedback, light therapy and acupuncture
- Know specific steps to decrease the risk for Alzheimer's and related dementias

Modules XIX A-D: Sports Medicine and Sports Nutrition

These modules focus on improving performance for the professional athlete or extreme exerciser. Principles discussed include diet and nutrition, toxins that decrease performance, exercise recovery, reducing fatigue, eating disorders, athletes and aging, sports psychology and chronic disease.

Objectives:

Upon completion of this module, the participant will:

- Learn eating programs that will aid the professional athlete or patient that aggressively exercises
- Recognize the science of eating for sports success
- Learn winning recipes for peak athletic performance
- Recognize body pollutants that will decrease athletic performance
- Know vitamins that will aid in athletic performance
- Learn minerals that will aid athletic performance
- Understand the importance of good sleep hygiene and performance
- Learn the nutritional depletions that are caused by vigorous exercise programs
- Learn how antioxidants combat injury
- Know how to prevent infections in athletes
- Understand cardiovascular responses to exercise and training
- Know anaerobic metabolism, acid-base balance, and muscle fatigue during high intensity exercise
- Learn about eating disorders in athletics
- Know respiratory responses of athletes to exercise
- Recognize adaptations in skeletal muscle in response to endurance training
- Learn the endocrinology of exercise
- Understand the aging athlete
- Look at exercise and pregnancy
- Understand sport psychology
- Know biomechanics as applied to sports
- Recognize the physiological and clinical consequences of exercise in heat and humidity
- Learn the effects altitude has on sport performance
- Know about fluid and electrolyte loss and replacement in exercise
- Discover the epidemiology of athletic injuries
- Learn the role of exercise in the treatment of chronic disease
- Ascertain how to prevent injuries
- Know how to select the appreciate diet for the athlete or patient that exercises vigorously
- Know the protein and carbohydrate requirements for various types of athletes
- Realize how to manage weight issues in athletes
- Find out techniques for weight gain in athletes
- Learn how to write prescriptions for compounds for blisters, heel spurs, plantar faxcitis and fungal infection

Fellowship (FAARM) Module Overview

Module XX: Metabolic Code Triad Training

The purpose of Module XX is to define important physiologic interrelationships that mediate health and disease. There is emerging science to show that specific processes or systems in the body work in concert to maintain homeostasis. When this balance is disrupted, through factors such as stress, poor diet, environmental exposures, genetic individuality or medication use, these intrinsic homeostatic mechanisms begin to alter and break down. Early disruptions can accumulate over time and build towards a significant shift to disease state processes.

The Metabolic Code Triad system creates a framework to assess and treat patients by first understanding these important interrelationship hierarchies, and then provides specific treatment recommendations. The Metabolic Code Triad Training is a breakthrough approach in clinical medicine that serves to organize complex patient presentations into a unified treatment approach.

The module will cover five triads that together underlie the clinical framework of the Metabolic Code. Case-based teaching forms a central part of the training, ensuring that the learner gains specific tools and techniques to effectively treat patients immediately after completing the course.

Triad 1: Adrenals – Thyroid – Pancreas
Triad 2: Gut – Immune – Brain
Triad 3: Cardio-Pulmonary – Neuro-Vascular
Triad 4: Liver – Lymph – Kidney
Triad 5: Estrogen – Progesterone – Testosterone

Objectives:

Upon completion of this module, the participant will:

- Understand how the Metabolic Code Triad works
- Look at an example of a triad, The Brain-Gut-Inflammation Triad, and see how triad organizational thought would be helping organize complex patient therapies
- Review normal physiology of adrenals, thyroid, and pancreas
- Review common ways patients present with multiple metabolic abnormalities
- Review natural and hormonal treatment strategies for cortisol, insulin and thyroid
- Understand the physiologic relationships between the digestive tract, immune system and brain
- Review common clinical presentations within the proposed framework of Gut-Immune-Brain
- Review treatment options and strategies specific for Gut-Immune-Brain pathologies
- Understand basic physiologic connections between the mind, brain and heart mediated through mechanisms such as heart rate variability, depression, stress, and the immune system
- Review common clinical presentations within the cardiopulmonary-neuro-vascular triad
- Understand ways to treat complex conditions within this triad framework
- Understand the physiology of the most important detoxification organs and their pathways to remove toxins
- Review the most common toxins, both exogenous and endogenous, which contribute to medical illness
- Review treatment strategies for removal of toxins safely and effectively
- Review ways to mitigate toxins in the home environment
- Review the role of sex hormones in the aging male and female
- Review common presentations of sex hormone dys-regulation and the associated signs and symptoms
- Examine methods of balancing and replacing estrogen, progesterone, and testosterone safely and effectively through the use of natural products and hormone replacement therapy

Module XXI: Advanced Immune Therapies

Coming Soon!

Module XXII: Genomics

Coming Soon!

Fellowship (FAARM) Module Overview

Module XXIII (A): Lifestyle Coaching

This module provides information on how to guide the patient to successfully changing lifestyle habits to create sustainable, long-term health. Several steps are discussed to bring the patient through this process and models for success are shown.

Objectives:

Upon completion of this module, the participant will:

- Understand the Wellness Revolution and how you can become a part of the solution
- Understand the "Three Circles of Success" for lifestyle health coaches
- Know why we are in such a healthcare crisis and how you can prepare yourself for the future
- Learn the three steps for sustainable change
- Learn how to get amazing results by shaping one's belief systems
- Have a greater understanding that everything begins at the cellular level and learning how to balance your body's pH
- Know how to build the three pillars for optimal health and performance
- Be able to improve nutrient absorption, digestion and elimination, keys for optimal health
- Know how to understand and educate your clients on the "Food Target"
- Know the 6-step Nutritional Pyramid for optimal health, energy and vitality
- Understand hormonal pathways and stress
- Learn how to create more "white space" in your life
- Know the 6-step Rest & Rejuvenation Pyramid for optimal health, energy and vitality
- Understand how much exercise is enough
- Understand that the key to exercise is proper posture and alignment
- Learn the 5 key checkpoints for injury prevention and performance
- Learn how to develop sustainable exercise program that creates amazing results
- Understand the 6-step Exercise Pyramid for optimal health, energy and vitality
- Learn how to educate your clients about knowing your numbers along with many other measurements for tracking their success
- Learn how to build a solid lifestyle health coaching program
- Learn how to create "Transformational Experiences" with your coaching clients and watch your business grow

Module XXIII (B)

This module discusses the immune system and digestion, along with toxins, detoxification and diet. The key avenues for toxin entry are overviewed, along with digestion, absorption, deposition, and utilization of all nutrients. Diet prescription and food preparation are taught and techniques are reviewed for overcoming objections by the patient.

Objectives:

Upon completion of this module, the participant will:

- Explain the difference between addressing symptoms of disease with palliative drugs and surgery versus resolving underlying etiology of disease with lifestyle alterations
- Comprehend basic nutrition: digestion, absorption, assimilation, deposition, and utilization of all essential nutrients
- List the key components in a healthy gut ecosystem along with the probiotic and prebiotic precursors for optimal immune functioning
- Be able to analyze a patient's lifestyle exercise habits and make appropriate recommendations for enhanced physical therapy
- Be able to assess the key avenues of entry for toxins into the human body, along with major principles of detoxification
- Analyze a patient's attitude and stress levels as they may be involved in the overall equation of patient's morbidity
- Itemize the main vectors that constitute "host defense mechanisms" in a human body in order to restore the patient's innate self-regulating and self-repairing capacities
- Be able to adapt to individual patient needs, ethnic diets, unique eccentricities and still be able to counsel the patient toward a healthier lifestyle that will prevent or reverse disease
- Be able to write a recommended diet based upon unique preferences, limitations in food preparation, and requirements for wellness from doctor's prescription
- Know how to outline potentially useful nutrition supplements, based upon limitations in ability to swallow pills and finances, and predicated on physician's advice

Fellowship (FAARM) Module Overview

Module XXIII (C)

This module focuses on the concept of the co-active coaching model. It discusses fundamentals of the model, the basics of the co-active coaching relationship and the coaching power triangle. The program instructs on how to utilize co-active coaching contexts, principles, practices and other skills.

Objectives:

Upon completion of this module, the participant will:

- Learn the fundamentals of a co-active coaching model
- Understand the co-active coaching relationship
- Utilize the co-active coaching contexts of listening, intuition, curiosity, forward and deepen, and self-management
- Learn the co-active coaching principles and practices of fulfillment, balance, and process
- Actively engage in learning coaching skills
- Discuss the coaching power triangle

Module XXIII (D)

Several different topics of lifestyle coaching are explored, such as medication-induced nutritional depletions, foods as nutrients, treatment modalities, hormonal balance, energy levels and food additives. The module also discusses other factors that relate to health coaching—such as emotions, intuition, etc.—as well as skills to implement a comprehensive weight loss program for a patient.

Objectives:

Upon completion of this module, the participant will:

- Learn how to counsel a patient concerning nutritional depletions caused by medications
- Learn how to coach a patient on foods as nutrients
- Understand how to discuss vitamins, minerals, and herbal therapies and their importance in treatment modalities with patients
- Understand the importance of hormonal balance in the patient and how to encourage patient understanding
- Learn which foods help improve energy and inspire creative changes
- Gather knowledge on how to recognize food additives
- Understand how body, emotions, power, love, mindfulness, intuition, and connection are related to health coaching
- Acquire new skills in coaching the patient in a comprehensive weight loss program

***Completion of Modules I-VIII and board certification requirements allows one to graduate as a Fellow in Anti-Aging, Regenerative & Functional Medicine.**

***Modules IX-XXIII are optional electives and may be used towards Master's Degree requirements.**

Testimonials

Sharon G. Thompson, RPh, JD
Halesite, NY

For the past quarter century, (with a short hiatus in the middle to attend law school), I have been a practicing pharmacist. Growing up with homeopaths and herbalists, my mother among them, I always knew there was something missing in my professional life. I watched with great sadness as Big Pharma took over the standard of care. I knew there must be a different path for me. I felt not only more dissatisfied with my role as a health care professional, but I became convinced that traditional medicine had gone over the cliff in terms of its approach. We've lost our way; so many people have become dependent upon (often unsafe) pharmaceuticals to take care of all their diseases because that's all mainstream medicine affords them.
I always knew there was a better way, but I felt that the only changes coming were for the worse. Fortunately, in December of 2007 a friend invited me to Las Vegas; she was attending the medical aesthetics conferences but told me to look into the Anti-Aging fellowship. Since that first module, starting with the famous "caterpillar" lecture, I was inspired to learn more. I completed the Fellowship in December 2009 and through the process I've met some extraordinary, brilliant teachers, colleagues and leaders in this field. I've expanded my professional skills sufficiently such that I was able to start a compounding and consulting practice in the heart of Manhattan. There are no words to describe my gratitude for this experience; I have found my passion at last thanks to all my wonderful teachers, especially Dr. Pam Smith.

Thomas Joseph Barnard, MD
FAAFP CAQ (GERIATRICS), FCCFP (EM), FAARM, Fellowship in Anti-Aging, Regenerative and Functional Medicine

When I first talked to Dr. Pam Smith, at the very start of the Fellowship program in Anti-Aging Medicine, I was looking for some like-minded souls. I had been teaching physicians about vitamin and mineral therapies, teaching the public about good nutrition on commercial radio and TV news spots, and educating a large patient population about all these principles for years. I thought I had a pretty good background in the integrative medicine arena, or, "just good medicine," as I was fond of calling it.
Dr. Smith told me I would love her new fellowship program. I would find a community of professionals very interested in the same things I was, so I took her at her word, and became one of the first few students in the Fellowship program, with perhaps 30 other stalwart souls.
I have had my own vision of a truly integrative, compassionate, effective medical practice supported, reinvented, reinvigorated, and renewed. I have continually been introduced to new cutting edge information and technologies.
My practice, while already busy, has blossomed, and has attracted people of all stripes and backgrounds, for whom my new toolkit and renewed enthusiasm have proven invaluable.
A sincere thank you is a barely adequate expression of my appreciation to Dr. Smith, the Fellowship community, and the A4M. We are the vanguard in the reinvention of the medical model; may our vision continue to grow and prosper.

Fellowship in Integrative Cancer Therapy

What is Integrative Cancer Treatment (ICT)?

Integrative Cancer Treatment is a unique therapy for treating individuals with cancer. This therapy utilizes multiple modalities, including but not limited to, off-label pharmaceuticals, neutraceuticals, vaccines and other types of immunotherapy, novel drugs/substances not yet approved in the U.S., dietary treatments, mind-body techniques, hyperthermia, homeopathy, in addition to traditional therapy.

Why should cancer patients seek ICT vs. traditional cancer treatment?

Traditional cancer treatment is efficacious for early stage cancer. Unfortunately, in the U.S., we have made little progress in the treatment of advanced stage cancers in the past twenty years. A study was published in the British journal, "Clinical Oncology," in December, 2004, entitled, "The Contribution of Cytotoxic Chemotherapy to 5-Year Survival in Adult Malignancies." The authors, one medical oncologist and two radiation oncologists, analyzed the results of all randomized clinical trials performed in the U.S. and Australia, that reported a statistically significant increase in 5-year survival due to the use of chemotherapy in adult malignancies. The trials that were analyzed were performed between 1990 and 2004. The authors' conclusions were the following:

- Contribution to 5-year survival in Australia was 2.3%
- Contribution to 5-year survival in U.S. was 2.1%
- Median survival in lung cancer has increased by 2 months in the past 20 years
- Overall survival benefit of less than 5% has been achieved in the adjuvant treatment of breast, colon, and head and neck cancers

Clearly, the need for an alternative form of cancer treatment is great and imminent.

Who should attend the Integrative Cancer Fellowship?

All healthcare practitioners can benefit from this fellowship. In addition, all healthcare practitioners, regardless of specialty, can practice ICT.

What benefits will be afforded by attending this Fellowship?

The knowledge gained from attending this Fellowship will allow practitioners to provide improved cancer treatments, allowing a better quality and quantity of life for cancer patients. In addition, practitioners will be learning "cutting edge" therapies.

Requirements

- Modules I-VIII are required to be a Fellow, Your diploma would read "Fellow in Integrative Cancer Therapy"
- Modules I-X or equivalent are required to prepare for the Master's Degree plus an ethics course
- Complete A4M Board Certifications
- A4M Membership

Module I: Cancer Prevention

This module explores the predecessors and risk factors of cancer, including medications, environmental toxins, inflammation and even emotions. Methods for creating an anticancer environment are presented, as well as the positive roles of certain foods and nutrients. Also discussed are vaccines, screening tests and the epidemiology of known causes of cancer.

Objectives:

Upon completion of the module, the participant will:

- Know the role stress plays in the genesis of cancer cells
- Understand the role that sugar has in feeding cancer cells
- Recognize the role inflammation plays in the development of cancer
- Aid the patient in developing an anticancer environment for their body
- Learn anticancer foods
- Understand the role nutrients have in cancer prevention
- Know the role emotions play in cancer development
- Understand the value of cancer screening tests
- Learn medications that may be related to the development of cancer
- Know environmental toxins that may be associated with increasing a patient's risk of cancer
- Emphasize nutrients that may aid in decreasing a patient's risk of cancer development
- Learn about cancer vaccines
- Review the studies relating fluoride intake and increase in cancer risk
- Review the literature concerning alcohol use and the risk of certain cancers
- Look at the medical literature related to high intake of some nutrients increasing the risk of cancers (B12, Folic acid)
- Realize that an imbalance of fatty acids in the body may increase the risk of tumor growth
- Understand that a diet high in omega-6 fatty acids increases estradiol levels which can increase the risk of breast and prostate cancer
- Recognize the role that cigarette smoking/tobacco use has in increasing the risk of several cancers
- Evaluate exposure to environmental toxins
- Understand the role of radiation exposure as a possible cause of cancer
- Understand the molecular mechanisms of aging and its prevention including somatic mutation, telomere loss, mitochondrial damage, formation of free radicals, cell senescence, DNA repair and genome stability, and caloric restriction
- Know the epidemiology of the known causes of cancer

Fellowship (ICT)
Module Overview

Module II: The Biology of Cancer

This module focuses on understanding of normal cell biology and is paired with an overview of apoptosis, cell differentiation, cell cycle deregulation, gene mutations and DNA repair mechanisms. A definition of cancer is presented, including its genetic basis and new strategies for underlying mechanisms. Other topics include carcinogenesis, angiogenesis, signal transduction mechanisms and methods for detection.

Objectives:

Upon completion of the module, the participant will:

- Understand normal cell biology
- Explain apoptosis
- Comprehend cell differentiation and loss of cell differentiation
- Identify cell cycle deregulation including restriction point, pRb pathway, C-Myc proto-oncogene pathway
- Comprehend gene mutations and their role in oncogenesis
- Learn DNA repair mechanisms
- Learn cancers resulting from defects in repair pathways
- Understand that cancer cells grow best in an anaerobic environment
- Learn new strategies for underlying mechanisms of cancer
- Understanding the genetic basis of cancer
- Know the definition of cancer
- Understand the role that ionization and UV radiation plays on carcinogenesis
- Look at viral carcinogenesis
- Review the literature on the epidemiology of cancer
- Look at mutations and cell defenses
- Know methods for cancer detection and biomarkers
- Know the growth characteristics of malignant cells
- Learn signal transduction mechanisms
- Study angiogenesis and its relationship in cancer development
- Understand the biology of tumor metastasis
- Review the molecular genetics of cancer

Module III: Immunology of Cancer

This module focuses on current concepts in immunology, including available immunological tests, immunosuppression and cancer, the multifactorial basis of immunodeficiency, immunoregulatory cells and immunomodulatory factors. The roles of various cells are discussed, as well as treatment-induced immunosuppression, immunotoxins, interferon therapy and how tumors avoid the immune response.

Objectives:

Upon completion of the module, the participant will:

- Review current concepts in immunology
- Understand the function of T-lymphocytes, T-helper cells, T-suppressor cells, T-cytotoxic cells, B lymphocytes, monocytes, macrophages, natural killer cells, and lymphokine-activated killer cells
- Know the immunological tests that are currently available
- Review the medical literature on immunosuppression and cancer
- Look at the multifactorial basis of immunodeficiency in cancer patients
- Understand effector cell numbers and function
- Know immunoregulatory cells and immunomodulatory factors
- Look at immunosuppression and tumor cell burden
- Evaluate solid tumors in the light of immunological function
- Understand hematopoietic malignancies in the light of immunology
- Evaluate radiation-induced immunosuppression
- Comprehend chemotherapy-induced immunosuppression
- Look at the immune status of patients in clinical remission
- Learn treatments of cancer-associated immunodeficiency
- Know biological response modifiers with immunorestorative properties
- Understand the chemical properties of thymic hormones
- Learn treatment of radiotherapy-induced immunosuppression
- Learn therapies for chemotherapy-induced immunosuppression
- Learn about cancer vaccines
- Understand the cytokine sources and their effects related to the growth and treatment of cancer
- Have a working knowledge of all of the interleukins
- Understand tumor necrosis factor alpha and its effects on inflammation, immune regulation, apoptosis, and endothelial damage
- Understand interferon therapy for specific cancers
- Understand the mode of action of interferons in cancer treatment
- Learn about monoclonal antibody therapy
- Study immunotoxins

Fellowship (ICT)
Module Overview

Module III Objectives Continued

- Learn new testing methods for immunological markers
- Train in granulocyte colony-stimulating factor therapies
- Understand the clinical implications of granulocyte-macrophage colony-stimulating factor therapies and immunomodulation
- Review heat shock proteins as regulators of the immune response
- Understand the role of gene rearrangement in the tumor response
- Look at how tumors avoid the immune response

Module IV: Targeted Cancer Therapies

This module focuses on treatments for specific cancers, including leukemia, breast and other female cancers, colorectal and other GI cancers, lymphoma, pancreatic cancer, prostate cancer, head and neck cancer, melanoma and more. This module also comprises nanoparticle approaches to cancer, genetic tissue testing and the role of proteomics in cancer diagnosis and treatment.

Objectives:

Upon completion of the module, the participant will:

- Learn targeted therapies for acute myelogenous leukemia
- Learn targeted therapies in breast and other female cancers
- Know targeted treatments in chronic lymphocytic leukemia
- Recognize targeted therapies in chronic myeloid leukemia
- Know targeted therapies in colorectal and other GI cancers
- Identify targeted therapies in non-small cell lung cancer
- Comprehend targeted therapies in lymphoma
- Know targeted treatment in melanoma
- Identify targeted therapies in multiple myeloma
- Know targeted treatments for myelodysplastic syndrome
- Comprehend targeted therapies in epithelial ovarian cancer
- Know targeted drug therapy in pancreatic cancer
- Learn targeted therapy in prostate cancer
- Comprehend targeted therapy in renal cell carcinoma
- Learn targeted therapies in sarcoma
- Learn about personalized cancer therapies
- Learn about head and neck cancer treatments
- Know brain cancer therapies
- Comprehend new nanoparticle approaches to cancer
- Explore genetic tissue testing
- Discover the role proteomics has in cancer diagnosis and treatment

Module V: Case Histories In Cancer Therapies

This module focuses on case histories to explore methods of preventing and treating therapy-induced conditions, such as cardiac toxicity, GI complications and kidney damage. The benefits of proteolytic enzymes and certain nutrients are discussed, in addition to integrative therapies for many forms of cancer and the role of antioxidants in chemotherapy and radiation.

Objectives:

Upon completion of the module, the participant will:

- Learn nutrients that can prevent radiation induced diarrhea
- Review cases showing that proteolytic enzymes can reduce adverse effects caused by radiation and chemotherapy
- Learn treatments for side effects of chemotherapy such as nausea, food aversions, sore mouth and throat, mouth ulcers, dry mouth, hair loss, decreased production of blood forming cells
- Learn methods to help prevent cardiac toxicity caused by chemotherapeutic agents
- Learn nutrients through case histories that can protect against busulfan toxicity
- Understand how to prevent complications of chemotherapy such as leaky gut syndrome, yeast overgrowth, malabsorption, loss of digestive enzymes, and low stomach acid
- Learn nutrients that help prevent kidney damage caused by chemotherapeutic agents
- Understand nutrients that can be used in conjunction with radiation and chemotherapeutic agents that do not decrease the efficacy of the radiation or chemotherapy
- Learn nutrients that help protect the nervous system
- Recognize neurological complications of chemotherapeutic agents
- Comprehend lymphedema treatments
- Be familiar with nutrients that protect against radiation necrosis
- Know nutrients that can increase the effectiveness of radiation
- Learn integrative therapies for many forms of cancer
- Understand the role of antioxidant use with chemotherapy and radiation
- Learn to assess cancer-related infections
- Learn to recognize paraneoplastic syndromes
- Learn treatment of hematological complications in cancer

Fellowship (ICT)
Module Overview

Module VI: Integrative Cancer Therapies

This module provides an overview of several integrative cancer therapies, such as Hoxsey therapy, avemar therapy, protocell therapy, hyperbaric oxygen therapy, photodynamic treatment, sonodynamic therapy and cancer pH manipulation therapy. Other topics include mind/body medicine, the role of exercise in cancer therapies, and bio-oxidative and ultraviolet medicine and cancer therapies.

Objectives:

Upon completion of the module, the participant will:

- Recognize Hoxsey therapy
- Understand Burzynski's anitneoplastons
- Know avemar therapy
- Understand protocell therapy
- Comprehend hyperbaric oxygen therapy
- Identify photodynamic treatment
- Learn sonodynamic therapy
- Study cancer pH manipulation therapy
- Learn about mind/body medicine
- Comprehend the significance of exercise as related to cancer therapies
- Learn about bio-oxidative and ultraviolet medicine and cancer therapies
- Discover IV vitamin C as a cancer treatment modality

Module VII: Dietary Treatments of Cancer

This module focuses on the negative influences of dietary components such as sugar, omega-6 fatty acids, iron and copper on the immune system of the cancer patient. This module also conveys the importance of avoiding malnutrition and providing adequate hydration, as well as the role that diet plays in genomic methylation.

Objectives:

Upon completion of the module, the participant will:

- Understand the role that a high glycemic index diet plays in increasing the risk of a cancer reoccurrence
- Review the literature concerning diets that are high in omega-6-fatty acids suppressing the immune system
- Understand that a diet high in omega-6-fatty acids may decrease cancer-fighting lymphocytes
- Understand that fat cells produce estrogen independent of the ovaries, production of estrogen
- Understand the role that elevated insulin levels have in cancer development and metastasis
- Learn the role nitrosamines can play in the causation of cancer
- Review studies that show that large amounts of iron and copper can lead to free radical production and increase the patient's risk of cancer and reoccurrence
- Know the importance of avoiding malnutrition in a cancer patient
- Understand the importance of adequate hydration in a cancer patient
- Understand the role diet plays in genomic methylation

Fellowship (ICT) Module Overview

Module VIII: Nutritional Integrative Cancer Therapies

This module focuses on the role of nutrients in cancer therapy, including those that can increase or decrease the effectiveness of radiation and chemotherapy, inhibit cancer-dependent enzymes, cause apoptosis of cancer cells, inhibit tumor invasion or promote immune enhancement. Also discussed are nutrient and herb interactions with conventional cancer therapies.

Objectives:

Upon completion of the module, the participant will:

- Learn the importance of fatty acid balance including the importance of fatty acid supplementation in the cancer patient
- Understand nutrients that can add augmenting cancer therapies
- Know nutritional depletions caused by chemotherapy
- Learn nutrients that can decrease side effects of radiation without affecting therapy
- Identify nutrients that inhibit cancer-dependent enzymes
- Learn nutrients that can cause apoptosis of cancer cells
- Know nutrients that inhibit inflammation
- Review the literature on nutrients that can inhibit tumor invasion
- Learn nutrients that can block angiogenesis
- Know nutrients that have anti-hormone effects
- Identify nutrients that can promote immune enhancement such as beta-glucans, thymus protein extract, mushroom extracts, MGN-3, colostrum, lactoferrin, astragalus, mistletoe extract along with others
- Identify nutrients that improve barrier strength and reduce tumor invasion
- Understand the role of antioxidant use with chemotherapy and radiation
- Know nutrients that decrease the effectiveness of chemotherapy and radiation
- Learn nutrients that increase the effectiveness of chemotherapy and radiation
- Understand the importance of reducing tumor cell glutathione levels with whey protein intake
- Understand the importance of hydration in the cancer patient
- Value the role that melatonin can play in the treatment of cancer
- Understand the nutrient and herb interactions with conventional cancer therapies
- Learn the action of vitamin D metabolites on cancer cells

Module IX: Detoxification and its Role as a Cancer Therapy

This module discusses the organs of detoxification in the body, in addition to the role that toxins play in cancer etiology. Methods for evaluating the body's inability to detoxify, strategies for enhancing detoxification and ways to minimize toxic exposure are discussed, as well as the 4 R program and phase I/phase II detoxification of the liver.

Objectives:

Upon completion of the module, the participant will:

- Understand the role that toxins play in cancer etiology
- Learn the five major organs of detoxification in the body
- Learn the 4 R program
- Learn phase I/phase II detoxification of the liver
- Understand the role of the GI tract in the immune system
- Understand the importance of methylation in the detoxification profile
- Review the role that toxins play in the P450 system
- Learn testing methods to evaluate the body's inability to detoxify
- Learn scientific strategies for enhancing detoxification

Fellowship (ICT) Module Overview

Module X: New Radiological Treatments of Cancer and Stem Cell Therapies

This module focuses on anti-body peptide-based radiopharmaceuticals and radionucliades. The specific applications for various cancer conditions will be explored. This module also discusses radiological imaging therapies for cancer, autologous bone marrow transplantation, transcription factors in cancer, stem cell chromatin patterns, and the advantages and disadvantages of pretargeted RIT systems.

Objectives:

Upon completion of the module, the participant will:

- Learn antibody-based radiopharmaceuticals
- Understand radionuclides for radioimmunotherapy
- Learn targeted radionuclide therapies for hematological diseases
- Understand the radionuclide therapies for non-hematologic tumors such as GI carcinomas, prostate cancer, and breast cancer
- Review the radionuclides therapies for gliomas
- Find out about peptide-based radiopharmaceuticals
- Learn about strategies to improve outcome in radionuclide therapies
- Discover ways to reduce radiation exposure to normal tissues
- Look at the advantages and disadvantages of pretargeted RIT systems
- Discover radiological imaging therapies for cancer
- Evaluate autologous bone marrow transplantation
- Understand hematopoietic stem cell transplantation and its role in cancer therapies
- Know granulocyte colony-stimulating factor therapies in relationship to stem cell transplantation
- Know transcription factors in cancer
- Learn stem cell therapy for hematopoietic cancers
- Understand DNA hypermethylation
- Review stem cell chromatin patterns
- Know stem cell therapy in the treatment of brain cancers
- Learn about the role of tumorigenic and migrating cancer stem-progenitor cells in cancer progression and their therapeutic implications
- Understand the role that modifying genetic signaling has in cancer prevention and treatment

Testimonials

Dalal Akoury, MD
North Myrtle Beach, SC

I am a board certified pediatrician and emergency physician; I began my medical career with passion and excitement during the mid 1980's after completing my pediatric hematologist oncology from Emory University. After several years of practicing traditional allopathic medicine, I realized that modern medicine is deceptive as I was not able to help any of my patients by simply patching up their symptoms. I became exhausted, irritable, frustrated, I also developed a chronic cough, and lost my energy.

Five years ago at a family reunion I was fortunate to see my cousin Dr. Fouad Ghaly who has been practicing Anti-Aging, Functional, and Regenerative Medicine for at least 15 years. Dr. Ghaly, who is a number of years older than me, looked happy, energetic, young, and full of life; while I looked older, feeble, and frail. This encounter with Dr. Ghaly was the turning point that transformed my medical career. I took a leap of faith and began the A4M Fellowship program; I since have completed the Anti-Aging, Functional, and Regenerative Medicine Fellowship, have attended 11 modules, and have completed the Integrative Cancer Therapies Fellowship. My association with the A4M has transformed my life, my children and my husband's life and my patients' lives forever. For the first time after over thirty years of practicing medicine, I feel I am a true physician and a healer. The support and information of A4M continually aids me in my new and growing practice today. There is nothing more rewarding than having my patients finally feeling better.

Nia M. Smyrniotis, MD, MS
Boca Raton, FL

The convention in Orlando was a wealth of information, as always! I highly recommend that a physician in ANY field attend who wants to improve the quality of care offered in their practice. I always leave with my brain FULL of new knowledge. And I look forward to the upcoming conventions and Cancer modules. Thank you A4M for making the medical world a better (and much needed) place.

Become a Fellow in Integrative Cancer Therapies

(561) 997-0112
info@a4m.com
www.a4m.com

Fellowship in Anti-Aging and Aesthetic Medicine

What is Aesthetic Medicine?

Aesthetic Medicine is a developing clinical subspecialty and field in scientific research aimed at the use of minimally invasive cosmetic treatments to enhance patients' satisfaction with their physical appearance. This subspecialty is no longer limited to the fields of plastic surgery and dermatology, as many specialties are offering aesthetic medical procedures in order to better accommodate their patients' aesthetic needs. A growing trend among baby boomers is that aesthetic treatments are part of a normal health routine with the goal of maintaining a natural and healthy appearance.

Why add Aesthetics to your practice?

- There were nearly 10 million surgical and nonsurgical cosmetic procedures performed in 2010. Nonsurgical procedures represented 83% of the total.
- Since 1997, there has been an increase in nonsurgical cosmetic procedures of over 147%.
- The top five nonsurgical cosmetic procedures in 2010 were:
  1. Botulinum Toxin A Injections
  2. Hyaluronic Acid Injections
  3. Laser Hair Removal
  4. Laser Skin Resurfacing
  5. Chemical Peels

Statistics courtesy of the American Society of Aesthetic Plastic Surgery 2010 Cosmetic Surgery National Data Bank

What is the Aesthetic Anti-Aging Fellowship?

The Aesthetic Anti-Aging Fellowship is a six-part series consisting of a three-module didactic series and a three-module hands-on clinical training series. The Aesthetic Anti-Aging Fellowship was created in recognition of the need to establish best practice standards in Aesthetic Medicine. The fellowship enables medical professionals to learn aesthetic medicine theory and receive individualized hands-on training in aesthetic procedures to provide superior patient outcomes. The clinical programs provide Level 4 CME classification and are accredited by the University of South Florida Office of Professional Development. Practitioners completing the Level 4 classification courses and required and follow-up can qualify as competent to perform the procedures without further supervision, in accordance with AMA Guidelines on Continuing Medical Education for new procedures and skills. There are also Advanced Fellow and Master's Fellow designations that can be obtained.

What is the goal of the Aesthetic Anti-Aging Fellowship?

- Create standards of evidence-based knowledge and procedural excellence in aesthetic treatments
- Promotion of education to these levels of competency
- Create subspecialty that can be internationally recognized by both consumers and physicians as a credible source for aesthetic services

Now offering advanced and elective clinical courses for experienced aesthetic practitioners:

Already practicing aesthetic medicine? The Fellowship now offers advanced courses to enable certification on more advanced techniques for the seasoned professional. Entry to course is approved based on experience and case study submission. Courses offered include:

- Advanced Cosmetic and Therapeutic Uses of Botulinum Toxin A Advanced Facial Filler for Facial Enhancement
- Advanced Aesthetic Laser & Light Treatments for Facial Rejuvenation
- Autologous Facial Fat Transfer
- Autologous Fat Transfer for Breast & Gluteal Augmentation
- Introduction to BodySculpture
- Advanced BodySculpture
- Dermatology for the Anti-Aging Physician
- Aesthetic Vaginal Rejuvenation
- Hair Transplantation
- Blepharoplasty
- Abdominoplasty

Requirements to become a Fellow in Aesthetic and Anti-Aging Medicine

The following criteria must be completed before candidates can sit for the exam:

- Membership in the American Academy of Anti-Aging Medicine (A4M)
- Attendance at two or more consecutive A4M approved/sponsored conferences
- An MD, DO, CRNP, ARNP, PA or MBBS degree from an accredited medical school
- An active medical license in the state, province, or nation the applicant resides
- Curriculum vitae (resume) demonstrating a minimum of 5 years of clinical practice experience (residency training applicable)
- No significant disciplinary actions against the applicant, or a written appeal including full disclosure of all disciplinary actions accompanied by a request for a waiver of this requirement
- Completion of the Aesthetic Anti-Aging Fellowship modules
- Payment of written examination fee
- 12 case studies
    - 2 Botox and 2 filler (for Module IV)
    - 4 laser/light (for Module V)
    - 2 chemical peel and 2 sclerotherapy (for Module VI)
- Completion of Aesthetics Written Exam, or ABAARM/ABAAHP Written Exam

Modules I-III are only available online and do not need to be taken in numerical order.

Fellowship (Aesthetics) Module Overview

Module I: Advanced Facial Sculpting and Contouring With Botulinum Toxin A and Dermal Fillers

The module teaches an understanding of facial anatomy, features and age-related changes. The pharmacology and best-practice standards for botulinum toxins are reviewed, in addition to filler properties, injection techniques and potential adverse events. Plus, an interactive session features injections performed live.

Objectives:

Upon completion of this module, the participant will:

- Analyze facial anatomy as it relates to the aging face
- Understand and develop aesthetic treatment plans
- Understand mechanism of action of various Botulinum Toxins
- Review proper dosing and injection techniques for Botulinum Toxin A injection of the following areas: glabella, frontalis, brow depressors, orbicularis oculi, nasalis, orbicularis oris, depressor anguli oris, mentalis, platysma
- Describe mechanism of action of the following filling agents: fat, bovine collagen, bioengineered human collagen, cadaver based products, hyaluronic acid, calcium hydroxylappatite, poly-L-lactic acid, liquid injectable silicone, and polymethylmethacrylate
- Learn to choose appropriate filling agent based on correction desired
- Review proper dosing and injection techniques for facial filler treatment for: nasolabial and melomental folds, wrinkles, facial contours, lip augmentation, tear trough deformity, malar area, temporal hollow, jaw line
- Discuss the prevention and management of complications and adverse sequelae of botulinum toxin and dermal filler injections
- View demonstrations and participate in live case studies of proper injection techniques utilizing Botulinum Toxin A and various dermal filler products
- Review patient management and pricing strategies for facial injectable treatments

Module II: Aesthetic Treatments Utilizing Laser and Intense Pulsed Light Applications/ Chemical Resurfacing and Cosmeceutical Additives

This module focuses on dermatologic conditions requiring aesthetic enhancement. It reviews the mechanisms, types, best-practice standards and potential adverse effects of both lasers and chemical peels, including an interactive session devoted to each. Other topics include cosmeceuticals, toxins in over-the-counter products and the role of the aesthetician.

Objectives:

Upon completion of this module the participant will:

- Understand laser physics and light-based tissue interactions
- Review laser wavelengths and mediums: KTP, Pulsed dye laser, Ruby, Alexandrite, Diode, Nd:YAG, Er:YAG, CO2, Intense Pulsed Light, Photodynamic Therapy, LED photomodulation, Fractional photothermolysis

Module II Objectives Continued

- Discuss the following factors in designing an appropriate laser treatment protocol for hair reduction, vascular lesions, nonablative treatments, intense pulsed light, and acne:
    - o Safety considerations
    - o Choice of wavelength/device
    - o Fitzpatrick scale
    - o Contraindications
    - o Pretreatment instructions
    - o Spot tests
    - o Treatment considerations
    - o Post-treatment instructions
    - o Complications
    - o Patient selection
- Understand laser safety precautions
- Review skin physiology
- Review of skin type and aging classifications: Fitzpatrick skin typing, Glogau classification, Rubin classification, Monheit-Fulton numerical score of photoaging
- Discuss the properties of various chemical peeling agents including Retinoic acid, Enzyme peels, Alpha hydroxy acid, Beta hydroxy acid, Jessner's solution, Trichloroacetic acid, Phenol
- Discuss clinical protocols to obtain optimal results utilizing various chemical peeling agents
- Learn role of various cosmeceutical additives in anti-aging skin care regimens: botanicals, vitamins, antioxidants, growth factors, peptides, and metals
- Understand the role of skin lightening agents and sunscreen in cosmetic medicine
- View demonstrations and participate in live case studies of proper chemical peel and laser and light techniques

Module III: Aesthetic Venous Treatments and Body Contouring Techniques

This module reviews venous anatomy as well as the risk factors, diagnosis, therapies and complications of venous disease. Obesity, strategies for weight loss, cellulite and the lymphatic system are discussed, in addition to mesotherapy and light-based devices for body contouring. Three interactive sessions are included in this module.

Objectives:

Upon completion of this module the participant will:

- Review the history and prevalence of chronic venous insufficiency
- Learn the theoretical causes and differential diagnoses of varicose veins
- Understand physical evaluation techniques of venous system including duplex ultrasound, transillumination, and Doppler
- Discuss clinical protocols to obtain optimal results for venous disease including sclerotherapy, endovenous closure, ambulatory phlebectomy, and surgical intervention
- Review statistical data regarding the obesity epidemic

Fellowship (Aesthetics) Module Overview

Module III Objectives Continued

- Discuss appropriate treatments for obesity: diet, exercise, regulation of endocrine disorders
- Understand pathophysiology of cellulite
- Understand medical applications of injection lipolysis as well as its indications, contraindications, and procedural protocol
- Discuss clinical protocols to obtain optimal results for body contouring including mesotherapy, carboxytherapy, laser lipolysis, ultrasound, noninvasive laser and light applications, liposuction, and invasive body contouring techniques
- View demonstrations and participate in live case studies of proper techniques of effective venous and body contouring treatments

Module IV: Intensive Hands-Procedural Training

This module reviews how to perform aesthetic consultations and evaluate facial anatomy and aging. Other topics include correct injection and dosage techniques, best-practice standards for botulinum toxin, the properties of facial fillers and the administration of anesthesia. Participants both observe and perform injections on live models and complete case studies.

Objectives: DAY ONE - THE USE OF BOTULINUM TOXIN FOR AESTHETIC ENHANCEMENT

Upon completion of this module, the participant will:

- Be proficient in conducting an aesthetic consultation for patients considering Botulinum Toxin. This includes understanding patient expectations, predicting clinical outcomes, and effectively communicating this to patients. It also includes proven strategies for conducting successful consultations where patients are comfortable with Botulinum Toxin treatments and the risks and benefits. All necessary clinical forms and protocols for pre-procedural care, post-procedural care, patient education, procedural documentation, and patient consent will be reviewed and made available
- Identify dynamic facial muscle anatomy and function on live patients and understand how to treat these muscle groups to achieve a youthful facial muscle balance. This includes the frontalis, glabellar complex, orbiularis oculi, nasalis, levator labii alaque nasi, depressor anguli oris, orbicularis oris, and platysmal muscles.
- Demonstrate correct injection and dosage technique for all of the facial muscles with the various Botulinum Toxin products available for aesthetic enhancement
- Understand the best practice standards for the use Botulinum Toxin for facial aesthetic enhancement including available products, dosing, indications, contraindications, injection technique, and complication avoidance and management
- Participate in interactive demonstrations of Botulinum Toxin treatments on live models done by aesthetic experts, including the treatment of frown lines, crows feet, forehead lines, brow position, bunny lines, gummy smile, marionette lines and platysmal banding
- Perform Botulinum Toxin treatments on live models with an aesthetic expert instructor to achieve competency in best practices for aesthetic consultations, treatment planning, Botulinum Toxin injection techniques for all indications, and post-procedural care
- Submit two case studies using Botulinum Toxin for facial aesthetic enhancement after completion of this course to receive Level 4 accme credit through USF Department of Professional Development

Module IV Objectives Continued

- When combined with the Didactic Module I of the Fellowship, this module allows the physician to deliver expert knowledge and clinical expertise in the use of Botulinum Toxin for aesthetic enhancement

Objectives: DAY TWO-THE USE OF FACIAL FILLERS FOR AESTHETIC ENHANCEMENT

Upon completion of this module, the participant will:

- Understand the volumetric changes that occur with facial aging including skeletal changes, muscular changes, dermal changes, and subcutaneous tissue changes and how these changes contribute the appearance of facial aging for all cultures and both genders
- Understand ideal facial proportions for all cultures, genders and ages and understand how to achieve these ideal proportions in aesthetic patients with the use of facial fillers
- Be proficient in conducting an aesthetic consultation with patients considering facial filler by accurately identifying individual facial volume deficiency, predicting the accurate volumes and products necessary for aesthetic correction, and effectively communicating this to aesthetic patients
- Demonstrate a working knowledge of the properties of the various facial fillers available for aesthetic enhancement, including autologous fat, cell augmented fat, the various collagens (Zyderm, Zyplast, Cosmoderm, Cosmoplast, Evolence), the various hyaluronans (Restylane, Perlane, Juvederm, Prevelle, Hydrelle), poly-L-Lactic acid (Sculptra), calcium hydroxylappetite (Radiesse), and silicone. With this understanding, learn how to choose the appropriate filler for individual aesthetic corrections.
- Be proficient in providing anesthesia in the form of regional blocks including supraorbital, infraorbital, and mental blocks, topical anesthesia, local anesthesia, and product infused anesthesia. Understand the risks and benefits of each form of anesthesia
- Understand how to select the appropriate anesthetic technique for aesthetic patients based on their individual pain tolerance and their facial filler indications
- Participate in an interactive session with experts performing live demonstrations of "best practice" techniques in the aesthetic correction of nasolabial folds, marionette folds, wrinkles, and scars, as well as lip enhancement and perioral filling using all of the appropriate filling agents available
- Provide live facial filler treatments including aesthetic consultations, treatment planning, patient education, delivery of effective anesthesia, and facial filler injections according to "best practice" standards. These cases will be done with an expert instructor in facial filler injections and the attendee is ensured competence in these skills.
- Complete two case studies using facial filler for aesthetic enhancement after completion of this course and receive Level 4 CME credit through USF Department of Professional Development
- When combined with Aesthetic Module I, this course will enable physicians to provide expert knowledge and procedural competence to their patients desiring facial aesthetic enhancement

Fellowship (Aesthetics) Module Overview

Module V: The Aesthetic Use of Energy Based Devices

This module provides knowledge of energy-based devices, including their selection and application. Ways to diagnose dermatologic conditions requiring these treatments and evaluate skin types prior to treatment are explored. Methods of adjusting treatment factors and recognizing clinical endpoints are covered, and participants observe and perform energy-based treatments on live patients.

Objectives:

Upon completion of the module, the participant will:

- Demonstrate a working knowledge of aesthetic energy based devices including Lasers (KTP, Ruby, Pulsed Dye, Diode, Nd:YAG, ErYAG, YSGG, CO2), Intense Pulsed Light, Radiofrequency, Ultrasound, and Light Emitting Diodes and the important features in selecting each device and their appropriate aesthetic applications
- Demonstrate the ability to accurately diagnose dermatologic conditions requiring energy based aesthetic treatments including lentigenes (brown spots), atypical lesions, dysplastic lesions (cancers), telangiectasias (redspots), wrinkles, elastosis (skin laxity), melasma, cellulite, acne, dysplasia, unwanted hair, veins, and tattoos
- Recognize abnormal skin conditions requiring biopsy prior to light based treatments and effective treatment protocols
- Review the technical considerations of energy based devices with expert luminaries and understand what these mean in clinical practice
- Gain experience in conducting aesthetic consultations with patients desiring correction of dermatologic conditions or aesthetic defects with aesthetic devices. This includes experience in diagnosis and effective treatment planning with "best practice" standards in choosing the correct device and energy
- Receive the necessary treatment forms and protocols, including patient information, pre- and post-procedure care, procedure record, and patient consent forms
- Gain experience in Fitzpatrick skin typing to accurately prescribe the correct modality and treatment parameters for optimal results and avoidance of complications
- Understand how to adjust the parameters of fluence, pulse width, cooling, and treatment times on aesthetic devices to provide safe and effective treatments
- Recognize the desired clinical endpoints and tissue interactions for the treatment of lentigenes (brown spots), atypical lesions, dysplastic lesions (cancers), telangiectasias (redspots), wrinkles, elastosis (skin laxity), melasma, cellulite, acne, dysplasia, unwanted hair, veins and tattoos
- Review the treatment protocol used in photodynamic therapy and its clinical application in skin rejuvenation, acne, actinic keratosis and skin cancer
- Participate in an interactive session with aesthetic experts demonstrations offering energy based aesthetic treatments for all indications according to "best practice" standards on live models
- Provide energy based treatments for all aesthetic indications on live patients including the aesthetic consultations, treatment planning, pre- and post-care, choosing the appropriate device and treatment parameters and delivering the treatment. These treatments will be done in a clinical setting with expert luminaries to ensure safety and efficacy
- When combined with Module II of the Fellowship, attendees will achieve both expert knowledge and expert clinical skill to provide true excellence in the delivery of energy based aesthetic treatments

Module VI: Intensive Hands-On Procedural Training In Chemical Peels and Sclerotherapy

This comprehensive module includes the diagnosis, mechanisms, equipment, techniques, pre- and post-care, and best-practice standards for chemical peels, sclerotherapy and body contouring. Participants conduct patient consultations, observe and perform treatments on live models, and submit case studies.

Objectives: DAY ONE - CHEMICAL PEELS IN AESTHETIC MEDICINE

Upon completion of the module, the participant will:

- Successfully diagnose dermatologic conditions that are appropriately treated with chemical peels and identify the depth of chemical peel necessary to achieve full correction
- Demonstrate a working knowledge of the chemical peeling agents including retinols, enzymes, alpha hydroxy acids, beta hydroxy acids, Jessnor solution, TCA, phenol, and combination peels
- Understand how the concentration, pH, exposure time, and number of applications of these agents affect the depth of the chemical peel
- Know how to prescribe proven regimens for pre- and post-peel care which optimize the safety and clinical outcomes of chemical peels
- Learn how to prescribe combinations of chemical peels and products in proven strategies for treatment of the dermatologic conditions to encourage patient compliance and to achieve optimal results
- Demonstrate correct techniques for aesthetic facial cleansing, lymphatic drainage, massage, steam activation, and mask application
- Be familiar with aesthetic equipment, supplies procedures, staffing and pricing as well as standard incentive programs for employees
- Conduct aesthetic consultations with patients desiring chemical peels including accurate diagnosis; treatment planning, pre-peel preparation and post-peel care. All forms, protocols, patient education materials, and resources will be made available
- Participate in an interactive demonstration session with aesthetic experts performing chemical peels on live models in a clinical setting
- Deliver chemical peels using "best practice" standards including consultations, diagnosis, choosing the appropriate peel agent, concentration, exposure time, and number of passes, delivering the peel, and prescribing pre- and post-peel care
- Submit a case study on an aesthetic chemical peel using these standards and obtain Level 4 CME credit through USF Department of Professional Development

Objectives: DAY TWO - SCLEROTHERAPY IN AESTHETIC MEDICINE

Upon completion of the module, the participant will:

- Understand the incidence, prevalence, etiology, pathology, and clinical presentation of venous disease
- Demonstrate working knowledge of venous anatomy including: the Anterior Tibial, Posterior Tibial, Peroneal, Popliteal, Femoral, Common Femoral, Perforators, Greater Saphenous, Short Saphenous, reticular and spider veins

Fellowship (Aesthetics) Module Overview

Module VI Objectives Continued

- Conduct an aesthetic consultation with patients desiring treatment of venous disease including patient education regarding the progressive and chronic nature of venous disease, to establish reasonable patient expectations for treatment
- Demonstrate the ability to perform a medical history and physical examination to accurately predict the extent of venous disease
- Utilize diagnostic tools including CW Doppler, transillumination, photoplethysmography, and duplex ultrasonography for diagnosing the extent of venous disease in individual patients
- Have a working knowledge of the properties of the available sclerosants including the standard concentrations used for each size of vessel. The sclerosants used include hypertonic saline, sotradecol, and polidocanol. Sources, pricing, and practical experience with dilution will be made available for all of these products
- Develop and understanding of the advantages and disadvantages of insurance billing for the treatment of venous disease. Forms, methodology, and CPT codes discussed
- Prescribe the appropriate type of compression stocking for each venous treatment and understand it's important role in achieving successful clinical outcomes
- Understand the indications and contraindications of each form of sclerotherapy as well as the risks and potential complications. Understand the increased risk of sclerotherapy in patients on HRT or who have hypercoagulability states and how to manage these risks
- Have a working knowledge of how to diagnose and treat the complications of sclerotherapy including deep venous thrombosis, superficial phlebitis, necrosis, intra-arterial injection, tissue necrosis, hemosiderin staining, and hyperpigmentation
- Participate in an interactive demonstration sessions with vascular experts delivering "best practice" standards in sclerotherapy
- Develop skill in performing sclerotherapy on live patients with specialists according to "best practice" standards including consultation, physical exam, diagnostic studies, diagnosis, patient education, and appropriate post-procedural care
- Submit a case study to receive Level 4 CME through USF Department of Professional Development
- Along with the expert knowledge gained in Module III, this module will enable attendees to deliver expert care to patients with venous disease

Testimonials

Mark Johnson, MD, PhD

I recently completed my final module in the Aesthetics Fellowship and within two months, using all the information and skills I gained, opened a rapidly growing aesthetic medical practice. Dr. Sharon McQuillan is one of the most respected practitioners of aesthetic medicine in the country. Her experience and knowledge has enabled her to develop and share best-practice models, which I have found to produce uniformly excellent results and happy patients. Ms. Janette Daher, an integral part of this course, has also had a tremendous positive impact through sharing her wealth of business experience in both aesthetics and other consumer businesses. This fellowship training has allowed me to both build the new practice in a very tough economic environment and avoid many of the usual pitfalls of new aesthetic practitioners. The Aesthetics Fellowship is without a doubt THE FINEST aesthetics training program in the country, and I enthusiastically recommend attending to anyone serious about entering this field or improving the quality of their practice. I owe my newly found success entirely to Dr. McQuillan and her vision of providing excellence in aesthetic medicine, and I am confident that this fellowship will help you be successful as well!

Maria Del Vecchio, MD
Wellness & Medical Aesthetics of No. Jersey, LLC

My affiliation with A4M has totally transformed the way I practice medicine! After more than twenty years of traditional Internal Medicine, I was frustrated and unhappy. After attending my first A4M conference, I realized there is a better way. I immediately incorporated what I learned into an ailing practice. Traditional medicine does not focus on disease prevention or the individual patient. I wanted to allow my patients to look good, as well as feel good. My first step was to complete the Aesthetic Fellowship. The training is outstanding. As I continue to work in this field, I see that my knowledge base and the techniques, which I learned in the Fellowship, formed a sturdy foundation to build upon. My journey continues, as I now complete the Fellowship in Anti-Aging Regenerative Functional Medicine and master's program. Rarely, in the past, did I make as much impact on my patient's health as I do now. My practice is flourishing and I enjoy medicine again!

Become a Fellow in Aesthetic Medicine

(561) 997-0112
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Fellowship in Stem Cell Therapy

Fellowship in Stem Cell Therapy

The American Academy of Anti-Aging Medicine (A4M) has recognized the need for knowledge on stem cells amongst physicians and healthcare professionals, thus creating the world's first Stem Cell Fellowship program. Stem cell therapies involve the potential replacement of cells or organs that are diseased, injured, infirmed, ailed or aged. In this modular training program, a group of experienced academics, involved in stem cell transplantation, present a series of topics to cover the general principles and practice of stem cell biology and evidence-based treatments for physicians to optimize the health of their patients.

By enrolling in the Fellowship, you will learn how to treat the diseases associated with aging with stem cell therapies – the medicine of the future. After completion of this modular training program, physicians will be able to intelligently decide which stem cell protocols to implement into their existing practice. Become a pioneer in stem cells and the future of Regenerative Medicine.

Requirements

- Modules I-VI are required to be a Fellow. Your diploma will read "Fellow in Stem Cell Therapy"
- Complete A4M Board Certifications
- A4M Membership

Module I: The Basic Principles of Stem Cells

This module provides an overview of basic stem cell principles and properties, including the development of embryonic stem cells, stem cell niches, adult stem cells and induced pluripotent stem cells. Principles of regenerative medicine, comprising both current and future perspectives, are introduced, including rationale of cell-based therapies.

Objectives:

Upon completion of the module, the participant will:

- Understand the basics of stem cells
    - Principles and properties of stem cells
        - Embryonic germ cells
        - Differentiated stem cell types from embryonic stem cells
            - ECTODERM: Neuroprogenitors
            - MESODERM: Cardiomyocytes, hematopoietic progenitors, leucocytes, endothelial cells
            - ENDODERM: Insulin positive cells, hepatocyte-like cells
- Understand the principles of stem cells
    - Development of embryonic stem cells
        - Self renewal
        - Differentiation
        - Totipotency
        - Pluripotency
        - Multipotency
        - Committed progenitors
        - Terminal differentiation
        - Stem cell pasticity or transdifferentiation
- Understand the concepts of
        - Stem cell niches in bone marrow
            - Osteoblastic
            - Vascular
        - Stem cell niches in other organs, e.g. neural, cardiac, skeletal

Module I Objectives Continued

- Trafficking of stem cells
- Mobilization of stem cells
- Phenotypic differentiation of stem cells

- Understand principles of
  - Adult stem cells
    - Blood: Hematopoietic stem cells (HPC), endothelial stem cells (EPC)
    - Bone marrow: Hematopoietic stem cells, endothelial progenitor cells, mesenchymal stem cells.
    - Brain
    - Fat
    - Liver
    - Muscle
    - Pancreas
    - Umbilical cord
    - Fetal derived cells: amniotic fluid, chorionic villi, placental
  - Induced pluripotent stem cells
    - Autologous cell transplantation
    - Allogeneic cell transplantation
    - Issues of immune compatibility
    - Regeneration of tissues
    - Development of new cellular therapies
- Review principles of regenerative medicine – current and future perspectives
  - Rationale of cell based therapies
    - Autologous cell based therapies
    - Allogeneic cell therapies
    - Immunosuppressive properties of mesenchymal stem cells
    - Commercialization of cell therapy
    - Current issues in stem cell based therapies
    - Basics of cell therapy applications for:
      - Neural
      - Cardiovascular
      - Orthopedic
      - Metabolic and secretory
      - Hematopoietic and autoimmune

Module II: The Biological Basis of Stem Cells in Regenerative Medicine

This module provides the biological basis of stem cells in regenerative medicine, including epithelial to Mesenchymal transition (EMT). It also covers mechanisms of tissue regeneration and type of cells involved, the chemical/physical induction of repair and regeneration, how cells change their phenotype, and somatic cloning and epigenetics.

Objectives:

Upon completion of the module, the participant will:

- Understand the biological basis of stem cells in regenerative medicine
  - Epithelial to Mesenchymal transition (EMT)
  - Cellular mechanisms of the EMT

Fellowship (Stem Cell) Module Overview

Module II Objectives Continued

- Changes in cell to cell adhesion
- Cell to extracellular matrix adhesion
- Stimulation of cell motility
- Molecular control of the EMT
- Signaling molecules
    - TGF-ß pathway
    - Wnt pathway
    - Signaling by RTK ligands
    - Notch pathway
- ECM signaling
- The EMT transcriptional program
- Cell-ECM interactions during regeneration, e.g. wound healing
    - Adhesion and migration
    - Proliferation
    - Differentiation
    - Apoptosis
- Molecular basis of pluripotency in principles of regenerative medicine

- Understand the mechanisms of tissue regeneration and type of cells involved
    - Compensatory hyperplasia
        - Hepatocytes
        - Beta cells
    - Activation of adult stem cells
        - Epithelial stem cells
        - Digestive tract
        - Respiratory tract
        - Interfollicular epidermis
        - Hair follicle
        - Neural
        - Kidney
    - Endothelial stem cells
        - Bone marrow
        - Capillaries and venules
        - Epicardium
    - Hematopoietic stem cells
        - Bone marrow
    - Mesenchymal stem cells
        - Bone marrow
        - Periosteum
        - Endosteum
        - Dental pulp
        - Adipose tissue
        - Connective tissue
    - Muscle stem cells
        - Skeletal muscle
        - Myocardium
- Understand the chemical/physical induction of repair and regeneration
    - Topical agents for flair repair
    - Regeneration templates
    - Soluble factors

Module II Objectives Continued

- Natural regeneration promoting and inhibitory molecules
- Small molecules

- Understand how cells change their phenotype
  - Stem cells
  - Plasticity: transdifferentiation and transdetermination
  - Cell fusion
  - Cell phenotype
  - Control of gene activity
  - Extrinsic control
- Understand basic principles of somatic cloning and epigenetic reprogramming
  - Short history of cloning
  - Technical aspects of somatic nuclear transfer
  - Success rates of somatic cloning
  - Basic epigenetic mechanisms
  - Application of somatic nuclear transfer

Module III: The Principles of Stem Cell Tissue and Organ Repair: Bench to Bedside

This module focuses on the principles of cells and tissue development, including genetic approaches in human embryonic stem cells and their derivatives. A variety of cells are discussed, including induced pluripotent stem cells, stem cells from amniotic fluid and placenta, hepatic stem cells, somatic cells, cancer stem cells and more.

Objectives:

Upon completion of the module, the participant will:

- Understand the principles of cells and tissue development
  - Genetic approaches in human embryonic stem cells (ESC) and their derivatives.
  - Somatic cell nuclear transfer-derived ESC
  - Embryonic stem cells: derivation and properties
  - Induced pluripotent stem cells and their current state of development for reprogramming adult cells to become pluripotent
  - Stem cells from amniotic fluid and placenta
  - Stem cells derived from cord blood
  - Multipotent adult progenitor cells
  - Bone marrow stem cells
  - Hematopoietic stem cells
  - Neural stem cells
  - Mesenchymal stem cells
  - Hepatic stem cells
  - Skeletal muscle stem cells
  - Islet and pancreatic stem cells
  - Retinal stem cells
  - Peripheral blood stem cells
  - Somatic cells: Growth and expansion potential of T lymphocytes
  - Cancer stem cells

Fellowship (Stem Cell) Module Overview

Module IV: Understanding the Principles of Therapeutic Applications of Cell Therapy

This module focuses on principles of therapeutic applications of cell therapy, including biomineralization and bone regeneration, musculoskeletal repair, bone marrow stem cell transplantation, corneal repair, skin therapy and more. Also discussed are regulations and ethics as applied to stem cells, such as research policy and the FDA regulatory process.

Objectives:

Upon completion of the module, the participant will:

- Understand the principles of therapeutic applications of cell therapy
    - Biomineralization and bone regeneration
    - Articular cartilage
    - Stem cell therapy for diabetes
    - Cardiovascular regeneration and neovascularization in adults with heart disease
    - Musculoskeletal repair
    - Hepatocyte transplantation
    - Neurological disorders, e.g. stroke
    - Bone marrow stem cell transplantation for cancer
    - Bone marrow stem cell transplantation for autoimmune disorders
    - Bone marrow stem cell transplantation for marrow aplasia
    - Parkinson's disease and Alzheimer's disease and other neurodegenerative disorders
    - Corneal repair
    - Genitourinary system repair
    - Skin therapy
    - Peripheral nerve regeneration
    - Stem cell therapy for burn injuries
    - Stem cell therapy for baldness
    - Stem cells for retinal repair
    - Endothelial progenitor cells and clinical applications
        - Transplantation of hepatic stem cells
        - Potential applications for cell therapy
    - Stem cells in lung morphogenesis, regeneration and carginogenesis
    - Noninvasive imaging in stem cell therapies
    - Alimentary tract and stem cells
    - Dental tissue regeneration
- Understand principles of regulations and ethics as applied to stem cells
    - Ethical considerations in human tissue engineering and therapies
    - US stem cell research policy
    - FDA regulatory process
    - Issues in US patent law

Module V: Clinical Case Studies of Stem Cells for Blood Disorders and Chronic Diseases of Aging

This module provides an overview of stem cell therapies and their specific applications through case studies. Examples include stem cell therapy for diabetes; cardiovascular regeneration; liver failure; stem cell transplantation for cancer, autoimmune disorders and marrow aplasia; stroke; Parkinson's disease; and more.

Objectives:

Upon completion of the module, the participant will:

- Learn stem cell therapy for diabetes
- Understand cardiovascular regeneration and neovascularization in heart disease
- Learn stem cell therapy for musculoskeletal repair
- Learn stem cell therapy for liver failure
- Learn bone marrow stem cell transplantation for cancer
- Learn bone marrow stem cell transplantation for autoimmune disorders
- Learn bone marrow stem cell transplantation for marrow aplasia
- Understand stem cell therapy for stroke
- Learn stem cell therapy for Parkinson's disease
- Understand stem cell therapy for Alzheimer's disease and other neurodegenerative disorders

Module VI: Stem Cells at the Frontiers of Disease and Aging

This module explores emerging stem cell therapies and their applications for skin therapy, peripheral nerve regeneration, brain injuries, baldness and retinal repair. Other topics include transplantation of hepatic stem cells and potential applications for cell therapy, stem cells in lung morphogenesis and regeneration, and stem cell storage potential for the future.

Objectives:

Upon completion of the module, the participant will:

- Learn skin therapy
- Understand peripheral nerve regeneration
- Know stem cell therapy for brain injuries
- Learn stem cell therapy for baldness
- Understand stem cells for retinal repair
- Learn transplantation of hepatic stem cells and potential applications for cell therapy
- Understand stem cells in lung morphogenesis and regeneration
- Understand stem cell storage potential for the future

Become a Fellow in Stem Cell Therapies

(561) 997-0112

info@a4m.com

www.a4m.com

Certifications

Skin Cancer Certification

Expand Your Career Path in Skin Cancer Diagnosis and Treatment

The world's leading CME primary care skin cancer training program, the Certificate in Primary Care Skin Cancer Medicine, is now available in the United States through the A4M. This three-day workshop is structured to optimize your knowledge in Skin Cancer Medicine and enable you to successfully meet existing and future marketplace challenges. With a consistent course satisfaction rating of over 91% since its creation in 2006, the course continues to exceed delegate expectations.

The certificate course is designed to meet the needs of busy medical practitioners by providing a flexible program of which many of its requirements are conducted in your own time.

Course Includes:

- Online predisposing activities (completed in your own time any time prior to the workshop component)
- A three-day practical workshop
- All PowerPoint slides presented and reference materials
- Online training in dermoscopy (100 image quiz using the 3 point checklist)
- Online assessment to be completed in your own time within three months of attending the workshop segment of the course

Course Objectives:

- Diagnose Skin Cancer
  - Learn how to conduct a unique and methodical head-to-toe examination
  - Differentiate between benign and suspicious lesions
  - Perform various types of biopsies
  - Bill appropriately and optimally for these services
- Treat Skin Cancer
  - Learn basic procedural skills to confidentially and easily excise skin cancers you identify
  - Preparation for more advanced skin cancer excisions
  - Latest in non-surgical techniques including cryotherapy
- The Business of Skin Cancer
  - Workflow management and efficiency in your primary care office
  - Proper coding / billing protocols for your state
  - Patient awareness and communication materials

University of South Florida Master's Degree and Certifications

Name of master's program:
MS in Medical Sciences with a Concentration in Metabolic and Nutritional Medicine

School granting the degree:
School of Biomedical Sciences College of Medicine, University of South Florida School of Medicine (USF)

Credits needed to complete degree:
32 credit hours

Who is eligible for the master's program?

- Anyone who already holds a master's degree in a related field is eligible for this master's program with the University of South Florida
- Those who have graduated in an accelerated program from an accredited medical school inside the United States will also be eligible with the university
- Anyone who holds a BS or BA degree will need special approval with the university
- For physicians who have graduated outside of the United States, one will need to have graduated from a four year medical school to be eligible for this master's program

Requirements:
There will be 11 courses in total that will need to be completed in order to receive the master's degree.

- Modules I-VIII with the A4M are required before applying to USF
- Courses 1-8 from the university will require the student to submit three case histories and to take two examinations.
- Course 9 and Course 10 are independent studies. There is a vast number of offerings that students may choose in order to receive credit for as an independent study. Please see your A4M representative for more details or email mastersandcertificates@gmail.com
- The 11th course is an ethics course

Requirements for each course (module):

- The completion of all eight modules
- 50 hours of web casts with A4M
- Two open-book, online examinations (50 questions each)
- Three case histories (examples of case histories will be forwarded to students)

Upon completion, students are able to turn in their case histories anytime during that semester. Pre-tests will be available online with the University of South Florida's Blackboard system.

Registration:
Students will receive notification by email on how to register for classes with USF.

Access to medical journals:
As long as you are a registered student at USF, you will have access to all major journals.

What if I have already completed the module? How do I receive credit for the course at the medical school?
If students have already completed a module and the university is offering that particular course, they will need to complete two online examinations and three case histories.

Certificate program:
After students have completed four courses (not including Module V, which is the core course), one is eligible to apply for a certificate in Medical Sciences with a Concentration in Metabolic and Nutritional Medicine from the University Of South Florida School Of Medicine, College of Biomedical Sciences. An additional cost for this certificate is a $30 application fee. Upon completion of the master's program, students would then have a certificate and a master's degree in the concentrations of Metabolic and Nutritional Medicine.

Certifications

Comprehensive Weight Loss for the Integrative Physician

In this program you will learn the unique relationship between adrenal dysfunction stress with hormonal imbalance and weight gain plus weight loss plateaus. Participants will recognize and understand the prevalence of adult obesity and the risk factors involved and understand the bio-chemistry of how the body breaks down proteins, fats and carbohydrates.

Requirements:
Completion of FAARFM Modules XIV A, B, C, D
Completion of USF Courses XIV 1, 2, 3, 4
A4M Membership

Brain Fitness

One of the major medical issues that will affect all of our patients is how to maintain memory throughout their life. The Brain Fitness Modules (Module XV: A-D) are a group of four modules that will give you new skills to help patients prevent memory loss along with treat patients who already have cognitive decline.

After the completion of the four modules and course work, you will receive a certificate from the University of South Florida College of Medicine in Brain Fitness. It is the only certification of its kind from a major medical school in this up-and-coming field. Top doctors in the field of cognition from major medical schools around the United States are the faculty.

Requirements:
Completion of FAARFM Modules XV A, B, C, D
Completion of USF Courses XV 1, 2, 3, 4
A4M Membership

Metabolic Cardiovascular Certification

This certification program is very different in that it takes a very basic understanding of vascular medicine from the beginning of vascular biology all the way through to the preventive treatment of cardiovascular disease.
It can literally be applied to any healthcare practitioner from any discipline. It is very scientific—everything's backed up with references and peer-reviewed literature—but it's presented in a way that, no matter what your background, you can take this course and understand it, learn it, and our key is to teach you how to apply the concepts to change the way cardiovascular medicine is being practiced in this country for a better way.

Requirements:
Completion of FAARFM Modules XVI A, B, C, D
Completion of USF Courses XVI 1, 2, 3, 4
A4M Membership

Sports Medicine and Sports Nutrition

This certification program focuses on the "science of eating," including diet programs, recipes and nutrients that help athletes reach peak performance and success. Factors that hinder such success are also reviewed. The program discusses the body's physiological response to exercise, treatments for sports-related conditions, biometrics, eating disorders, the aging athlete and psychology.

Requirements:
Completion of FAARFM Modules XIX A, B, C, D
Completion of USF Courses XIX 1, 2, 3, 4
A4M Membership

Lifestyle Health Coaching

You have a patient who, no matter what medications and advice your office provides them, will not get healthy. Were you giving them the right advice, but it didn't stick? Did they not follow your advice? Maybe it wasn't the advice you gave, but HOW you gave it to them?

Introducing the ALL NEW Lifestyle Certification Program through the American Academy of Anti-Aging Medicine!

This four-course modular program will teach the techniques to properly implement your medical advice and create a change in the overall lifestyle of your patient.

Requirements:
Completion of FAARFM Modules XXIII – A, B, C, D
Completion of USF Lifestyle Health Coaching Courses 1, 2, 3, 4
A4M Membership

Clinic/MedSpa Accreditation

Enroll your facility in the A4M Anti-Aging Clinic/Medical Spa accreditation program. Accreditation of Anti-Aging medical clinics and medical spas serves two primary, fundamental purposes: to assure the quality of the institution and its clinical program, and to assist in the ongoing improvement of the institution or program.

The A4M Anti-Aging Clinic/Medical Spa Accreditation Program features Standards of Excellence that:

- Emphasize your facility's high level of service and safety
- Showcase a broad range of advanced diagnostics and therapeutics available at your clinic or medical spa
- Encourage patient education and empowerment
- Demonstrate your facility's compliance with the highest governing operational standards of Professional excellence
- Enjoy the enhanced visibility and patient volume thanks to A4M Internet referrals

For more information on the Clinic/MedSpa requirements, please email info@a4m.com or call (561) 997-0112

Notes

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The Future of Medicine Today

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