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MARCO's "AETHER" Pronounced "Ether"
Healthcare & Radio in One Medium
The Medical Amateur Radio Council

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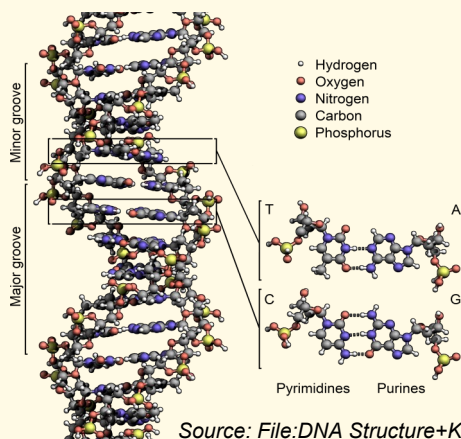
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Past, Present and Future Edition

Medical and Dental Technology are changing rapidly with advances in science. While other professions such as IT have a half-life of usable knowledge much shorter than health care, those of us still treating patients or doing health-related research have a challenge of keeping up with the new computer infused science based and rapid occurring advancements in our fields of expertise.

This edition strives to foster a dialogue of health care related topics of the past, present and those on the horizon. We encourage members to write in with submissions for the *Aether*, that capture your perspective of topics of the past that are foundational to progress in health care but forgotten or under appreciated.



Source: File:DNA Structure+Key+Labelled.png NoBB.png - <https://en.wikipedia.org>, see <https://en.wikipedia.org/wiki/DNA>

The initial 13 year-long effort to sequence the human genome was declared complete in 2003. The billions of codes and associated building blocks (segments) is renewed in analysis through advances in technology, moving us on the path toward understanding the meaning and purpose of its content. Is this a new era of biologic understanding, a basis for new treatments from uncovering a manual for human life? See page 2 for a primer, additional discussion, and a link to a *Grand Rounds on the Air* discussion on the subject as to whether our grey matter can solve the dilemma of the human genome's dark matter.

To fully understand the human genome, what philosophical, theoretical, ethical, moral, and theological considerations, and risks, will arise as advanced techniques accelerate this exploration aided by quantum computing and the application of Artificial Intelligence?

Read pages 4-5 to learn about an antiquated material and technique for producing dentures.

While part of dentistry's past, its story provides valuable insight into development that meets the needs of individuals and society.

Since the technique discussed in this article fell from favor, other generations of materials have replaced traditional dentures. Implant supported or full implant replacement prostheses, have become the contemporary gold standard.

Prosthetics replacement of teeth continues to transition from analog to digital techniques through [CAD-CAM](#) solutions. We could eventually have a biomimetic solution ([replacement tooth buds](#)), a dream solution courtesy of advances in understanding the genome and processes in development.

UNITED STATES PATENT OFFICE.

NELSON GOODYEAR, OF NEW YORK, N. Y.

IMPROVEMENT IN THE MANUFACTURE OF INDIA-RUBBER.

Specification forming part of Letters Patent No. 8,075, dated May 6, 1851.

To all whom it may concern:

Be it known that I, NELSON GOODYEAR, of the city, county, and State of New York, have invented a new and useful Improvement in the Preparation and Manufacture of Caoutchouc of India-Rubber; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in so compounding caoutchouc with other substances that the composition thus formed, when subjected to the heating or curing process described in the patent of Charles Goodyear, dated June 15, 1844, and in the reissue of said patent, dated December 23, 1849, will form a hard stiff substance hitherto unknown. The need of some such substance in several branches of the india-rubber manufacture first called my attention to the subject, and experiments were commenced by me for the purpose of ascertaining whether caoutchouc could not be so treated as to be rendered comparatively hard and stiff. My efforts were, after repeated trials, at last successful, and the result, so far as then ascertained, was communicated in a caveat filed in the Patent Office and dated December, 1849. Further experiments made by me since the filing of that caveat have confirmed the entire success of my invention.

THE GOODYEAR DENTAL VULCANITE CO., AND THE RUBBER PATENTS.

The following letter, which explains itself, we take from *Items of Interest* for January.

WASHINGTON, D. C., Jan. 3, 1881.

T. B. WELCH, M. D. Dear Sir: Your esteemed favor of 29 ult. to hand, I am glad that you wrote to me, because I believe that I am better acquainted with all the points of the rubber patents, their history and the litigations about them, than any other dentist in the country. This knowledge has been gained from a persistent fight against the Cummings' patent (which I have always believed to be a fraudulent one) for sixteen years past. This sixteen years fight has crippled me seriously in my finances and practice, but I have as an offset two facts to console me: 1st. That my resistance to the unjust claims of the Goodyear Dental Vulcanite Company has caused them to expend not less than \$100,000. 2d. And more important, that in this sixteen years fight I have collected and am in possession of sufficient material in the shape of evidence, etc., to enable me, if properly backed and assisted by the profession, to prevent the G. D. V. Co., getting an extension of the Cummings' patent by special act of Congress or saddling us with the Herring patent.

The Human Genome. A Bob Currier Grand Rounds on the Air topic

The topic for The *Grand Rounds on the Air* net on April 16 2023 was Human Genome, as presented by Jay AA4FL and Harry WB9EDP. [Click to listen the a recorded audio stream](#) of the net. The following material and the links contained are the reference the presentation was based on.

[The Mystery of the Human Genome's Dark Matter, by David Cox, 12th April 2023](#)), and more....

Continued from page 1..., When the initial decoding of the human genome was accomplished in 2003 it was thought that the majority of the coding would consist of instructions for making proteins, the building blocks of all living organisms. "These perform a bewildering range of roles within and between our cells. With over 200 different types of cells in the human body, it seemed to make sense that each would need its own genes to carry out its necessary functions. The appearance of unique sets of proteins were thought to have been vital in the evolution of our species and our cognitive powers."

Further analysis has revealed that **less than 2%** of the **three billion letters** of the human genome are dedicated to proteins. "Only around 20,000 distinct protein-coding genes were found to exist in the long lines of molecules known as base pairs that make up our DNA sequences. Geneticists were astonished to find that humans have similar numbers of protein-making genes to some of the simplest creatures on the planet. Suddenly the scientific world was faced with an uncomfortable truth: perhaps much of our understanding of what makes us human was actually wrong?" Doing starting to explore answers just lead to an unending cascade of new questions, one beyond our ability to solve?

The **remaining 98% of our DNA** has become known as dark matter, or **the dark genome**. We have not determined its meaning or purpose. Is this **junk DNA**, the leftovers of broken genes from evolution? How do we determine this? Could the 2% portion of the genome dedicated to proteins be our hardware and the 98% part be the software that makes it work? Thus, is dark matter's function to regulate the decoding process, or expression, of protein-making gene? Can it evolve in response to the lifelong environmental pressures our bodies face, including diet, stress, pollution, exercise, lack of sleep, etc.?



With such a complicated sequence of billions of codes how can humans evaluate the codes for segments of meaning? Is discovery desirable, providing worth exceeding the creation of risks? Can our evolving massive computing power act to uncover the complexities to [DNA sequencing](#) using the concept of massively parallel processing, also called [next-generation sequencing \(NGS\)](#) or [second-generation sequencing](#)? Can looking at the genome of different species and doing full analysis and comparisons in regard to the potential evolution development patterns?

What are [DNA transposons](#), DNA sequences, sometimes referred to "jumping genes", that can move and integrate to different locations within the genome? If present in our DNA how did they get there and what do they represent?

Assuming we can determine what the footprint of life is how would we use it? Would we use it unselfishly for the benefit of humanity to create new drugs, genetic based treatments, etc.? Alternatively, would our discoveries be used for nefarious purposes, changing the nature of humans as we know it, genetically engineering changes not for the common good and disturbing a divine plan for humanity? One might argue that we were given the gift of critical thinking to that end, but is that circular logic substantiating an answer for a ill-conceived question? [Please listen to the recorded audio stream from our on the air discussion](#) and follow-up with additional questions submitted through our google group marco-ltd@googlegroups.com.

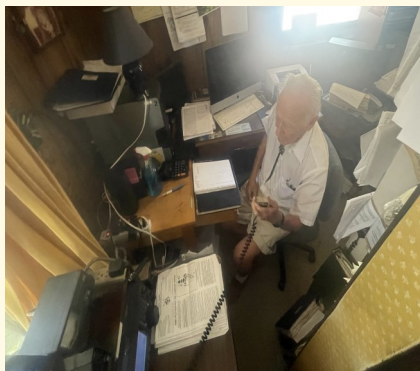
The following online wiki background material with links can be used to explore the details behind the concept of the human genome to the level of inquiry you would like to pursue.

It states that "The [human genome](#) is a complete set of [nucleic acid sequences](#) for [humans](#), encoded as [DNA](#) within the 23 [chromosome](#) pairs in [cell nuclei](#) and in a small DNA molecule found within individual [mitochondria](#). These are usually treated separately as the nuclear genome and the [mitochondrial genome](#).^[2] Human [genomes](#) include both protein-coding DNA sequences and various types of [DNA that does not encode proteins](#). The latter is a diverse category that includes DNA coding for non-translated RNA, such as that for [ribosomal RNA](#), [transfer RNA](#), [ribozymes](#), [small nuclear RNAs](#), and several types of [regulatory RNAs](#). It also includes [promoters](#) and their associated [gene-regulatory elements](#), DNA playing structural and replicatory roles, such as [scaffolding regions](#), [telomeres](#), [centromeres](#), and [origins of replication](#), plus large numbers of [transposable elements](#), inserted [viral](#) DNA, non-functional [pseudogenes](#) and simple, [highly-repetitive sequences](#). Introns make up a large percentage of [non-coding DNA](#). Some of this non-coding DNA is non-functional [junk DNA](#), such as pseudogenes, but there is no firm consensus on the total amount of junk DNA."

Rambling Around with Warren Brown, KD4GUA

TURNING BODIES INTO SOIL—human composting—*what is it?*

information from an April 21, 2023 article in [“The Week” magazine](#)



It is an environmentally friendly way of burying people, in which human remains are turned into rich soil. (*Also known as natural organic reduction*), the process takes roughly two months to decompose a body, producing soil which loved ones might use to plant flowers, vegetables, or trees. In 2019, Washington became the first state to allow human composting and hundreds of people have chosen this means of disposing of their remains. Oregon, Colorado, Vermont, and New York followed with their own legalization. California plans to allow human composting by 2027. As urban cemeteries around the world near capacity, cremation rates have soared but many people concerned about climate change and the environment don't want these incinerated remains to release

hundreds of pounds of carbon dioxide and toxic chemicals. A 2022 survey by the National Funeral Directors Association found that 60% of Americans are open to “green” end-of-life arrangements.

Are burials still commonplace? Not nearly to the extent it was just a few years ago. In 2021, just 37% of Americans were buried, compared with roughly 90% in 1980. Many observant Christians, Jews and Muslims still wish to be buried, in keeping with tradition and religious teachings. But for many people burial is growing less and less practical. A casket burial costs about \$8,000 on average, and a burial plot can cost thousands of dollars more. In crowded urban areas like New York City, a plot can cost up to \$1 million. Cities are running out of cemetery space, forcing people to be buried hours away from where they lived. Acute cemetery plot shortages are occurring in crowded areas throughout the world as available land can't keep pace with the number of people dying every day.

What about cremation? It is increasingly popular—usually costing \$ 1,000 to \$2,500. But incinerating a body uses enough fuel to fill an SUV's gas tank, and total cremations in the U.S. release about 360,000 metric tons of carbon dioxide every year. During the pandemic Los Angeles was forced to suspend air pollution rules because of the surging demand for cremating Covid victims. Cremations also release carbon monoxide and sulfur dioxide into the atmosphere, plus vaporized mercury from tooth fillings accounting for about 16% of total mercury emissions, according to the UN.

How are bodies composted? A corpse is dressed in a biodegradable gown, typically made of cotton, and placed in a reusable, closed steel cylinder that's packed with biodegradable materials such as wood chips, alfalfa, and straw. Air is pumped into the closed vessel and microbes degrade the body and cause the vessel to get hot, with vents filtering the resulting gasses. There are billions of microbial, living things in our digestive tracts to help in the process...When our life ceases the life of those microbes does not cease.

After about a month, workers sift out medical implants—such as pacemakers and hip replacements—and pulverize remaining bones. The remaining soil is left for another few weeks to settle, then it can be donated or returned in sacks to families to see where they see fit.



Are there obstacles? Yes. The Catholic Church has said that composting treats human remains as a “disposable commodity;” arguing that its “more appropriate for vegetable trimmings and eggshells than for human bodies.” Other Christian, Jewish and Muslim denominations have also expressed opposition. There are philosophical and emotional objections as well: For decades the funeral industry has promoted the idea that expensive burial can protect loved ones from decomposition through embalming, sealed caskets, and even concrete vaults. Composting is a challenge for this concept, and embraces “dust to dust” on an accelerated timeline. It costs more than twice as much as cremation, running from \$5,000 to \$7,000—about the same as burial. Availability is also an issue: For now, at least, U.S. human composting centers don't have close to the capacity to process a significant number of bodies.

What are the advantages? The impact on the environment is dramatically lessened. Every year, U.S. casket burial uses 30 million board feet of wood and nearly 2 million tons of concrete, steel, and other materials. They introduce 5.3 million gallons of embalming fluids such as formaldehyde, methanol, and ethanol into the earth each year. People who choose composting and other green alternatives—such as burials without a coffin—say they like the idea of returning to nature after they die. “I've always wanted to be a tree,” said one fellow. The idea of having my family sitting under my shade one day, brings a lot of joy.”

Anthropologists say burying the dead is one trait that distinguishes humans from other apes. For some, cemeteries offer a place to keep families close and pay respect to distant ancestors. But many space-squeezed cemeteries are questioning whether anyone is really visiting the graves of people who died in the 19th century. In some countries it is common to remove remains from a specific grave site to a communal area after 50 years or so. At an overcrowded cemetery in Jakarta Indonesia, as many as six bodies, usually from the same family, can be stacked one on top of another in the place previously reserved for one body. In contrast soil from human composting can be scattered like the ashes from cremation, but families can also create a different kind of memorial—like planting a tree over their loved ones remains...a solution rooted in esthetics and ecology.

Vulcanite (vulcanized rubber): 19th and Early 20th Century Dental Technology

By Jay Garlitz DMD, AA4FL, Adjunct Clinical Associate Professor, Division of Prosthodontics, UF College of Dentistry

Sources: [British Dental Association Museum](#), [University of the Pacific](#), [University of Toronto Libraries](#)

Introduction to [Vulcanization](#) in Dentistry



What do rubber, shoes and dentures have in common? We must look to the past to make the connection.

Technologies come into favor and are replaced for many reasons, often displaced by newer techniques and materials that offer improved results. Profitability and efficiency are a factor for prosthetics of great need, such as denture replacement of missing oral structures (when teeth are removed and their supporting bone is lost the cheeks and lips lose cosmetic facial support as well).



[Creative replacements for missing teeth](#)

Vulcanization of rubber, as developed in the 1840's, in tandem with porcelain teeth with retentive pins, allowed dentures to be brought to the masses. Prior to this process denture construction was a high priced prosthetic luxury, often with construction in ivory and gold. Not that these dentures were perfect, there were many disadvantages that as being foul smelling if not processed perfectly, lost flexibility, and a dark gum color that is not ideal for cosmetic replacement. For almost a century it still remained a valuable and frequently made construct, until dental acrylics became a better option for the portion of the denture that sat on the edentulous dental ridges and held the prosthetic teeth in their desired position.



The laboratory equipment and supplies needed for construction

In 1843 American Charles Goodyear discovered how to make this flexible rubber. The family was not finished with entrepreneurship as his brother

Nelson patented an improved manufacturing process in 1851 to produce hard rubber. In the United States in 1864 the Goodyear Dental Vulcanite Company was founded. Unfortunately dentists had to obtain an expensive license to use the material, also requiring the payment of a royalty for each denture made. Many dentists bought licenses but not without objection, as the licensure was protested by the dental profession and the company prosecuted non-compliant dentists. The dissatisfaction became fatal to Goodyear's financial director Josiah Bacon. He was murdered, shot to death by a dentist in 1879.

Continued from page 4

The Goodyear patents lasted 25 years and expired in 1881. As a result the process of the construction of dental vulcanite prostheses reduced in price resulting in even more affordability, accelerating its use world-wide.

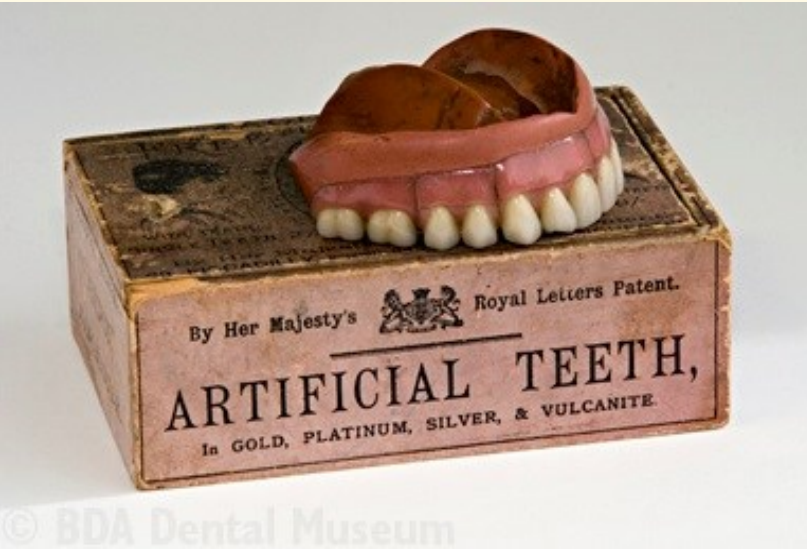


Figure 5: 2D Imaging coils

I was fortunate to have seen one vulcanite denture in my entire career, CIRCA early 1980's. The patient had their denture for over 50 years and came in due to its loss of function. The prosthesis had outlived its usefulness and was retired in favor of more modern materials.

The material was not well known in dentistry at the time and the owner of the dental laboratory that produced my patient's dentures was intrigued by the process. A patient of mine had a late father who was a dentist in St. Augustine FL, and she had given me his collection of dental texts. There was a laboratory technique book for vulcanite dentures within the tomes! Discussing that text made for an interesting and unique visit with my lab owner, discussions about techniques and materials lost to time.

The hope in offering this article for review by MARCO members is that our membership will submit articles about their experiences with materials and procedures from the past that are now a lost art or one supplanted by the technology of today. While we have discussed technology in medicine and dentistry in past editions of the *Aether* (click on images to review these editions), what is missing is the context of how they compare to your approaches and solutions of the past, an area our readership can be enlightened to through your submissions. Submit material with the text in a word file or the body of an e-mail to aether@marco-ltd.org

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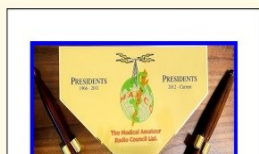
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Technology in Medicine

The health professions have experienced technologic innovations during our professional careers that have impacted the business and patient care aspects of the careers we are dedicated to. These changes can be daunting to deal with as the learning curve is often steep and the half-life of information reduces with each advance in information technology, and in computer components, the programmed brains of the innovations. It is a challenge to be a macro processor in the age of microprocessors! Each generation subsequent in innovation is native to the young. Technology for those of us in mature stages of our careers is more complex. We are challenged by a significant need for change and adaptation to the new normal. Ham radio has seen many of the same changes and we benefit from the familiarity with computer technology as we explore new radio horizons. This edition starts an ongoing dialogue on the subject. We hope members will continue with discussion in our Google Group and on our nets.

The technologies explored in this edition of the *Aether* are a sample of those underlying evolution in medical research, surgical treatment and interventional care. The landscape of the health related fields has undergone rapid change in recent years with an ever connected world and what traditionalists may feel are intrusions from external sources originating in industry, and the marketplace.

The presentation here is intended to probe your interest and initiate a dialogue. The reader is offered a choice in what information you would like to pursue, in contrast to



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Education, Science and Technology in Dentistry

The October 2021 edition of the *Aether* focused on technological innovations in Medicine that have recently impacted patient care. With the assistance of contributing editor and MARCO member Dr. Jack Spitznagel, KD4IZ, this edition extends the discussion to Dentistry, as to the changes in dental education and technology that is transforming dentistry from an oral art to a dental physician. This edition initiates a dialogue on the subject where the reader can choose their level of engagement on each area discussed, **self-selecting links for additional information highlighted by underlined words in blue (hypertext)**. We hope members will continue with discussion about this subject on our Google Group through questions directed to AA4FL and KD4IZ. The Feb. 12th session of the MARCO Digital Voice Net and the Feb. 13th session of Grand Rounds on the Air will explore this evolution of dental education and science in more detail, including the effect of COVID-19 on patient care and dental offices. See page 7 for DV net log-in information.

Dental school is most often a four year curriculum. Upon earning their dental degree most dentists (about 79%) practice as generalists. Historically dentists are solo practitioners (50% in 2019), or in small group practices. Demographics of the dental workforce can be found at this [link: https://www.aad.org/press-releases/2021/11/11/aad-releases-2021-11-11](https://www.aad.org/press-releases/2021/11/11/aad-releases-2021-11-11). General dentists as primary care providers have baseline training in the treatment that dental specialists provide. When they chose to render care in a specialty area one must satisfy a standard of care that meets that of a specialist. The need for generalists to offer care within some of the following fields for less complicated cases is amplified by practicality due to demographics, insurance, and the cost of care.

February is a significant month for dentistry, National Children's Dental Health Month. The month focuses on getting children off to a great start with their oral health and involves many members of the dental team; an educational outreach to children and their parents. Dental team members volunteer for school visits to speak to students, usually 1st graders, a focus as permanent molars start to erupt around that age. Teeth with the highest rate of being lost prematurely. Many dentists participate in February in the American Dental Association's pro-bono care effort, Give Kids a Smile. Even veterinary offices get in the spirit with many offering February dental specials for the canine

<https://marco-ltd.org/?p=1821>

MARCO Nets, 2023 updates

Weekly MARCO Medical Grand Rounds on the Air HF Net

The Medical Amateur Radio Council (MARCO) conducts its weekly *Grand Rounds on the Air* net on 14.342 MHz. (1500 UTC summer, 1600 UTC winter). Health Care professionals check-in to the net and engage through moderated (net directed) roundtable discussions on topics of interest, and have occasional continuing medical education (CME cat 2) presentations. Those present include physicians and dentists from many specialties, pharmacists, nurses, researchers (PhDs), EMTs, and members who serve in other health related careers. **All members of the amateur community and public are welcome to listen and submit questions** to the discussion panel using the AIM messaging feature in the freely available netlogger program (netlogger.org), aided by using the [livesteam of the net](#). This facilitates country and worldwide engagement of participants and listeners while negating the limitations of HF propagation.

MARCO Grand Rounds on the Air



Live audio stream and archives
WWW.MARCOAUDIO.NET

Founded in 1966, MARCO's mission is to promote goodwill and fellowship among amateur radio operators who are professionals in the healing arts or have an interest in medicine, dentistry, allied fields or in medical education and industry. On-the-air operation is an integral component of MARCO activities and is conducted for the purpose of discussion through exchanging medical and technical information of a non-commercial nature while conducting such dialogue as a public service of interest to the entire amateur radio community.

Livestreams and Net Recordings

Our Radio-Internet Coordinator Chip Keister, M.D., N5RTF, New Orleans, LA...[livestreams our net online](#). Check into our nets and earn CME. For times when propagation is poor when you would benefit from audio from another receiver, if you are away from your radio, in a skip zone, or unplugged due to thunderstorms, join the MARCO CW net and Grand Rounds by live [internet streaming audio](#). These are recorded to [listen in later to the online archive](#).

To Listen:

1. Use a browser to go to the following web page which has a player app and **links to the audio stream and archive**: www.marcoaudio.net.
2. The second way is to manually enter <http://marcoaudio.ddns.net:8011/stream> into a standard music player on computer, phone, or portable device **while the net is in progress**.

Feel free to share these links with anyone, MARCO member or not. No login or password is required. There is room for 100 listeners at a time. Comments are appreciated.

Chip N5RTF

MARCO International DV NET

The **MARCO International DV (Digital Voice) net** meets on Sundays at 1400UTC. It is the first of three Sunday morning nets and serves as the first place of roundtable discussion for the *Grand Rounds* topic of the day, while affording amateur radio operators without HF radio equipment, antennas, or those with technician licenses, and members in Asia (time of day), to participate while developing the topic for the HF net later in the day.

We have chosen to use the [QuadNet Array](#), an IRC or Internet Chat Facility that acts like a **universal translator between different digital modes** that allows hams who identify by callsign to connect with other users of digital radios world-wide through interconnected reflectors and talk-groups. See their website for more details, including how to connect, within the <https://www.openquad.net/> webpage.

This net applies the same format of, and augments MARCO's HF-based voice nets, providing a mechanism for members and guests worldwide to join discussions without the limitations of HF propagation, antennas, or equipment. Since operators can participate on radio while mobile through digital hotspots or repeaters, or at a fixed location by USB dongles on a computer, the net is a versatile opportunity for involvement for both newly and seasoned amateur radio operators.

Contact [Jay AA4FL](#) for additional details needed for implementing equipment needed for participating and protecting your neural connections, great involvement for your soul and health!

MARCO CW NET

The Bob Morgan Memorial Net

Our CW net is held every Sunday one half hour before the *Grand Rounds on the Air* net, at 09:30 central time, currently 1530 UTC, on 14.140 MHz. Net control is Chip N5RTF. The net is named after the late MARCO member Dr. Bob Morgan, VE3OQM.

At times in the in the past the net was on the same frequency as the *Grand Rounds on the Air* in an effort to hold the frequency for the voice net to be in the clear at the top of the hour. The net today means so much more to MARCO...

You are invited to participate. With radio license issuance in the US dropping the morse code requirement there are many members who have not had experience with CW. Our net is a great way to gain CW proficiency.

There are many advantages to learning morse code, a yes-brainer. There is increasing evidence that not only GM plasticity but also changes in white matter are important in the context of learning processes, see <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5526915/>.

Use CW through the MARCO net to keep those neural connections intact and resist the aging process! Links to other sources follow. Add to the discussion by posting to the MARCO google group: marco-ltd@googlegroups.com

[ARRL resources for Morse Code](#)


[Morse Code Instruction Learning, YouTube Options](#)

[Code Buddy Volunteers](#)

MEMORIES OF YEARS AGO IN MARCO

Our History Book

Twenty Five years ago in MARCO—June 1998



The
MARCO
NEWSLETTER

Official Publication of the Medical Amateur Radio Council, Ltd.
Robert Currier, M.D., WB5D, President
Bruce M. Small, M.D., KM2L, President-Elect
Robin J. Staebler, M.D., NN3L, Secretary
Alfred E. Greenwald, M.D., WA2CBA, Treasurer
Edward R. Briner, D.M.D., WA3TVG, Editor

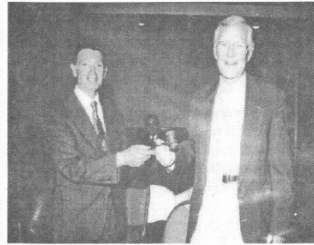
Vol. XXII No. 1 June - July, 1998

ANOTHER SUCCESSFUL ANNUAL MEETING

The officers and directors of MARCO held their 32nd annual meeting at Dayton, Ohio, in conjunction with the Dayton Hamfest, on May 15, 16, and 17, 1998. The meetings were held at the Holiday Inn North this year, and according to reports by those attending, were quite successful.

The majority who attended arrived on Thursday, but inasmuch as there was no MARCO activities scheduled that day, most of those present were able to meet, eat, and enjoy one another's company.

MARCO's activity began Friday morning, with a continental breakfast, followed by a meeting of the general membership at 8:30 am. In attendance was Ira Wexler, M.D., W3HEF, Robert



Outgoing president Dr. Ira Wexler, W3HEF (left), passes the gavel to incoming president Dr. Robert Currier, WB5D

BAND CONDITIONS IMPROVING RAPIDLY

[Click for the full edition](#)


- The President of MARCO was Bob Currier, who our *Grand Rounds on the Air* are named for, and whose call WB5D is now MARCO's club call sign.
- The President-Elect was Bruce Small KM2L, who is now our immediate Past-President after agreeing to serve a second term.
- Band conditions were a topic on the first page, specially improving band conditions for the 40m net that they held.
- A segment on Congestive Heart Failure was included, referring it to a cancer of Cardiology. Two different types with vastly different and medication regimen approaches were discussed.
- An article about MediShare chronicled a recently complete project in Kenya. MARCO supplied a Landrover ambulance to S. Luke's hospital in Kalolini.
- View the officers listing on page 3 to gain perspective on our history and who have been, and still are engaged in MARCO activities 25 years later.

Ten years ago in MARCO—June 2013

MARCO's "AETHER" Pronounced "Ether"
Medicine & Radio in One Medium

Official Publication of the Medical Amateur Radio Council **81st**
Edition
2000-2013

President: Mary Favara, M.D., AE4BK
Past President: Linda Krasowski, RN, KE5BQK
Pres. Elect: Jeffrey Wolf, M.D., K6JW
Secretary: Danny Centers, EC, W4DAN
Web Master: Bruce Small, M.D., KM2L
Assurer: Danny Centers EC, W4DAN
Silo-Internat: Chip Klotzer, M.D., N8RTF
MediShare: Arnold Kalan, M.D., WB8OJB
News Editor: Warren Brown, M.D., KD4GUA



A non-profit Corporation, founded in 1965, privately supported for the public good and dedicated to the advancement of Medicine through Amateur Radio.

Web Site: <http://www.marco-ld.org>
Internet address: warrenbrown@aol.com

Marco Blogsite: marco-ld.blogspot.com
"listserve": <http://g00g1e00ps.com>

Vol. XXXVIII, (38th year), Edition #81 since Year 2000), June 2013 P.O. Box 127, Indian Rocks Beach, FL., 33785-0127

WARNING—

THE AGING SKIN

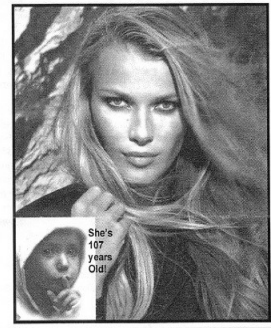
...THIS IS COMPLICATED!

WOMEN HAVE LIGHTER SKIN THAN MEN SINCE THEY REQUIRE MORE VITAMIN D & PRODUCE LESS BODY OIL EARLIER THAN MEN AFTER THE MENOPAUSE RESULTING IN DRIER SKIN. LOSS OF SUBQ FAT WITH AGING MAKES ONE MORE SUSCEPTABLE TO HYPOTHERMIA.

Maintaining healthy skin is simple: You need to protect your skin from the sun and not grow old. Do not visit tanning salons. Try to avoid the sun between 10 am and 3 pm. Wear protective clothing and sunglasses with UV 400 lenses. Put on sunscreen lotion before going out in the sun and reapply as needed. Always use products that are SPF (sun protective factor) 30 or higher. And choose products that provide both UVB and UVA protection. If your skin is dry, use a humidifier at home, bathe with a soap less often (use a moisturizing body wash instead) and use a moisturizing lotion. Apply the best one—Vaseline jelly to the face every night.

For early signs of aging, treatments such as using retinoids, vitamin C, and alpha hydroxyl acids may be enough. Chemical peels, dermabrasion, or laser resurfacing may be an option for moderate to severe facial sun damage. Deeper facial lines may be treated with botulinum toxin or fillers, including hyaluronic acid injections, your own fat, and Gore-Tex implants. Some people may opt for surgery, such as a facelift, brow lift, or cosmetic surgery on the eyelids. Whether you do any of these things, and how much you do, is a personal choice.

Wrinkle Treatments...abound for "crow's feet" and fine lines, but there's plenty of confusion about what works and what's hogwash. Three treatments definitely rejuvenate skin: topical retinoic acid. (brand names



"I've been "SANDBLASTED"!"

[Click for the full edition](#)

- Warren KD4GUA's feature article was about aging and skin. Are there differences in this regard between men and women? Click on the newsletter for the full edition's article...
- On page 2 N4DOV, a retired plastic surgeon, continues and elaborates on Warren's topic, expanding about treatment to counteract the ageing of skin and the types of providers who are involved. David lives in S Florida and you can imagine the need for treatment is great there.
- There was a follow-up to a *Grand Rounds on the Air* session on page 6, on the topic of Non-Steroidal Anti-Inflammatory Drugs.
- To see what happened in MARCO 35, and 30 years ago before 2023, read Bruce Small's KM2L columns written 25 and 20 years prior to this 2013 publication. In tandem with this edition's columns you will be on the path toward being a MARCO historian.

Membership Committee News

The membership committee requests your assistance in keeping MARCO's database up to date so all members data is current. We have tried a different approach this year regarding annual billing, making renewal self-initiated. In addition, we are a volunteer organization and processing renewals can be a huge task, potentially to be reduced by your compliance with the suggestions that follow.

With that in mind we sent group messages late last year about making dues payments, rather than waiting for emailed invoices. Our trust has been rewarded with a nice response, with many of you renewing, and extending your membership beyond your renewal term. (longer renewals are the best compliment you can offer and allow for reduced workload by our volunteer staff).

Membership dues, for new joins and renewals, are processed by email. Our online form allows you to renew and extend your membership for 1, 2 or 5 year terms (pull down list), with longer terms reducing the cost per year. There is a unified dues structure for associate and regular members. Please complete the entire form just as you were a new member as this assists us with keeping your information current in our membership database (contact phone number as well). Additional explanation is located on page 13 of this edition of the Aether.

MARCO encourages members to consider a five year membership of \$100. This reduces your yearly cost of membership and simplifies our annual billing by our all volunteer staff. **Existing members can choose to extend your membership at any time. [Click for the online application](#) and if desired, select the five year term from the pull down list.**

Once submitting the online form **if you have a problem with the form appearing not to submit** (spinning icon, known to occasionally occur), email the issue to Jay AA4FL at secretary@marco-ltd.org to confirm it went through. The membership committee will receive your online application and process an invoice to be sent by email. Once you open the invoice use buttons at the top left are present to credit card payments (Stripe), and for PayPal. If you prefer to pay by mail list such on your application.

Thank you for your Membership!

In Service to MARCO and 73,

Jay AA4FL, and *Alanna* K4AAC

MARCO OFFICERS, 2023-2024

Contact info— mail and e-mail addresses are on QRZ.com.
E-mail is preferred, phone contact info is provided for the President and Secretary only.

President: Bernie Krasowski, KD5QHV
P: 915.449.0234

President-Elect: Barry Rabin, M.D., WB1FFI

Secretary: Jay Garlitz, D.M.D., AA4FL
C: 352.246.6003

Treasurer: Diane Rodman, R.N., NM2K

Assistant Treasurer: Charles Lind, M.D., N8CL

Web Master: Dave Lieberman, KT8E

Radio-Internet Coordinator: T. "Chip" Keister, M.D., N5RTF

MediShare Director: Arnold Kalan, M.D., WB6OJB

Newsletter: Warren J. Brown, M.D., KD4GUA

REGIONAL DIRECTORS:

(1st call district) Don Arthur M.D., J.D., K1DCA

(2nd call district) David Rodman M.D., KN2M

(3rd call district) Keith Adams, M.D., N3IM

(4th call district) Mary Favaro, M.D., AE4BX

(5th call district) Linda Krasowski, R.N., KE5BQK

(6th call district) Paul Lukas N6DMV

(7th call district) Lee Barrett, M.S.E.E., K7NM

(8th call district) Mark Young, M.D., N2OJD

(9th call district) Stu Oserman, M.D., WA9ZPL

(0 call district) Carlyle Rowland R.N., N0ARN

(Dx director) Etsuo Takada, M.D., JA0BXP

DIRECTORS-AT-LARGE:

Bruce Small, M.D., KM2L, Immediate Past-President

Arnold Kalan, M.D., WB6OJB,

Chip Keister, M.D., N5RTF

Jeff Wolf, M.D., K6JW,

Jerry Ziperstein, M.D., N4TSC

AD-HOC COMMITTEES:

Membership—Jay Garlitz AA4FL, Alanna Conder K4AAC,
Michaline Przekop KC9ARP

Grand Rounds Net—Chip Keister N5RTF, Jack Spitznagel KD4IZ,
Jerry K4TSC, Linda Krasowski KE5BQK, Harry Przekop WB9EDP

Historian: Michaline Przekop, KC9ARP

GREETINGS FROM YOUR PRESIDENT

June 2023

Hello MARCO members. Well the dust has settled after the last of the annual meeting attendees departed for home. For Linda and I, it got somewhat quieter, BUT we



enjoyed having guests in town.

Warren and Harry have done a good job getting folks checked in and presenting timely

information during Grand Rounds. I would like to ask two things of the membership:

1. Each and every one of you have knowledge and experiences that others of us do not. Can you prepare a presentation for the members on a subject in your clinical area of expertise? That will allow us to spread presentations around and give the regular presenters a break.

2. In May 2023 MARCO was NOT be in attendance at Dayton/Xenia, the mother lode Ham Fest and membership drive. Because of the fire at Keith's house our information board and associated materials were destroyed. We need ideas on how best to put together a table, presentation device and associated materials/handouts for potential members for the 2024 year. Personally, I'm in favor of a large screen TV, 42," that we might be able to get a MARCO member or someone in the Dayton Club to take control of after the convention and get it back to us on our return in 2025. We can tell him he can use it if he likes and pay him some amount of cash to keep it for us. I was thinking that a computer/PowerPoint type presentation that could run in a loop might be advantageous. If we could get the monitor/TV stored in Dayton the presentation could arrive on a laptop. The program could be tweaked between years with pertinent information, photos etc.

Barry mentioned last Sunday that he had some ideas for his upcoming Presidency and I wish him success with his ideas for MARCO going forward.

With so many computer savvy members we will get some GREAT ideas for both presentations for Grand Rounds as well as ideas for the new MARCO presentation system and what to put on it. I look forward to hearing from you.

For now,

73, *Bernie* KD5QHV



gg60414294 GoGraph.com

Barry Rabin WB1FFI will become our next MARCO President at our 2024 business meeting in Xenia, OH. Put May 16th to 19th 2024 on your calendars and join us

at our annual meeting at [Hamvention!](#)

If you have never been to this mecca of amateur radio you will be amazed at the experience. For those of you who have attended in the past but have not been to the new location in Xenia, make the trip! The new venue is an agricultural fairground with excellent grounds and food. Where else would you expect hams to be at home?

With Mount Rushmore pictured above think about the possibilities of AI enhanced editing. Perhaps in the future we can virtually create our own photo/graphic with MARCO Presidents featured on Mount Rushmore. [See product information such as Adobe Firefly to preview the future that is starting to become available now...](#)

WRITE TO US!

We welcome your comments.
Email aether@marco-ltd.org

Disclaimer: Letters and articles may be edited for brevity & clarity. **All content, including linked unedited member article submissions, and linked online material, are not the opinion of MARCO. The Aether's content is not Medical Advice.** Graphics selected are the choice of the editor and not of MARCO-ltd.

MARCO NET SCHEDULE

<u>DAY</u>	<u>TIME</u>	<u>FREQ.</u>	<u>NET CONTROLS</u>
Any Day	On the Hour	14.342	Hailing Frequency
Sunday	9 AM Eastern	DV QuadNet	Jay AA4FL
Sunday	10:30 AM. Eastern	14.140	CW Net, Chip, N5RTE
Sunday	11 AM Eastern	14.342	Jay, Warren, KD4GUA

MARCO'S CW NET, the "Bob Morgan Memorial Net"
(precedes the Grand Rounds on Air net, meeting on Sundays, 14:30 UTC, 14.140 MHz)

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MARCO Grand Rounds is held Sunday at 11 a.m. Eastern Time; 10 a.m. Central; 9 a.m. Mountain, and 8 a.m. Pacific Coast time on 14.342. You qualify for one hour Category II CME credit with your check-in.

MediShare International News
Arnold Kalan, WB6OJB, Director



The charitable arm of MARCO is active developing new projects and appreciative of your donations. Recognize other members for their accomplishments and life events with a donation that will be recognized in the *Aether*.

Donations are fully tax deductible and you will receive a note of thanks with wonderful MARCO seals that look very nice on QSL cards. MARCO is a 501 (3)(c) organization, and MediShare International is a project of MARCO.



Take this opportunity to participate in MARCO's way of helping the less fortunate worldwide. For more details about MARCO's Project MediShare and the types of projects it [supports click here](#). It is a reality, not just a moniker, that [HamsCare](#) at MARCO. New projects are in the process of being developed with the assistance of Wayne K4WFP and Jay AA4FL.

[Click to donate online](#) or mail written checks made out to MARCO, noting MediShare in the check's "for" area. Send your donation to MARCO c/o Secretary Jay Garlitz, PO Box 1333, Hawthorne, FL 32640



Thank you , Stay Well & God Bless,

Arnold

Arnold (Doc) Kalan, M.D., WB6OJB, MARCO #673

MARCO Membership News

April 2023 -- May 2023

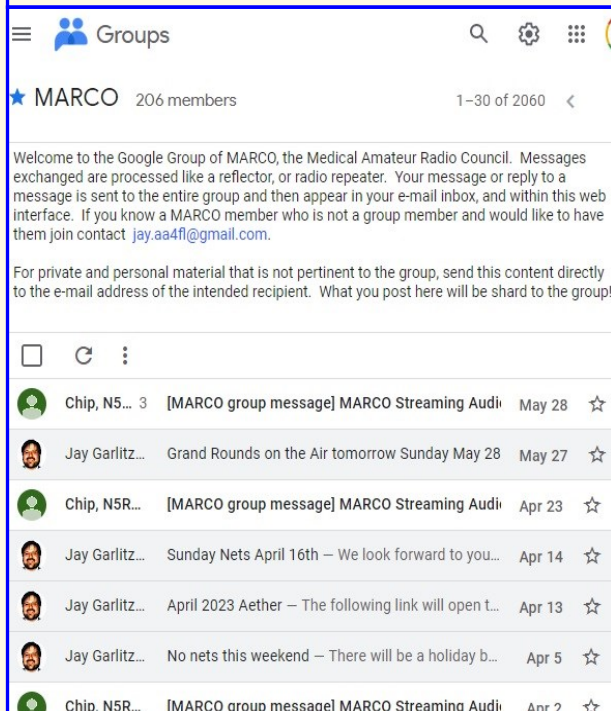
Renewals

N8YSB—Christopher Hollingworth, Cincinnati, OH(5 years)

MediShare donation in honor of Bernie KD5QHV and Linda KE5BQK 's hosting of the annual meeting in El Paso

<https://groups.google.com/g/marco-ltd>

Our MARCO google group allows members to ask questions, start discussion threads, follow-up on Grand Round topics and much more. If not signed up already make sure to!



The Secretary's Keyboard Korner
secretary@marco-ltd.org

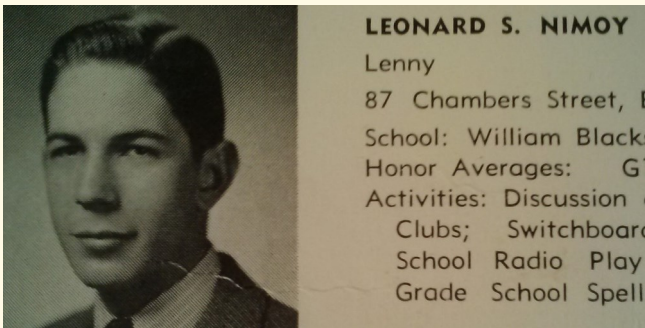


My story in this edition about antique dentures came to mind while in Spain, specifically in a Madrid Sketchers store on the Gran Via. The Goodyear emblem on the shoe brought back memories of the one patient who I treated that had a vulcanite denture.



I shared the experience with my dental school class Facebook group and another story was brought to the forefront by a classmate. She was volunteering in a nursing home on a school project and the attending faculty called her over (CIRCA 1981) to see a vulcanite denture as he explained "it may be the only one you ever see".

The Garlitz connection to "Vulcan" extends to the family line, albeit not known at the time. My father was a classmate of Leonard Nimoy at Boston English HS. Apparently he had talent at an early age but the pointy ears worked in his favor? For you to do the examination by yearbook photo...



Thank you to all who were patient with MARCO responses while I was away on the extended trip to Spain. Randi and I often travel with a college friend who is psychiatrist, Episcopalian priest, fluent in Spanish, and Italian. Benefitting through his colleagues in the Catholic clergy, we stay in convents and retreat centers that are often in the core of 1000 year old + cities, a special experience not to be missed. He often does the same in Italy so if we can get future trips to not conflict with HamVention and the MARCO annual meeting more trips will follow.

To provide feedback on this issue of the *Aether* contact the co-editors of our *Aether* editions at aether@marco-ltd.org.

73, **Jay** AA4FL

Amateur Radio in Space



MARCO member [Dr. Keith Brandt, WD9GET](#)

Keith reports he is the lead crew surgeon for the SpaceX Crew 7 mission that is scheduled to launch August 17. On board will be three hams in its international crew. The mission has astronauts representing the US, ESA, Japan, and Russia.

<https://blogs.nasa.gov/crew-7/>

While often a flight surgeon for NASA missions, Keith reports he is working on details like medical kits, procedures, flight rules, and checklists for the Artemis II mission. The crew has been named and includes three hams. Unfortunately, there will be no opportunity for operations from the Orion spacecraft, but ham radio is planned to be included in the Gateway spacecraft to be launched at a later date.



From <https://www.nasa.gov/image-feature/artemis-ii-map>

Keep an ear on the ISS as the crew has been heard recently utilizing the repeater to make direct contacts with Earth-bound hams. Frequencies are available at ariss.org

<https://www.amsat.org/amateur-radio-on-the-iss/>

<https://www.ariss.org/current-status-of-iss-stations.html>

Payment Options for Renewing your Membership or Joining MARCO

Membership dues, for new joins and renewals, are processed by email. At the time of annual billing invoices are invoiced to each member. The default billing term is unified for all types of members, two years for \$45.

MARCO encourages members to consider a five year membership of \$100. This reduces your yearly cost of membership and simplifies our annual billing by our all volunteer staff. Existing members can choose to extend your membership at any time. Please use the online form at <https://marco-ltd.org/join-marco-amateur-radio/> and select the five year term from the pull down list. Completing the entire form just as you were a new member assists us with keeping your information current in our membership database.


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Thank you for your Membership!

Medical Amateur Radio Council



The Medical Amateur Radio Council Ltd.

Online editions of the *Aether* can be printed by the reader for use at home but linked information available through clicks within the online document will not be available. Note in using the online edition you have control of the size of the text and images, being able to zoom in for more comfortable and informative reading.

This is the 141st edition of The Aether (2000-2023) since Warren Brown, KD4GUA, became editor, and the 11th online only edition by co-

MEDICAL AMATEUR RADIO COUNCIL, LTD.
[New Membership Application & Renewals](#)

Apply or renew online using the [online join form](#), which if you are already a member will be processed as a renewal. Once you fill out and submit the online form it will be reviewed by the membership committee. Upon approval you will be invoiced by email with a link to pay online by credit card or PayPal.

<https://marco-ltd.org/join-marco-amateur-radio/>

If you need to pay by check use this application form. Send the written form to the mailing address below.

Check your preference:

- One year membership \$25 (USD)
- Two year membership \$45 (USD)
(the default billing for renewal)
- 5 year membership \$100 (USD)

Name: _____

Address: _____

Health Related Career (if appropriate)

Call Sign: _____ Type License: _____

Phone: _____

email: _____

Birthday _____ (year, full DOB optional) Member ARRL: Y / N

Written applications for membership should be sent to

Membership Committee
 c/o Secretary Jay Garlitz, AA4FL
 PO Box 1333
 Hawthorne, FL 32640, USA