

## **Betsy says HI!!!!**

### **Announcements**

**The next LABQUEST meeting will be Wednesday, June 11 at 12:30, location TBD.**

### **Science Report Highlights**

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

- 'Gas Station Heroin'
- Early Onset Colon Cancer Associated With A Certain Gut Bacterium
- Probiotics Such As Fermented Dairy Boost Oral Health
- World's First Ammonia Powered Ship
- Quiet Revolution In Grid-Scale Battery Storage
- Amazon Launches Internet Satellites
- VTOL Air Taxi Moves Forward

### **Science Report**

#### Self-Protective Measures -

You should get your medical advice from official sources, your doctor, or your pharmacist ... not from this Report or the internet. Per recommendations by FDA and CDC, everyone should maintain current vaccinations for the three respiratory viruses: Covid, flu and RSV (for RSV, adults [over 60](#) and children [younger than 8 months](#)) - unless your doctor advises against it based on your medical record. Adults over 50 should have had the [Shingrix vaccine for shingles](#) (two doses 2 to 6 months apart, good indefinitely). Adults over 50 should have the [Pneumococcal Vaccine](#).

- 'Gas Station Heroin' - FDA has issued a health advisory regarding the trending use of tianeptine, warning of serious harm including death. Details in the Commissioner's public letter, [here](#). Additional background [here](#).
- NIH BMI Calculator - Use the [NIH](#) National Heart, Lung and Blood Institute [calculator](#) to find your Body Mass Index (BMI). Above 25 - overweight. Above 30, check with your doctor, consider better nutrition, and exercise.
- Basal Metabolic Rate (BMR) - Your BMR is how many calories you burn just sitting in your chair. Use the [calculator](#) to get your BMR. Then consult the exercise table to see how many calories you can consume daily with your current exercise plan and still maintain your current weight.
- Body Roundness Index (BRI) - is a new medical screening tool for estimating *visceral* fat, [details](#). Use a calculator to get your BRI [here](#). Additional background from Harvard, [here](#). Results to your doc.

#### Vaccine and Therapeutic News -

- Early Onset Colon Cancer Associated With A Certain Gut Bacterium - probably encountered in the first 10 years of life. The number of colon cancer cases in those under 55

has [doubled](#) in the last two decades. A new study by researchers at the University of California at San Diego suggests that the cause could be colibactin, a toxin produced by certain strains of E. coli and other bacteria. Details [here](#). Publication [here](#). Screening test next, for early diagnosis ??

#### Other Health Science News -

- Three New Natural Food Colors Approved - FDA has [approved](#) two new blue food dyes, and a new white.
- FDA/NIH Announce Joint Nutrition Regulatory Science Program - to study such subjects as the effect on health of ultra-processed foods, the effect of food additives on metabolic health and chronic disease, the effect of maternal/infant dietary exposures on autoimmune diseases.
- FDA Announced Comprehensive Review Of Infant Formula Nutrition - See the announcement [here](#). The Agency will also increase testing for heavy metals and other contaminants.
- Probiotics Such As Fermented Dairy Boost Oral Health - Recently [published](#) research indicates that eating probiotic natural foods like kefir and yogurt reduces cavity and periodontal disease development, and improves gingival health. Probiotics also act against pathogenic bacteria like S. mutans, and reduce associated biofilm formation (hides bacteria from mouthwash/toothpaste).
- Probiotics Benefit Pediatric Oral Health - Publication [here](#).
- Engineers Design The Perfect Urinal - designed to save men's dignity, and their pants, by minimizing splash-back ... and they use less water. Details [here](#). Publication [here](#). Yes, they did study how dogs manage better. Hint: shallow angle of incidence with the tree. [Bill McC.]
- Are Your Stools Healthy? - Check the Bristol Stool Chart [here](#). Ideally you should be a Type 3 or 4. This simple check, that you can routinely do yourself in a few seconds, may help catch a problem early, and could provide important information for your doctor. [Details](#).

#### Practical Nutrition -

- CDC Update On Bird Flu (H5/N1) - [here](#). Summary: not good, but pasteurized dairy products and thoroughly cooked eggs are safe.
- Registered Dietician's Top Healthy Canned Food Pick - [here](#).
- 5 Vegetables A Heart Surgeon And Gut Expert Eats Daily - [here](#).
- 8 Plant-Based Foods With Big Protein - and many other nutrients as well, [here](#). Protein boosts satiety, and thus helps weight control ... but avoid saturated fat. Note: do *not* eat raw lima beans.
- Misleading Words For Sugar - High-fructose corn syrup, sucrose, barley malt, dextrose, maltose and rice syrup are all [forms of sugar](#). Certain blood alcohols sometimes used as sweeteners, such as Erythritol and Xylitol, are made by the body and occur naturally in certain foods - but in very small amounts. They have recently 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.
- Is Your Favorite Food Ultra-Processed? - and if so, what's a good substitute. View the Northeastern University [TrueFood Dashboard](#).

- Most Nutritious Vegetables and Fruits Rank-Ordered by CDC - See the list [here](#). Chinese cabbage = bok choy.

### Environmental Science News -

- World's First Ammonia Powered Ship - docked in London in March after a 12,000 mile voyage beginning in Singapore in January, demonstrating the use of ammonia as a low Carbon fuel. [Details](#). Heavy fuel oil (HFO) powers about 60% of [ocean shipping](#), and is both very toxic and very difficult to clean up when spilled.
- Quiet Revolution In Grid-Scale Battery Storage - Grid scale battery storage quintupled from 2021 to 2024. In 2024 12.3 GW was installed. This year installations are on track to double that. The current US *total* for grid scale battery capacity is >26 GW. Having plenty of storage is particularly important for adding wind and solar power to the grid, [here](#). Some used EV batteries are finding new purpose by being incorporated into grid scale battery farms. See the International Energy Agency's review of the state of the art in EV batteries, [here](#).
- Balcony Solar Is Big In Germany, Utah Next? - About 10 years ago Germany succeeded in solving the engineering problems (not hard) and wiping away essentially *all* the red tape (*miraculous*, but they did it). Just buy a couple of panels, hang them on your balcony railing, plug them into the nearest outlet, and you're done - up to 800 Watts, enough to charge a laptop or power a small fridge. Now Utah has passed a law exempting balcony solar from grid interconnection agreements with local utilities - step 1. Over to UL and the US federal government to clear the way. [Sonja B.]
  - May 7 - US Company Enphase Energy (Fremont CA) Offers Balcony Solar In Germany - [details](#).
  - May 12 - Enphase Energy Offers Balcony Solar in Belgium - [details](#).
- Pivot Energy Announces Tax Credit Financing For US Community Solar Projects - The Company (Denver Co) has [announced](#) \$200 million in tax credit financing for 40 community solar projects in 8 states, following the arrangement of \$450 million in loan financing. [First commercial operations are expected in 3Q25](#).
- The End Of Coal At The Capitol Power Plant And In DC - The [plant](#) (25 E St SE) provides steam heat, chilled water and electrical power for 23 facilities on Capitol Hill: US Congress, Library of Congress, Supreme Court and more. In 2018 the Architect of the Capitol [announced completion](#) (details and a video) of the plant's conversion from [1950s coal-fired technology](#) to more efficient, clean-burning, gas-fired, [cogeneration](#) technology (7.5 MW). The old smoke stacks are still there, and probably the old coal-fired boilers of the now disused last coal burning facility in Washington DC, for [historical/political](#) reasons. The age of coal is over (no longer economically *or* environmentally justifiable); the age of renewable energy, including grid-scale stored energy, has begun. Natural gas is a useful bridging technology for the all important grid stabilization, until more cost-effective renewable energy (with storage) can take over.. [CC, Peter M.]

### Other Science News -

- Amazon Launches Internet Satellites - The company has launched the first 27 high-speed internet communications satellites for its planned Project Kuiper system. Many more to come. First service is expected in late 2025. The surfaces of the new satellites have been coated to avoid reflections that could interfere with astronomical observation. Competition is good. [Details](#) [Peter M.]

- VTOL Air Taxi Moves Forward - Joby Aviation (Santa Cruz CA) [reports success](#) in tests demonstrating the first inhabited (live piloted) transitions from vertical to winged (horizontal) flight ... a critical step toward FAA certification. Details and a photo [here](#). Previous test flights were piloted autonomously. Battery/electric, pilot plus 4 passengers, 200 mph, quiet, no exhaust, no runway.

Nice Thing - [full screen, wait out ads]

Through The Looking Glass - 1871 novel by Lewis Carroll, sequel to his 1865 novel 'Alice's Adventures in Wonderland'.

- The Jabberwocky - the famous nonsense poem from Carroll's 1871 book, narrated in 2014 by Bill Barke in the style of Shakespeare's King Lear, [here](#). You've been warned. ;) For a good laugh, turn on closed captions (CC) to see the AI flub transliterating Carroll's nonsense words. *It* just doesn't get it.
- The Jabberwocky - Classic recitation narrated in 2013 by Renee LaTullipe, [here](#).