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CryoSavers
for long term freezer storage

Learn about our complete selection of freezer vials.

View the CryoSaver catalog.

Micro Musings...

Norbert crams for his microbiology exam.

Hemp is Enlisted in the Battle Against Bacteria

Cannabidiol (CBD) is one of the most abundant non-psychoactive cannabinoids naturally found in hemp plants, in contrast to the psychoactive tetrahydrocannabinol (THC) found in other strains of the cannabis plant. (1)
Hardy's new Carba 5 detects the five major bacterial enzymes of carbapenem resistance. This new lateral flow device gives you results in only 15 minutes at a price much much lower than PCR!

Watch a short video...
Learn more...
Press release...
Order here...

Control Organisms

Hardy offers a complete selection of over 900 ATCC derived microorganisms for use in Quality Control procedures.

Learn more...

Zerbaxa and Avycaz now available!

New Antibiotics

KB Disks Now Available from Hardy

At the University of Queensland, Australia, a group of researchers have found some success when testing CBD against panels of common bacteria that exhibit resistance towards the most commonly used antibiotics. The testing done by Dr. Mark Blaskovich's group, senior research officer at the Centre for Superbug Solutions, has been completed in vitro and in animal models.

Overall, the results indicated good effectivity against Gram-positive bacteria, but this was not observed with Gram-negative bacteria. In the animal studies, topical CBD reduced the number of bacteria over time, although it did not fully clear infection.

Dr. Blaskovich's research was supported by Botanix Pharmaceuticals Ltd and the Australian government in order to identify uses of CBD for skin conditions.

"The first thing we looked at is CBD's ability to kill bacteria," he says. In every case, CBD had a very similar, if not better, potency to that of common Gram positive antibiotics, such as vancomycin and daptomycin.

The researchers tested the CBD against some strains of *Staphylococcus*, which causes skin infections, and *Streptococcus*, which causes strep throat. "We looked at how quickly the CBD killed the bacteria. It's quite fast, within 3 hours, which is pretty good. Vancomycin kills over a period of 6 to 8 hours," states Blaskovich.

In addition, the CBD also disrupted the biofilm, the layer of "goop" around bacteria that makes it more difficult for the antibiotic to penetrate and kill.

Interestingly, CBD has already made a splash into the cosmetics and skincare arena and can be found in facial oils, serums, salves, bath bombs, sunscreen, and some types of makeup.

Although CBD has already been added to many different products, CBD is currently FDA approved only for treating rare and severe forms of seizures. As preliminary research continues, the results could support and promote additional innovative therapeutic uses for CBD.

Ref: 1, 2, 3, 4, 5
- Imipenem/Relebactam, "Recarbio" (Z9441, Z9445)
- Eravacycline, "Xerava" (Z9401, Z9405)
- Plazomicin, "Zemdri" (Z9331)
- Ceftazidime/Avibactam, "Avycaz" (Z9351, Z9355)
- Ceftolozane/Tazobactam, "Zerbaxa" (Z9341, Z9345)
- Delafloxacin, "Baxdela" (Z9301, Z9305)
- Meropenem/Vaborbactam, "Vabomere" (Z9321, Z9325)
- Omadacycline, "Nuzyra" (Z9411)
- Lefamulin, "Xenleta" (Z9451, Z9455)

HardyDisks:
- Are compatible with all BD Disk dispensers.
- Feature "last disk recognition" so you know when a refill is needed.
- Include all traditional and newer antibiotics.

Learn more about HardyDisks.
View our AST mini-catalog.

For the detection of Group B Strep...

Carrot Broth One-Step

Every test is an opportunity for a new life to thrive and grow...

- Improved...No tile addition needed!
- Detects hemolytic Group B Strep from the initial broth culture
- Provides results in as little as sixteen hours
- Found to be 100% sensitive and up to 100% specific in a recent study

Our new, FDA-cleared, chromogenic media for Carbapenem-Resistant Enterobacteriaceae

PathFinder Listeria

"The green glow will let you know..."

Hardy's new test for environmental Listeria will eliminate most false positives and quickly give you results, as seen by a green glow!
Strange ads from the past...

We've got a beef!

When it comes to antibiotics in beef, how do the burger chains stack up?

Last year, Consumer Reports and the Center for Food Safety published a study of all the leading hamburger chains and whether or not they use beef tainted by antibiotics. In the US today, over 70% of all antibiotics are given to food animals as opposed to humans. This is a major contributor to the growing problem of antibiotic-resistant infections, which is taking the lives of 23,000 Americans annually, according to the CDC. The antibiotics added to the feed are usually not

Salmonella
Still a major concern...

According to the CDC, in the United States, Salmonella causes annually:

- 1.2 million illnesses
- 23,000 hospitalizations
- 450 deaths

Much of this could be avoided if poultry is cooked at the recommended 165 deg F. and if measures are taken not to cross-contaminate food in the kitchen.

More detailed information can be found here.

For the detection of Gardnerella vaginalis

Gardnerella Selective Agar

Our new G. vag plate contains no human blood!
No need for blood-borne pathogen precaution when detecting Bacterial Vaginosis.
given to sick animals, but are given in order to promote rapid growth, or to prevent disease due to over-crowding and unsanitary conditions in which the animals are raised.

Of the 25 burger chains studied, only Shake Shack and BurgerFi gained an A rating for sourcing antibiotic-free beef.

Those receiving an F rating for taking no action were McDonald's, Burger King, Sonic, Jack in the Box, Hardees, Whataburger, Carl's Jr, Five Guys, Culver's, Steak 'n Shake, In-N-Out, White Castle, Checkers, Krystal, Smashburger, Freddy's, The Habit, Rally's, Fuddruckers, A&W, Jack's, and Farmer Boys. Wendy's received a D rating for sourcing only 15% of their meat from an antibiotic reduced source.

Next month's MicroBytes issue will report on which restaurants are doing their part to control the over-use of antibiotics. Sneak preview: We can be assured that Chipotle, Panera, and Chick-fil-A are doing a good job in this area.

* * * * *

Phraseology...

"TIP"

The tip jar may have originated hundreds of years ago. A 1946 editorial in Life magazine claimed that English taverns used prominently displayed urns for tips that were labelled "To Insure Promptitude." However, there is no historical evidence to support this.

It is often thought that the word "tip" is an acronym standing for "To Insure Promptness" or "To Insure Performance." Although this may seem logical, tip is actually an old word that has nothing to do with either acronym or the act of attempting to influence quality of service. First of all, the proper word would be "ensure," not "insure," and, secondly, acronyms were rarely used before World War II.

Although the word has many meanings, both as a verb and as a noun, use of the term as it applies to monetary rewards to servants dates to the 1700s. However, the use of tip to describe the act of giving something to another (where that list of possible 'somethings' could include small sums of money for a waiter, intelligence on horse races, or the latest silly joke) goes back to 1610.

* * * * *

Inoculating Loops

Learn why this is the best way to culture for G. vaginalis.

Request samples for your laboratory.

* * * * *

Zapping Superbugs with light...

Can a Surface Disinfect Itself Using Ambient Light?

New research using quantum dots and crystal violet show great promise.

No one should contract an infection while receiving health care treatment; however, hundreds of millions of patients do every year. In fact, one in ten patients suffer from hospital-acquired infections (HAI) while receiving care according to a report from the World Health Organization (WHO). (1)
Hardy offers a complete selection of loops. Whether you prefer platinum, nichrome, or plastic... Hardy has it! See our complete offering.

What is Hardy all about?
View a short video to find out...

Did you know Hardy Diagnostics is 100% owned by its employees?

Brainteasers
A work-out for your mind.

Begins here...

Think about it...

* Is there ever a day that mattresses are not on sale?
* Why do people constantly return to the refrigerator with hopes that something new to eat will have materialized?

In an effort to mitigate the risks, antimicrobial compounds and materials have been researched extensively to pioneer the development and implementation of new and revolutionary technologies. In recent years, researchers at the University College London (UCL) presented a new material with promising applications in infection control, which they debuted in 2018 at a Materials Research Society. Ethel Koranteng, the principle chemist, and her colleagues introduced a new polymer-based material composed of polyurethane impregnated with quantum dots and crystal violet (QD-CV) in the matrix. (3)

Quantum dots are inorganic fluorescent, semiconducting nano-particles that absorb energy broadly in the visible light range. This energy is then passed to adjacent, photosensitive crystal violet molecules through a process aptly named Förster (Fluorescence) resonance energy transfer (FRET). (2) This energy transfer results in the production of cytotoxic Reactive Oxygen Species (ROS), which kill microbes in the near vicinity. Moreover, unlike dyes used on their own, quantum dots absorb energy broadly in the visible range, enabling activation of QD-CV materials by ambient lighting, which is much safer than UV radiation.

In addition to promising antimicrobial applications, this material is immensely practical as well. It harnesses energy from the ambient light of overhead fixtures, constantly powered in health care settings, and has a degree of versatility not afforded by other bacteriostatic materials, such as certain metals or metal-doped glass. The polymer is extremely pliable, making it suitable for fastening to curved or irregular surfaces that require flexibility; many of which metals or glass are not able to conform. (3) Such surfaces include keyboards, door handles, and bed rails.

In lab tests, the antibacterial activity of the material was evaluated against laboratory strains of S. aureus and E. coli. In the presence of 6,000 lux light intensity and a one hour incubation period, S. aureus was completely eliminated, whereas E. coli was reduced by 99.99%. Clinical strains were evaluated as well, which delivered a promising 99.97% reduction in MRSA and 99.85% reduction in a carbapenem-resistant strain of E. coli. The results of application testing demonstrates the efficacy of the quantum dot-crystal violet-impregnated polymer and suggest a viable and promising means of reducing the spread of transmissible infections in health care facilities.

Ref: 1, 2, 3

Andrew Kravariotis
R&D Biochemist
HARDY DIAGNOSTICS
* Why do people keep running over a string a dozen times with their vacuum cleaner, then reach down, pick it up, examine it, then put it down to give the vacuum one more chance?

* Why is it that no plastic bag will open from the end on your first try?

* How do those dead bugs get into those enclosed light fixtures?

Fungal slide cultures made easy!

Hardy's MycoVue does all the work for you! Allow your mycology cultures to grow undisturbed in a humidified chamber. The entire unit can be placed on the microscope stage for viewing.

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Trio Bas Air Samplers

Two heads are better than one!

Now with Bluetooth capability!

Trio Bas from Orum International has a robust impact air sampler for every type of use. Single, double, or triple heads are available from Hardy Diagnostics.

- Watch a short video that will explain why the Trio Bas is the best choice for your clean room.
- See the complete Trio Bas catalog.
- Please have a sales rep contact me about air samplers.

Testimonial from a Pharmaceutical Lab worker...

"The two heads of TRIO BAS DUO air sampler was one of the best investments we made during the last two years. The laboratory staff, which is responsible for the bacteriological sampling, is able to double the number of environmental microbial cycles per day. This means more efficiency and lower cost, together with the possibility to increase the number of sampling in other areas of the premises in the future."

Do you perform colony counts?

Compact Dry

- Self-diffusing of sample - No spreader needed
- Room temperature storage
- Rigid plate with removable lid
- Stackable plates to conserve space
- Many media formulas available

Learn more...
Request Samples of Compact Dry
Wisdom to Ponder...

Blaise Pascal
1623 ~ 1662

French mathematician, physicist, inventor, writer and theologian. Pascal's earliest work was in the natural and applied sciences where he made important contributions to the study of fluids, and clarified the concepts of pressure and vacuum, and invented the mechanical calculator. Pascal also wrote in defense of the scientific method.

"Truth is so obscure in these times, and falsehood so established, that, unless we love the truth, we cannot know it."

"Kind words do not cost much; yet they accomplish much."

"Too much and too little wine. Give him none, he cannot find truth; give him too much, the same."

"Few friendships would survive if each one knew what his friend says of him behind his back."

"You always admire what you really don't understand."

"Do you wish people to think well of you? Do not speak well of yourself."

"The heart has reasons of which reason knows nothing."

"Small minds are concerned with the extraordinary; great minds with the ordinary."

"All men's miseries derive from not being able to sit in a quiet room alone."

"In faith, there is enough light for those who want to believe and enough shadows to blind those who don't."

"Little things console us because little things afflict us."

"There are only two kinds of men: the righteous who think they are sinners and the sinners who think they are righteous."

"Man is but a reed, the most feeble thing in nature, but he is a thinking reed."

"Men despise religion. They hate it and are afraid it may be true."

Now Available!
The Wizard is an automated Compact Dry plate reader that will perform colony counts within seconds!

Find out more...
Watch a short video...

* * * * *

Stool cultures with no interference from Proteus!

HardyCHROM SS NoPRO

NOTE: New study shows 50% less colony work-ups, for an overall cost savings of 80%!

Find out how you can save also...

- Reduces costly false-positive work-ups, due to Proteus spp.
- Less colony picking, subculturing, and identifications
- No need for TSI, LIA, or KIA tubes
- Reduces use of expensive ID cards
- Reduces the number of plates for primary stool setup
- Increased specificity
- Easy Identification by patented chromogenic reaction
- The only chromogenic media that will detect both Salmonella and Shigella

Learn more about HardyCHROM SS NoPRO.

Place your order now.

Try out some free samples.

* * * * *
Pascal's death

"Faith is different from proof; the latter is human, the former is a Gift from God."

***

Online Ordering Made Easy!

Watch a short video to learn how easy it is to order from Hardy on-line!

Pick... Click... And your order is on its way!

***

Did you know?

Hardy Diagnostics...

- Manufactures over 2,700 microbiology products for you to choose from.
- Stocks over 13,000 laboratory products for your "one-stop shop" experience.
- Is celebrating its 39th year of serving microbiologists.
- Manufactures from two ISO certified factories; one in California and one in Ohio.
- Maintains nine distribution centers in the U.S. for faster turn-around-time to your lab.
- Is ISO 13485 certified for the manufacture of medical devices to give you confidence in our products.
- Services over 10,000 labs and maintains a worldwide network of over 80 distributors.
- Is a 100% Employee Owned company. "If we act like we own the place...it's because we do!"

Rubes By Leigh Rubin
RubesCartoons.com

"Is it just me, or are you also suddenly feeling exceptionally jumpy?"

Find more
Want to book Leigh as a speaker at your next event?

Warning:

PUN ZONE AHEAD
“As Hardy Diagnostics approaches its 40th year of serving microbiologists in the laboratory, I would like to thank each of our customers for their support and loyalty. It truly has been a pleasure to serve you!

If there is any way we can improve or expand upon our service, would you please let me know?”

Jay Hardy, CLS, SM(NRCM)
President
HARDY DIAGNOSTICS
Louis Pasteur once said...

"Take interest, I implore you, in those sacred dwellings that are called by the expressive term, laboratories. Demand that they be multiplied and advanced. These are the temples of the future, temples of well-being and happiness... where humanity grows greater, stronger, better"

Regular naps prevent old age...

Especially if you take them while driving.

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