

Betsy says HI!!!!

Announcements

The next LABQUEST meeting will be Wednesday, Sept 9 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:

- mRNA Vaccines Are Safe
- Hip Pain
- Mouse Study Shows Creatine Supplement Slows Melanoma Tumor Growth
- Antioxidants Made Simple
- Sleep
- Eggs Found To Reduce Alzheimer's Disease Risk 27%
- Aging Dams Mean Increasing Risk Of Catastrophic Flooding
- Texas Governor Wants To Breed Flies Faster
- Electricity Prices Up On The Largest US Grid
- Ukraine Has Purchased 20 New Swedish [Gripen E/F](#) Supersonic Jet Fighter Aircraft

Science Report Highlights

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.

- mRNA Vaccines Are Safe - A *very* comprehensive, recently [published](#) international study concluded that "After billions of doses, we now have an extraordinary amount of scientific evidence." "This review [affirms](#) that mRNA vaccines are a safe and highly effective platform, supported by rigorous testing and real-world monitoring. It provides an evidence-based foundation as this technology continues to expand into new areas of medicine." [Background](#).

Vaccine and Therapeutic News -

- FDA Cleared, AI Enhanced Prostate Imaging - Tempus Pixel, [here](#). Enhanced MRI interpretation, AI-enabled lesion detection, improved diagnostic accuracy/efficiency, gland segmentation, risk classification. Tempus (Chicago IL)
- AI-Assisted Tumor Genetic Sequence Profiling - Tempus (Chicago IL) received FDA clearance in May for its 'xT CDx' next-generation sequencing platform, a 648-gene tissue-based assay for molecular profiling of *all* solid tumor malignancies. [Amy S.]
- Hip Pain - Not all hip pain originates in the hip itself. A board-certified orthopedic spine surgeon [advises](#) on the symptoms that deserve an exam, and says that the pain "... may in fact be coming from the hip, the muscles around the hip or joints next to the hip,

including the lower back area and SI [sacroiliac] joint." Many issues don't require a [hip replacement](#). Some of these issues affect younger people.

- Lupus (Systemic Lupus Erythematosus) - [UCB](#) (Brussels Belgium) and [Biogen](#) (Cambridge MA) have [announced](#) positive Phase 3 human [trial results](#) for their candidate for this indication, dapirolizumab pegol (DZP). Stay tuned.
- Metastatic Triple Negative Breast Cancer - FDA has [approved](#) the [Gilead Sciences](#) (Foster City CA) treatment Trodelvy (sacituzumab govitecan-hziy) for this indication.
- Complicated Urinary Tract Infection - FDA has [approved](#) Utebzi (tebipenem pivoxil) as an oral medication for this indication. See the [GSK](#) (Philadelphia) announcement [here](#).

Other Health Science News -

- Mouse Study Shows Creatine Supplement Slows Melanoma Tumor Growth - See a [description](#) of the UCLA study [here](#), and a publication by the [UCLA research team](#) [here](#). *Human* cells were also a part of the study. [Barbara R.]
- 5 Things Not To Do Before 9 AM - according to a board-certified interventional cardiologist, [here](#). Summary: sugary coffee drinks, breakfast pastries, processed breakfast meats, skipping breakfast paired with stress and caffeine (note exception). [Publication](#).
- Antioxidants Made Simple - Antioxidants are substances that protect the body from damage by free-radicals, preventing oxidative stress linked to ageing, cancer, heart disease and other chronic illnesses. See a list of life-style and environmental conditions that promote free-radical formation (bad), and suggestions (good) for [natural foods](#) and vitamins that provide antioxidants, [here](#). Supplements only with your doctor's approval.
- Sleep -
 - Debunking 7 Common Sleep Beliefs - [here](#). Sufficient quality sleep is essential to good health.
 - How Much Sleep Is Healthy? - Researchers at Columbia University [studied](#) the relationship between sleep duration and biological (cellular) aging ... more or less than chronological age. They concluded ([publication](#)) that *either* more or less than [6.4 to 7.8 hours of sleep per night](#) correlated with accelerated biological aging.
 - Why Avoid Sleeping In The T. Rex Position? - See a [description](#) (photo) of the position, the [health complications](#) it may cause, and some suggestions from sleep experts on how to train yourself out of the habit. Requires patience.
 - Peanut Butter Before Bedtime - especially paired with whole grain bread, may improve sleep quality by better regulating blood sugar during sleep. [Details](#). 2 tbsp, 2 hours before bed, [all natural](#) with no added sugar.
 - Walnuts For Better Sleep - A [study](#) published in 2025 concluded that eating a handful of walnuts about 2 hours before going to bed improved sleep quality. [Details](#).
- New Type Of Cholesterol Discovered - Experts have discovered [Remnant Cholesterol](#) (RD), and it may be the most dangerous of them all. You can calculate it yourself by adding up the LDL (bad) and HDL (good) cholesterol numbers in your most recent blood work, and subtracting the sum from your *total* cholesterol. [Published](#) clinical studies indicate that those with high RD levels are twice as likely to die from cardiovascular disease and other non-cancer diseases. There's

not yet an agreed threshold for what counts as dangerously high RD levels. Ask your doc.

- 7 Warning Signs Of Calcium Deficiency - [here](#). Report these physical/psychological [symptoms](#) to your doctor.
- Is It Normal Aging, Or A Treatable Thyroid Issue? - Review the [symptoms](#), tell your doctor, and get tested. [Sam J.]
- [Eggs Found To Reduce Alzheimer's Disease Risk 27%](#) - A [published](#) study from Loma Linda University found that " ... moderate egg consumption was associated with a significantly lower risk of Alzheimer's Disease ...".

Practical Nutrition -

- Watermelon - See a nutritional run-down from the Mayo Clinic, [here](#). Summary: antioxidants, Vitamins A/C/B6, tasty.
- Avocados - Magnesium, Potassium, soluble fiber, lower LDL cholesterol, better quality sleep according to a registered dietitian. [Details](#).
- Mangos (And Guavas) - can help control blood sugar, and other important cardiac biomarkers, according to a registered dietitian. [Details](#) and a [publication](#).
- Blueberries - Nine health benefits from eating this nutritional powerhouse, [here](#). Tune-up: especially *wild* blueberries, same nutritional value [frozen or fresh](#).
- Bananas - Their nutritional value changes as they ripen. Details from a registered dietitian, [here](#). Summary: buy them 'unripe', and eat them 'barely ripe' ... while they are still a bit green at the stem and a little hard to peel.
- [4 Vegetables To Buy Canned](#) - Canned pumpkin, beans, artichokes and hearts of palm are healthy, cheap and handy ... frozen also good. Tune-up: cooked hearts of palm and grilled artichoke hearts are available in sealed packages in the cold case at the right store. They're all [nutritious](#), according to a registered dietitian. Details and recipes [here](#).
- 3 Natural Foods With Vitamin D - Most have none, but according to the Cleveland Clinic [these three](#) do. Also, some foods are fortified with D. Get your level checked in your next blood work ... important not to be insufficient/deficient in D. Five to thirty minutes of sun (not midday in Summer) will help your body generate its own D: less time for lighter complexions, more time for darker. Take D supplements only with a doctor's advice.
- 8 Healthy High Protein Snacks - [here](#).

Environmental Science News -

- Aging Dams Mean Increasing Risk Of Catastrophic Flooding - The average US dam is [64 years old](#), with a design lifetime of 50 year. They were *not* designed for the increasingly intense rain events that are beginning to happen. The wise thing to do, while there is time, is to either take down unneeded dams or modernize/reconstruct them. Details, and Michigan examples, [here](#). If the issue is neglected, Mother Nature may be unkind.
- PFAS Control Success! - A recently [published](#) study of North America's largest [Gannet](#) (large fish-eating sea bird) colony, on remote [Bonaventure Island](#) in Canada's Gulf of Saint Lawrence, shows a substantial *reduction* in the PFAS content of their eggs over the 55 year period of the study. The St Lawrence River had been receiving PFAS water pollution from upper midwest US manufacturing centers around the Great Lakes, and the chemicals had reached levels in the eggs that suggested ecotoxicological risks. So it *can* be done! [Details](#).
- West Virginia Lead And PFAS Issues -

- WVA will receive a [\\$27 million grant](#) - from the US Environmental Protection Agency (EPA) to replace lead pipes in public drinking water supply systems [state-wide](#).
 - WVA will receive a [\\$9 million grant](#) - from EPA for PFAS contamination clean-up state-wide.
- Tennessee Valley Authority (TVA) Booklet On [Coal Ash Risk](#) - was [characterized](#) by a Duke University researcher as: *unbelievable, misleading* public campaign, unbelievable and *scary*. Bad news for [Cumberland City TN](#).
- Bees Have Magnetic Powers - according to recently [published](#) research from the University of Tennessee (Knoxville TN). 90% of bee and wasp species exhibit magnetoreception, the ability to detect magnetic fields for the purpose of navigation. Surprise! [Details](#). [Karen W.]
- Pythons In SW Florida - The [Conservancy of Southwest Florida](#) set a [new record](#) during the Spring breeding season by removing 177 invasive Burmese pythons weighing a combined 8,080 pounds from a 200 square mile area of [Collier County FL](#) (near Naples FL). [Map](#). Females can be 17 feet long, and weigh up to 150 pounds.
- Texas Governor Wants To Breed Flies Faster - and has [offered to help](#) the US Department of Agriculture speed up construction of its \$750 million New World Screw Worm fly breeding facility outside Edinburg TX ... to produce millions of radiation-sterilized male flies. The flies' flesh eating larvae have begun infecting cattle in TX. A thousand pound infected steer can be dead in two weeks. [Details](#). Governor: "We cannot make it through a second summer."
- [Can Plants Hear](#) - Researchers at MIT discovered that rice exposed to the simulated vibrations of heavy rain germinated 30% faster than in silence ... so yes, in their own way, for their own purposes. [Publication](#).
- Solar Beats Coal In Texas - According to the US Energy Information Administration, the Texas grid ERCOT will receive [more electrical power from solar than coal in 2026](#) for the first time. Progress! [Mike/Jaqui K., CC]
- Big New Solar Plant In Texas - [Vesper Energy](#) (Dallas TX) has [announced](#) plans to build the 201 MW [Nazareth Solar](#) project in Swisher County, Texas (NW TX) ... power for 53,000 homes, 2,400 acre site, operational 3Q27. [Details](#)
- Solar Cell Manufacturing In Georgia - Hanwha [Qcells](#) (Seoul South Korea) has begun operations at their [new manufacturing site in Cartersville GA](#). The new facility will manufacture ingots, wafers, cells, and solar modules (panels) under one roof, with a *daily* production capacity of 16,700 solar panels. Big! [John A.B.]
- Electricity Prices Up On The Largest US Grid - Wholesale power prices on the PJM Interconnection (serves the DMV) are up 76% since last year, according to a report [published](#) by Monitoring Analytics. [Background](#).
- South Dakota Gets One Of The World's Largest Energy Storage Facilities - The 5 GWh [Big Stone City](#) plant will store cheap excess wind energy in superheated giant carbon blocks, for later release back into the Midcontinent Independent System Operator (MISO) grid. This will help stabilize the entire upper midwest grid, and lower costs, by adding power during peak use times. Full operations are expected by October. [Details](#) and a photo.
- New Hampshire Energy Bills - are among the highest in the US, particularly in the Winter due to overreliance on liquified natural gas (LNG) for peaking power during

extreme cold. The 1.5 MW added to the New England grid from completion of the [Vineyard Wind](#) and [Revolution Wind](#) offshore wind farms will [relieve much of the need for LNG](#).

- New Small Modular Reactors For Seadrift Texas - X-Energy (Midland MI), a subsidiary of Dow, has [announced](#) NRC [environmental clearance](#) of the company's [Long Mott Generating Station](#), consisting of 4 high temperature gas cooled XE-100 advanced nuclear reactors to be located on the existing Dow Seadrift manufacturing site producing materials for food packaging, pharmaceuticals, solar technology, and electrical applications. Dow expects to use the 320 MW of electrical power, and will *directly* use the 200 MW of *thermal* energy for industrial process heat on site.
- Solar Panels Cover An Irrigation Canal - where they both produce power and reduce evaporation. Good photo.
- 6,100 Acre Solar Farm '[Pride Of The Prairie](#)' Approved In Illinois - 6,100 acres, 1.5 million panels, 600 MW [Details](#).
- [Upstate New York Solar](#) - The state has announced site [approval](#) for the [Fort Edward Solar](#) project near the town of Fort Edward in Washington County NY. It will be built by renewable energy company [Boralex](#) (Kingsey Falls, Québec Canada) ... [530 acres](#), 100 MW (power for 25,000 homes), grid connection on site, commissioning 2030.
- Colorado Renewable Energy Is Doing Well - 44% of the total electricity consumed in the state in 2025, up from 19% in 2016. See 4 graphs showing how Colorado compares to nearby states, [here](#). [Maureen T., Connor K.]

Other Science News -

- Development Of Small Modular Reactors ([SMR](#)) For Commercial US Ships - The US Department of Transportation has issued a Request For Information ([RFI](#)) to gather ideas and proposals on this subject. Responses due 8/5/26.
- Ukraine Has [Purchased](#) 20 New Swedish [Gripen E/F](#) Supersonic Jet Fighter Aircraft - together with a munitions package that includes medium and long range air-to-air missiles ... for delivery in 2030. Sweden will now *donate* 16 existing Gripen C/D fighters from its own air force, with a munitions and training package, for delivery 1Q27.
- Small Modular Reactor - reaches criticality at the Department of Energy's Idaho National Laboratory. See photos, and a clear explanation of how the Antares microreactor design works, [here](#).

Nice Thing - [full screen]

- Les Misérables - 'Do You Hear The People Sing', Sung by 17 Jean Valjeans from around the world, [here](#). [Jules M.]
- Les Misérables - 'One Day More', and 'Do You Hear The People Sing', 2012 film, fully staged, [here](#). [Phil J.]

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.