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a microbiology newsletter -january, 2021

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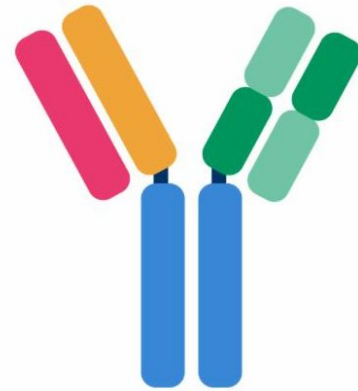
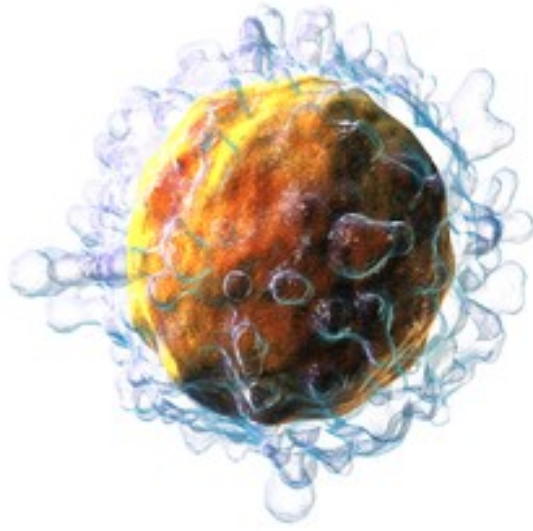
microBYTES



SIPLES

*"It's a simple stress test—I do your blood work, send it to the lab,
and never get back to you with the results."*

CartoonCollections.com



T cells vs Antibodies...

*Which is a better predictor
of COVID-19 immune status?*

Find out...

How do the three new COVID-19 vaccines work?

What are the stated effectivity rates?

What are the shelf life and storage requirements?

How many doses are needed?

How much do they cost?

Where are they made?

What are the risks and side effects?



The New COVID-19 Vaccines

[Find out here...](#)

Your one-stop source for COVID supplies!



Viral Transport Medium

Hardy's viral specimen transport is ideal for COVID-19 antigen testing. The shelf life has been increased to 150 days at room temperature. Swabs are sold separately.

[Learn More...](#)

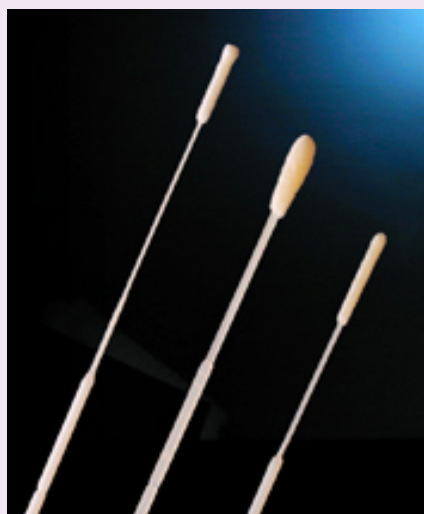
N95 Masks

NIOSH Certified, with silicone seal
Now available for immediate shipping!

[Learn More...](#)

Face Masks

With adjustable metal nose band.
Now available for immediate shipping!

[Learn More...](#)

Specimen Collection Swabs

Hardy offers swabs in the flocked, foam, and spun polyester formats.

Pick from nasopharyngeal, oropharyngeal, standard, or urethral.

Available for immediate shipping!

[More About Flocked NP Swabs...](#)[More About Polyester OP Swabs...](#)

WARNING:

PUN ZONE AHEAD



A good waiter really brings a lot to the table.

- Did you hear about the blind man that fell into a well? It was because he didn't see that well!
- Ever eaten a duck egg before? It's not all it's quacked up to be...
- If attacked by a mob of clowns, go for the juggler.
- The past, present and future walk into a bar. It was tense.
- Does seven days without exercise make one week?



Quiz Time!

You've seen these Kings many times, but can you name each King in history that these cards represent?

[Check your answers here...](#)

More Supplies to Keep You Safe



AloeSafe

Hardy's hand sanitizing gel guards against drying of your skin with Vitamin E, soothes with Aloe Vera, and has a pleasant scent with lavender oil. No harmful ingredients as with the cheap drug store variety! Don't your hands deserve the very best?

[Learn More...](#)

Face shields

For added protection on the job, Hardy offers face shields for immediate shipping. Comfortable foam headband.

[Learn More...](#)

Mid-Turbinate Swabs

Hardy's nasal, mid-turbinate swabs are ideal for COVID and flu specimen collection. The stopper prevents over insertion. Nylon flocked swab tip ensures maximum recovery and release. Pediatric size also available.

[Learn More...](#)

Lab Coats

For added protection on the job, Hardy offers disposable lab coats, featuring three pockets, and comfortable knit cuffs and collars.

[Learn More...](#)



Sanitizing Wipes

90 lintless wipes for disinfecting surfaces. Food-safe. Effective against all viruses.

[Learn More...](#)



Dehydrated Media

Hardy manufactures a complete line of powdered media. It is conveniently packaged in five different configurations ready for export.

[Learn More...](#)



Hand Sanitizer Solution

Hardy's liquid hand sanitizer contains both ethanol and hydrogen peroxide for extra killing power. Contains NO methanol!

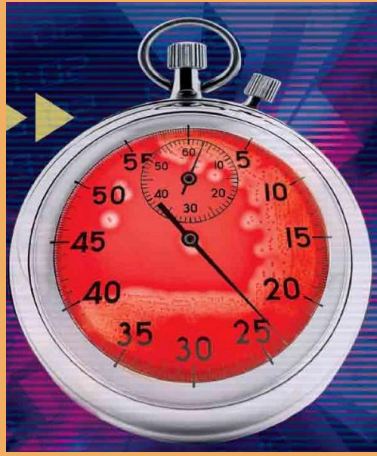
[Learn More...](#)



Rapid Flu A and B Kit

Hardy offers the Quidel rapid test for influenza A and B. Results in only 10 minutes. CLIA waived for POC use. No equipment needed.

[Learn More...](#)



Rapid Test Methods

Check out our mini catalog on rapid test kits. You'll see many "hard to find" products that will save you time and money!

[Learn More...](#)

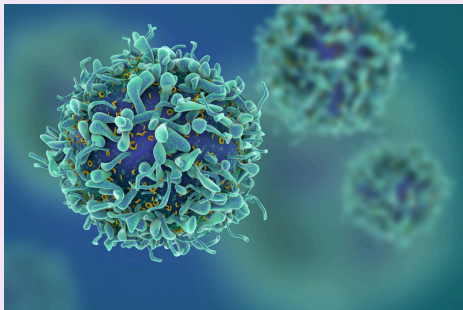


UV Chamber

Now you can sanitize your valuable N95 masks to make them last longer. Never run out again! Sanitizes four masks in only four minutes!

[Learn More...](#)

[See a study about sanitizing and re-using masks...](#)



Can a T Cell Test Predict Immune Status?

New Study shows that assays for T Cells against COVID-19 can be a good predictor of disease susceptibility

Ensuring that essential workers are healthy and can receive a vaccine against SARS-CoV-2 during the pandemic is extremely important. However, a major question must be considered: **How can we identify which individuals are most at risk for severe COVID-19 infection?** The answer to this question could start with a simple blood test for T cell immunity.

T cells originate in the bone marrow, but are matured in the thymus. However, they are not activated until they find their specific antigen, which in this case is the SARS-CoV-2 virus.

Increasing the number of immune T cells is crucial to clearing the SARS-CoV-2 virus from the patient's body. It has been shown that 95% of patients in ICU show an alarming decrease in T cell numbers. As we age, it is known that T cell function decreases. However, it is not known for certain if the decrease of T cells in COVID-19 patients is due to age or the cytokine response that could also impair T cell function. (4) Young people are less prone to severe infection due to their more robust T cell response and a lesser cytokine response in comparison to the elderly.

In a study by Oxford Immunotec Global and David Wyllie, nearly 3,000 first responders (police, fire, and healthcare workers) were evaluated for the antibody and T cell response to SARS-CoV-2. The T cell response to various SARS-CoV-2 proteins were determined using a research use only (RUO) T-SPOT *Discovery* SARS-CoV-2 assay (Oxford Immunotec, Oxford, England). The cumulative responsiveness of T cells to the spike (S), nuclear (N) and membrane (M) proteins was measured, and workers were placed into a high or low T cell response group. (1,2)

None of the participants with a high T cell response developed symptomatic SARS-CoV-2 infection in the follow-up period, whereas amongst those with low T cell responses, there were 20 confirmed infections. From the high T cell response group, about half of the individuals also had detectable antibodies against the N or S proteins. These results suggest that T cell assays may be able to predict the risk of patients becoming sick with COVID-19. (1,2) It also indicates that a T cell assay could be a far better predictor of immune status than an antibody test (either IgG or IgM).

Unfortunately, the numbers of individuals with a high T cell response to SARS-CoV-2 were shown to decline with increasing age; this may be another factor that could put the elderly at risk for a high severity of illness or fatality. (1,2,3) The results from this study are most important to consider for essential workers. In this case, those who may be at higher risk of infection by COVID-19 should take extra precautions while working in shared workspaces.

Hopefully, this type of diagnostic test can be used beyond an RUO setting and become implemented into standard clinical care to help essential workers and the general community identify individuals most at risk for COVID-19. In the near future, these high-risk individuals will also benefit from the three recently developed vaccines. (Figure 1)

[Learn more about T Cell Tests for COVID-19.](#)

Works Cited: [1](#), [2](#), [3](#), [4](#)

By Anna Klavins
R&D Microbiology Technician
HARDY DIAGNOSTICS



Carba 5

Detect the five most common enzymes of bacterial resistance to the carbapenems.

No equipment needed!

[Learn More...](#)



ImmuView P&L

Now you can simultaneously detect both *Legionella* and *S. pneumoniae* from a urine specimen, when patients show signs of pneumonia. No equipment needed!

[Learn More...](#)



Hardy's CarboFerm

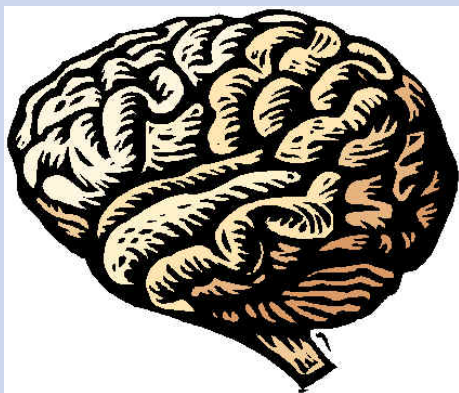
Confirm your *N. gonorrhoeae* cultures by using traditional carbohydrate fermentation tests in as little as two hours! No equipment needed.

[Click here](#)



The DuraRack

It just doesn't get any more durable than this. The DuraRack is the last Petri plate rack you will ever have to buy!

[Learn More...](#)

Brainteasers

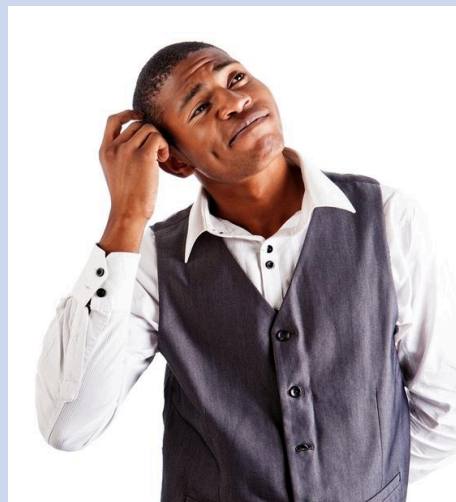
A brainteaser a day
Keeps the senility away...

[Click here for a challenge](#)

The Name Game

If the person that named the
Walkie Talkie had been allowed to
name other items...

- **STAMPS:** "Lickie Stickie"
- **DEFIBRILLATORS:** "Hearty Startie"
- **BUMBLE BEES:** "Fuzzy Buzzy"
- **PREGNANCY TESTS:** "Maybe Baby"
- **BRAS:** "Breastie Nestie"
- **FORKS:** "Stabby Grabby"
- **SOCKS:** "Feetie Heatie"
- **HIPPOPOTAMUS:** "Bloatie Floatie"



Unintended News Headlines

**Safety Experts Say School Bus
Passengers Should Be Belted**

**Survivor of Siamese Twins Joins
Parents**

Iraqi Head Seeks Arms

British Left Waffles on Brexit

Eye Drops Now Off Shelf

Teacher Strikes Idle Kids

**Governor Wins on Budget, but
More Lies Ahead**

**Something Went Wrong in Jet
Crash, Expert Says**

**Plane Too Close to Ground, Crash
Probe Told**

**Miners Refuse to Work After
Death**

Stolen Painting Found by Tree

Red Tape Holds Up New Bridge

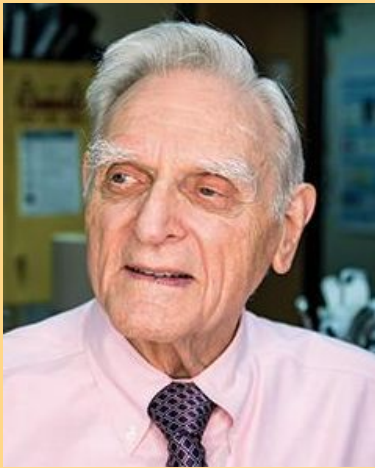
- **NIGHTMARES:** "Screamy Dreamy"

Astronaut Takes Blame for Gas in Spacecraft

Hospital Sued by 7 Foot Doctors

Include Your Children When Baking Cookies

Wisdom to Ponder...

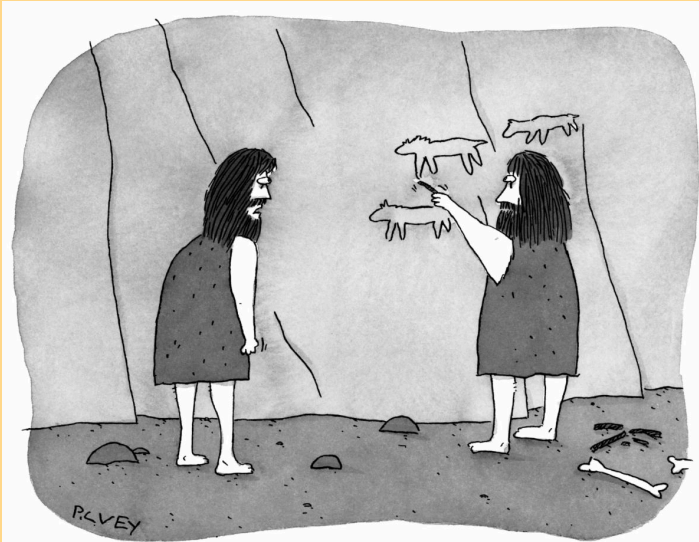


John B. Goodenough

98 years old

American materials scientist, a solid-state physicist, and a Nobel laureate in chemistry. He is widely credited with the invention of the lithium-ion battery, and for developing computer random access memory (RAM). He is a professor at the University of Texas at Austin.

"So a good teacher always makes you do something a little bit more than you thought that you could do."



"My doctor says you should be drawing more fruits and vegetables."

CartoonStock.com



Rubes By Leigh Rubin
RubesCartoons.com

"I don't know about you guys, but with the current state of affairs, I'll be extending my hibernation indefinitely."

Cartoons by Leigh Rubin

"Wisdom comes out of dialogue so you have to develop the capacity to expose your own ignorance in order that they may discover their own wisdom."

"I'm old enough to know you can't close your mind to new ideas. You have to test out every possibility if you want something new."

"My objective was never to make money. I wanted to contribute to human knowledge and betterment."

"I've had an interesting career, and I don't know if it was by chance or grace."

"Some of us are turtles; we crawl and struggle along, and we haven't maybe figured it out by the time we're 30. But the turtles have to keep on walking."



"You can live to be a hundred if you give up all the things that make you want to live to be a hundred."

~ Woody Allen

Sign seen on a Colorado highway...



Increasing your protection...

References for utilizing Vitamin D and Zinc supplementation for the adjunct therapy and prevention of COVID-19.

Listed here...



During our 40 years of serving the microbiology community, we have continually aimed to provide the utmost in "a culture of service" for our valued customers. As a 100% employee owned company, we have even more incentive to please our customers as best we can every day. Do you have a suggestion, comment or question? Please contact me [here](#).

Jay Hardy, CLS, SM (NRCM)
CEO of Hardy Diagnostics



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