

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be Wednesday, June 10 at “WeAchieve”, 10501 New Hampshire Ave.

Science Report Highlights

Betsy and Dan thought all the items in following science report from Charles were interesting but most liked the following:

- [Alpha-Gal Syndrome From Ticks](#)
- [Ebola Outbreak](#)
- [New Approach To Autoimmune Diseases](#)
- [CAR-T Cell Therapy For Cancer](#)
- [Personalized mRNA Vaccine For Pancreatic Cancer](#)
- [6 Prostate Symptoms To Be Alert For](#)
- [Six Habits To Keep You Sharp As You Age](#)
- [Renewable Energy Was 86% Of New Electrical Capacity Installed Worldwide in 2025!](#)
- [Montgomery County Maryland Completes Largest US Transit Depot Microgrid](#)

Science Report

Vaccination and medical advice should come from your doctor or your pharmacist ... not from this Report or the internet. Everyone should consider maintaining current vaccinations, and many states are simplifying vaccine access.

- [Alpha-Gal Syndrome From Ticks](#) - The sugar molecule (galactose- α -1,3-galactose) that precipitates this very serious, potentially fatal allergic reaction is one of [several pathogens carried by ticks found in the DMV](#) ... the [Black-Legged Tick](#) (Deer Tick) and the [Lone Star Tick](#). Anyone experiencing [symptoms](#) after a tick bite should seek medical advice promptly. Check pets. [Alpha-Gal Syndrome](#) is a severe life-long allergy to beef, pork, lamb, dairy and gelatin products. Tick young typically overwinter with hibernating, burrowing animals, such as field mice, that provide blood meals. The nymphs (young) emerge in Spring, reaching out from the tips of foliage to attach for blood. Cats are also at risk of a deadly tick borne infection called 'Bobcat Fever' (Cytauxzoonosis), [details](#). [Phil/Eileen J.]
- [Ebola Outbreak](#) - CDC information on the outbreak, and a map, [here](#). Information for travelers to the Democratic Republic of the Congo (DRC), Uganda and South Sudan, [here](#). There is no effective vaccine

for this strain of Ebola. As of 5/22/26, no cases have been reported in the US. Update: [CDC Ebola screening begins at Atlanta GA airport.](#)

Vaccine and Therapeutic News -

- [New Approach To Autoimmune Diseases](#) - Researchers at the University of North Carolina may have a cure, not just better management, if their [Phase 3 clinical trial](#) currently underway works out. mRNA based [CAR-T cell therapy](#) (Chimeric Antigen Receptor) removes, modifies, and returns a patient's own T-cells to target and destroy the particular B-cells that are attacking healthy tissues. The therapy is precise, narrowly targeted, and until recently too expensive for general use. New mRNA gene engineering techniques may make CAR-T therapy more accessible. Developed originally for cancer treatment, this may also be the silver bullet we need for dealing with Lupus, Multiple Sclerosis and other autoimmune diseases. Stay tuned.
- [CAR-T Cell Therapy For Cancer](#) - Four CAR-T cancer therapies have [already been approved for clinical use in Australia](#) (6 in the US), all for blood cancers, e.g. free treatment in Australia for [multiple myeloma](#). Now the international research focus is turning to *tumor*-based cancer treatments ... breast, brain and prostate. See a 2022 summary of CAR-T cell clinical trials in progress [here](#).
- [Personalized mRNA Vaccine For Pancreatic Cancer](#) - [Genentech](#) (South San Francisco, subsidiary of Roche) and [BioNTech](#) (Mainz Germany) have partnered to design a therapy for this indication that is created from the patients' own pancreatic cancer cells. Phase 1 human trial results ([publication](#)) were promising, and the companies have now launched a Phase 2 trial [Details](#). Other genetically designed mRNA vaccines are also under test. [Mike and Greg K.]
- [Hodgkin Lymphoma](#) - [Bristol Myers Squibb](#) (Princeton NJ) has [announced](#) that FDA has approved its treatment Opdivo (nivolumab), in combination with doxorubicin, vinblastine and dacarbazine, for this indication.
- [AI Mediated Cancer Treatment Follow-Up Service](#) - [Tempus AI](#) (Chicago IL) has announced a [service](#) for automatically surfacing updated therapy recommendations for particular patients when clinical guidelines change or new therapeutic options emerge, without requiring new samples or genomic resequencing. This will help clinicians keep up with rapidly evolving treatments, so as not to miss a timely opportunity for their patients. Inhumanly fast.
- [Low Cost, Low Dose 3-D X-Ray Imaging In Arkansas](#) - [NanoX Imaging](#) (Petach Tikva, Israel) has [announced](#) that its FDA cleared [Nanox.ARC](#) imaging system will be offered to healthcare facilities across Arkansas ... will make 3D imaging more widely possible at a lower cost, and with reduced radiation dose compared to traditional CT.

- Acne - Galderma (Zug Switzerland) has [announced](#) FDA approval for over-the-counter US sales of its topical cream for treatment of this indication. 'Differin Epiduo Acne Gel' (Adapalene 0.1% and Benzoyl Peroxide 2.5% Acne Treatment) had previously been available only by prescription. FDA notice [here](#).
- Hepatitis Delta Virus (HDV) Infection - [Gilead Sciences](#) (Foster City CA) has [announced](#) that FDA has approved its injectable medication Hepcludex (bulevirtide-gmod) for this indication, making it the first and only approved treatment for HDV in the US. Fills a significant unmet need. Already approved in the EU.
- 6 Prostate Symptoms To Be Alert For - There are other prostate issues than cancer, but these 6 symptoms overlap with those for cancer, and should be reported *accurately* to your doctor. [Details](#).

Other Health Science News -

- Purpose Of Appendix Discovered - It's a safehouse for beneficial gut microorganisms from which the gut microbiome can regenerate when it gets wiped by disease (or medication). Details [here](#). Two publications, [here](#) and [here](#).
- Six Habits To Keep You Sharp As You Age - according to a neuroscientist, [here](#). Summary: Stay [mentally active](#), [socialize](#), stay [physically active](#), eat healthy, [stay curious](#), think [positive](#). According to a recently [published](#) Swedish study, up to 45% of dementia may be avoidable.
- Small Lifestyle Changes For A Longer Life - [here](#). Summary: at least seven hours of quality sleep nightly, minimum of 40 minutes daily activity, high-quality diet maximizing fiber/protein and minimizing sugar/salt/saturated-fat.
- Highly Processed Foods Linked To Frailty In Seniors - Researchers reviewed data from 10 studies covering more than 100,000 adults, and concluded that diets higher in highly-processed foods are *significantly* associated with an increased risk of frailty. Details and a list of the types of foods to avoid, [here](#). Prepublication (3/26) release [here](#). The Mayo Clinic definition of frailty, [here](#).
- EPA And Microplastics - The Agency has taken the first very small regulatory step in this direction by placing microplastics on the most recent (6th) iteration of its Contaminant Candidate List. See this brief [video](#) for details.
- 5 Things A Colorectal Cancer Doctor Would Never Do - [here](#).
- Ultrasound Approach For Treating Conditions Like Post Traumatic Stress Disorder (PTSD) - Researchers at [Radboud University](#) (Nijmegen, Netherlands) have successfully suppressed the brain's fear response, without erasing the memory of the cause of the fear, by targeting the amygdala region of the brain with an ultrasound beam. The new technique has potential for treating a spectrum of anxiety disorders. [Details](#) and a [publication](#).

- Trichloroethylene (TCE) Linked To [500% Increased Risk Of Parkinson's Disease](#) - [Details](#). Even though the manufacture, importation and processing of TCE was banned in 2025 in the US, it is still found in nearly one-third of US groundwater. Researchers at the University of Rochester Medical Center believe that its link to Parkinson's Disease continues to be underestimated, [publication](#). TCE has also been [linked](#) to several types of cancer.
- Barefoot In The House - See the pros and cons weighed by licensed clinical podiatrists, [here](#). Pros: reinforces muscles in the feet, which tend to weaken as we age and wear shoes ... allows your skin to breathe, which helps prevent moisture buildup and reduces risk of fungal infections like athlete's foot ... assumes clean floors. Cons: those with diabetes, neuropathy or poor circulation should avoid barefoot walking due to the increased risk of unnoticed injuries or infections. Middle Ground: ease into it for a few minutes each day, and/or wear socks.

Practical Nutrition -

- Sweet Onions Vs Yellow Onions - Sweet onions are best raw or lightly cooked ... salads, sandwiches, salsas. Yellow onions develop a more full flavor, and caramelize well when more thoroughly cooked in slow-simmered soups, stews, braises, and roasted or grilled dishes such as kebabs. Both are healthy, according to a University of Wisconsin [food scientist](#). Buying and storage advice [here](#).
- Can You Eat Sprouted Sweet Potatoes - Yes, according to a registered dietitian/nutritionist Cut off the sprouts and proceed. But ... if the potato is wrinkled, soft, or smells off, discard it. White potatoes are from a completely [different plant family](#), and become toxic when they start to sprout. Discard!
- Buying/Storing/Eating Fresh Blueberries - They are loaded with antioxidants, and very healthy, fresh or frozen. If they look wet at the store, or if you see fluid or condensation inside the package, or if they stick to the paper on the bottom of the package, don't buy. [Details](#). The light, dusky coating you see on blueberries (bloom) is actually a good sign ... a *natural* waxy layer that protects the fruit. [Wash](#), but only *just before* eating. Buy organic. [Recipes](#)
- Roaches Out! - Several ideas [here](#). Tune-up: Roaches follow regular trails, so place [glue traps](#) (use *many*) where you recall seeing them, and be guided by which way they retreat when startled by sudden light. Declutter. Avoid crumbs. Eliminate leaks, drips and standing water in plant trays.
- Keeping Berries In Good Condition - Details [here](#). Summary: 1) Don't wash before refrigerating, 2) Dry off with a paper towel and then store *with* a dry paper towel, 3) Wash and slice only at time of use, not before storing, 4) OK to freeze, after washing/drying (see directions), 5) Do *not* store in airtight containers, 6) Discard moldy items

immediately, 7) Keep fridge clean from mold spores, 8) Don't store mixed berry types together, 9) Don't keep berries out on the counter at room temperature, 10) Keep them in a low humidity section of the fridge.

- Storing Citrus - Food experts explain how to extend the shelf life of lemons/limes/oranges, [here](#).
- Pity The Jalapeño - The original Jalapeño had a Scoville Heat Unit (SHU) of 4,000-8,500 ... the SHU rating of a chile is a measure of its capsaicin content, the substance responsible for a chile's spice. But *Big Food* thought that was too spicy for the mass market (\$\$\$), so the bioengineers at Texas A&M AgriLife Research ([TAM](#)) began (year 2000) genetically redesigning the Jalapeño to be [less spicy](#). Those found in the market today are based on either the 'TAM Mild Jalapeño II', with an SHU of less than 1,500, or the '[TAM Dulcito Jalapeño](#)' ... with no detectable level of capsaicin ... but *with* improved yield, disease resistance, appearance ... and *with* the flavor of the original. [Details](#). Now the *hot* go-to chile is the Serrano, with an SHU of 10,000-23,000 (medium hot) ... until it too gets reengineered.
- Fiber Fiber Fiber - Most people don't get enough. Registered dietitians suggest these [6 foods to fix that](#). And oats!
- Food/Drink To Avoid With Osteoporosis - [here](#).

Environmental Science News -

- Maryland Now Has Plug-in (Balcony) Solar Law - with *immediate* effect, upon the May 12 gubernatorial signing of [HB 1532 \(Utility RELIEF Act\)](#). Maryland is the 5th US state .. the 2nd in which it is **already in effect** ... also passed in Utah, Maine, [Virginia](#) and Colorado. Details and a photo, [here](#) ... 1,200 Watt power limit, must meet UL certification requirements. Well done Maryland!! [UL Solutions and ULRI]
- Balcony Solar Certifications Start Soon - [UL Solutions](#) (Northbrook IL) has been ready to receive applications for their [plug-in solar safety certification protocol](#) since January, and according to the company the first certifications should be forth-coming soon - "... months, maybe even weeks." [Details](#). Great work, and very timely!
- Safety Considerations For Plug-In-Solar (Balcony Solar) - see a summary from UL Solutions, [here](#). Getting there!
- US States Graded On Removing Permitting Obstacles To Installing Solar - See how your state rates, [here](#). The DMV gets a D, which sadly is *better* than most. None get an A.
- Bald Eagle Nest - Live cam view of the nest in Big Bear Valley California, [here](#). Jackie and Shadow come and go. [choose view, turn on sound, EST minus 3 hours]. [Background](#). [turn on sound]
- Eagle Owls - are being [rewilded on the Romanian side](#) of the Danube delta, and a companion project will now begin on the [Ukrainian side](#). Wingspan of 4 to 6 feet!

- [Agrivoltaic Turnips In Canada](#) - Researchers at [Western University](#) (London Ontario Canada) examined the cultivation of turnips under 13 types of solar modules with a variety of properties. They discovered several semi-transparent systems that produced substantially more food, while optimizing solar energy. Publication with photos, [here](#). Conclusion - each crop should be studied to find the optimum agrivoltaic plan.
- [Entire Mountain Range Covered With Millions Of Solar Panels](#) - [Over a million solar panels](#) cover over a thousand acres of a mountain range in the Guizhou province of China. See an amazing video taken by drone, [here](#).
- [Puerto Rico Has Sun](#) - Solar power generation has become the [second largest source of electrical power in PR](#). 3,850 rooftop solar+storage systems were installed in homes and businesses *per month* in 2025. Well done!
- [Largest Urban Battery In US](#) - The [Cormorant Energy Storage Project](#) is now under construction near San Francisco on the 11 acre site of a former drive-in movie theater, power 250 MW, energy 1 TWh, Tesla Megapack 2 XL lithium-ferrous phosphate battery tech, power for 321,000 homes for four hours. Developed by [Arevon](#) (Scottsdale AZ).
- [Maine Approves Balcony \(Plug-In\) Solar](#) - [Details](#).
- [Renewable Energy Was 86% Of New Electrical Capacity Installed Worldwide in 2025!](#) - according to the International Renewable Energy Agency ... led by solar, then wind, then hydro. Very timely, considering current events. [Details](#).
- [Renewable Energy Was 43% Of Electricity Generated In Colorado in 2025](#) - according to the [US Energy Information Administration](#) ... led by wind, followed by solar. Less than 25% was generated by coal, with all 6 remaining coal plants scheduled to close by 2031. [Details](#). [Maureen T., Larry G.]
- [Gasoline Prices Up In Europe ->> EV Sales Up In Europe](#) - New [European EV sales were up 29%](#) (560,000) in 1Q26 over 1Q25 ... up 51.3% (240,000) in March alone. The 4 Nordic countries have the highest EV adoption totals: Norway (98.6%), Denmark (81.9%), Finland (48.8%), and Sweden (40.7%). New technology ->> energy security!
- [Desalination](#) - is usually done by an energy intensive process called reverse osmosis, [details](#). According to the [International Desalination and Reuse Association](#) there are about 20,000 desalination plants operating worldwide, with the number increasing at the rate of 7% annually. The process leaves behind highly concentrated brine that can damage seafloor habitats and coral reefs. Generating the energy required is estimated to release [500-800 million tons of carbon emissions annually](#), about as much as for the entire worldwide aviation industry.
- [Brown Drinking Water In Bowie Maryland](#) - is due to internal erosion from old cast iron pipes, and sediment. The city has a plan to fix it ...

over 20 years ... and says the water is safe to drink. 7 miles of the 90 mile pipe system have been replaced so far. Not good enough.

[Details](#).

- [Montgomery County Maryland Completes Largest US Transit Depot Microgrid](#) - The David F. Bone Equipment Maintenance and Transit Operation Center in Derwood MD - 6.8 MW, 9,800 solar panels. At full buildout the microgrid [will support charging a fleet of 200 buses and power 5 buildings](#). It can also operate in island mode during power outages. Well done, and very timely!

Other Science News -

- [Physicists Have Discovered A New Particle](#) - The new baryon, named Ξ_{cc}^+ (Xi-cc-plus), is composed of one down quark and two charm quarks, is four times as heavy as a proton, and is expected to allow physicists a better understanding of the strong nuclear force that binds quarks together. [Video](#).
- [A Very British Problem](#) - Seagulls at the beach have been dive-bombing boxes of fish-N-chips, and stealing the fish! But researchers at the University of Exeter have a solution ... [painting eyes on the boxes](#) reduced aerial theft by 50%. [Publication](#). Staring at them also worked. Thieves just don't like being watched.
- [Humanoid Robot Chases Wild Boars Out Of Warsaw Parking Lot](#) - amazing video [here](#) [turn on sound, full screen]. Wild boars have become a destructive nuisance in both the EU and the US. They are also vectors for disease.
- [Leaky Artemis II Helium Valves](#) - are in the European-built service module that provides propulsion for [Orion](#) during Earth/Moon transfers (not at orbital-launch time). They will have to be fixed [before Artemis IV returns to the Moon](#).
- [Autonomous Drone Boats Being Built In Rhode Island](#) - Details/photos [here](#). [HavocAI](#) (Providence RI) [Julian G.]
- [Quantum Computing Comes To The DMV](#) - First it was CPUs, then it was GPUs, now it's 'Trapped-Ion Quantum Computing'. See information on this, and a [video](#) [white arrow in red circle], from IonQ (College Park MD). You'll be hearing more about it.
- [National Quantum Laboratory \(QLab\)](#) - IonQ and the University of Maryland at College Park have [announced](#) a multi-year expansion of their QLab partnership, with funding from the State of Maryland's '[Capital of Quantum](#)' initiative via the University of Maryland Economic Development Corporation (UMEC).

Nice Thing - [full screen, turn on closed captions]

- [The Mikado](#) - An operetta composed in 1885 by Gilbert and Sullivan, the complete 1966 filmed performance by the D'Oyly Carte Opera Company, London UK, [here](#). [Sarah F.]
- [The Mikado](#) - The 'Little List' song from the above film, [here](#).

- The Mikado - The 2020 version of the 'Little List' song, with some updates, [here](#).

Useful Health And Nutrition Websites -

- Health Biomarker Websites -
 - NIH BMI Calculator - [NIH](#) National Heart, Lung and Blood Institute [calculator](#). Find your Body Mass Index (BMI).
 - Basal Metabolic Rate (BMR) - Your BMR is how many calories you burn just sitting in your chair, [calculator](#).
 - Body Roundness Index (BRI) - Estimate your *visceral* fat, [details](#) and [calculator](#). Harvard background, [here](#).
 - Are Your Stools Healthy? - Check the Bristol Stool Chart [here](#). You should be a Type 3 or 4. Not complicated. [Details](#).
- Nutrition Websites -
 - Is Your Favorite Food Ultra-Processed? - and good substitutes. Northeastern University [TrueFood Dashboard](#).
 - Most Nutritious Vegetables and Fruits Rank-Ordered by CDC - List [here](#). Chinese cabbage = bok choy.
 - Misleading Words For Sugar - High-fructose corn syrup, sucrose, barley malt, dextrose, maltose and rice syrup are all [forms of sugar](#). Erythritol and Xylitol have been [linked to heart disease and stroke by Cleveland Clinic researchers](#), and should be avoided as food additives. Chemical sugar substitutes to be avoided: acesulfame potassium, advantame, allulose, aspartame, brazzein, lactitol, maltitol, mannitol, neotame, rebaudioside A (reb-A), saccharin, sorbitol, thaumatin and trehalose.