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microBYTES™

A Hardy Diagnostics eNewsletter

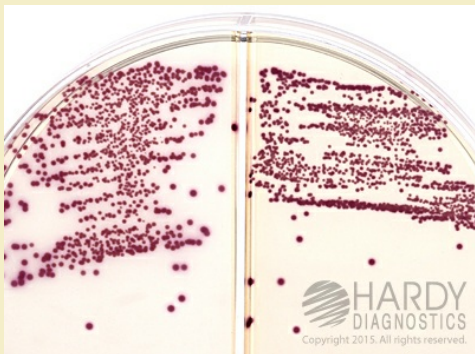


November, 2015

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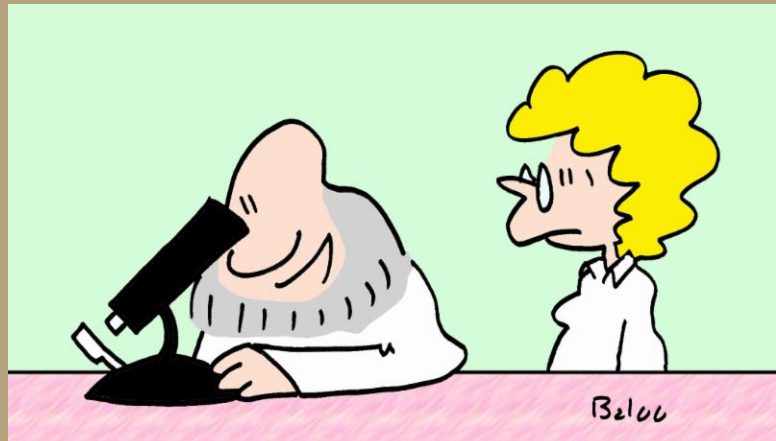
The New Hardy Staph Biplate

**MRSA / S. aureus
Biplate**



Hardy's new biplate for

Micro Musings...



"The anaerobic ones are just sitting there, but the aerobic bacteria are doing jumping jacks, sit-ups, leg lifts...."

*Breaking the code
could make our lives better...*

How do Bacteria talk to each other?

Staphylococcus will assist in detecting MRSA and MSSA. One side has chromogenic substances to cause all *S. aureus* colonies to turn magenta in color. The other side will also show magenta colonies for *S. aureus* but only if it is resistant to methicillin. This new biplate gives you the complete picture when it comes to detecting sensitive and resistant strains of *Staphylococcus aureus*.

[See the catalog listing](#) for J35.

[View the instructions](#) for use (IFU).

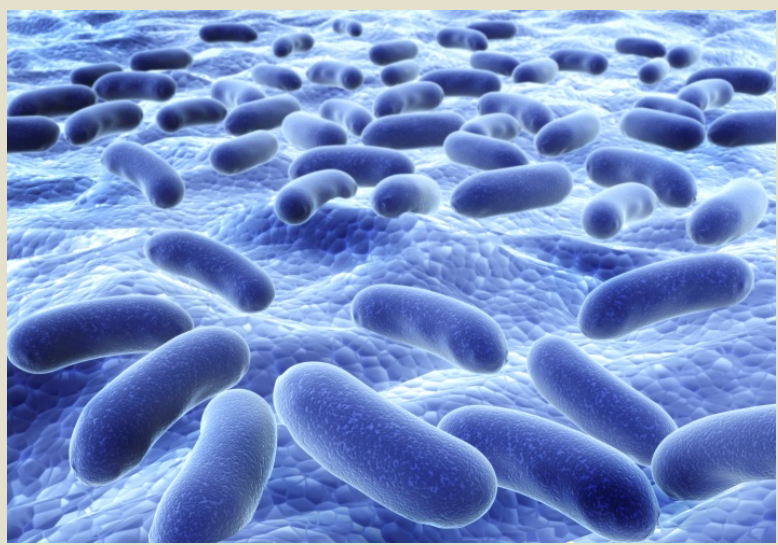
[Request](#) free sample for evaluation.

* * *

Hardy Announces...

2 New Antibiotics

Hardy will be the first to offer these new antibiotic disks for Kirby-Bauer testing.



Find out **about:**

- **Biofilms**
- **Quorum Sensing**
- **Quorum Quenching**
- **Autoinducers**
- **Bacterial Census**

That Pesky Pestis

*Studies of ancient DNA reveal
the history and nature of the Plague*

A recent collaboration by the universities of Copenhagen, Denmark, and Cambridge in the UK have found some interesting new evidence that *Yersinia pestis*, long credited for three devastating pandemics, may have been hanging around in humans for a lot longer than previously estimated.

Avycaz

Ceftazidime/Avibactam

Zerbaxa

Ceftolozane/Tazobactam



These new antibiotic disks will be available in January of 2016.

[More information...](#)



[Click here](#) for our complete catalog of products for Antimicrobial Susceptibility Testing.

[Click here](#) to contact your Account Rep for further discussion.

* * *



Y. pestis was behind three waves of Bubonic plague, the first starting with the Plague of Justinian in 541 AD and continuing intermittently until 750 CE. The second was dubbed the "Black Death" and devastated Europe from 1347-1351 CE, although it continued sporadically until the 18th century. The third emerged in China in the 1850's and continued until the middle of the 20th century.

The international team of researchers sequenced the genome of bacteria found in the teeth of 101 adults dating from the Bronze age, from locations spanning across Europe. They found *Y. pestis* in seven samples.

Of those seven, six lacked key genetic components that allow *Y. pestis* to use fleas as a vector from human infection. A virulence gene called "ymt" and a mutation in an activator gene called "pla" work together, as ymt protects the bacteria from toxins in the flea's digestive tract, allowing it to build up in numbers. This chokes off the flea's digestive system, causing it to feel as though it's starving and will bite anything it can. The pla gene allows *Y. pestis* to spread across different tissues, so it is no longer limited to the pneumonic tissue but can get into the blood and lymph nodes as well.

Rapid Strep Kit



Quidel's Group A Strep Kit produces results within five minutes on a simple-to-use dipstick. It is highly sensitive, producing 95% agreement with standard throat cultures.

The easy procedure is CLIA waived so it can be used in the physician's office laboratory.

Order now

See other Quidel kits offered by Hardy Diagnostics.

See all the rapid latex agglutination kits that Hardy offers.

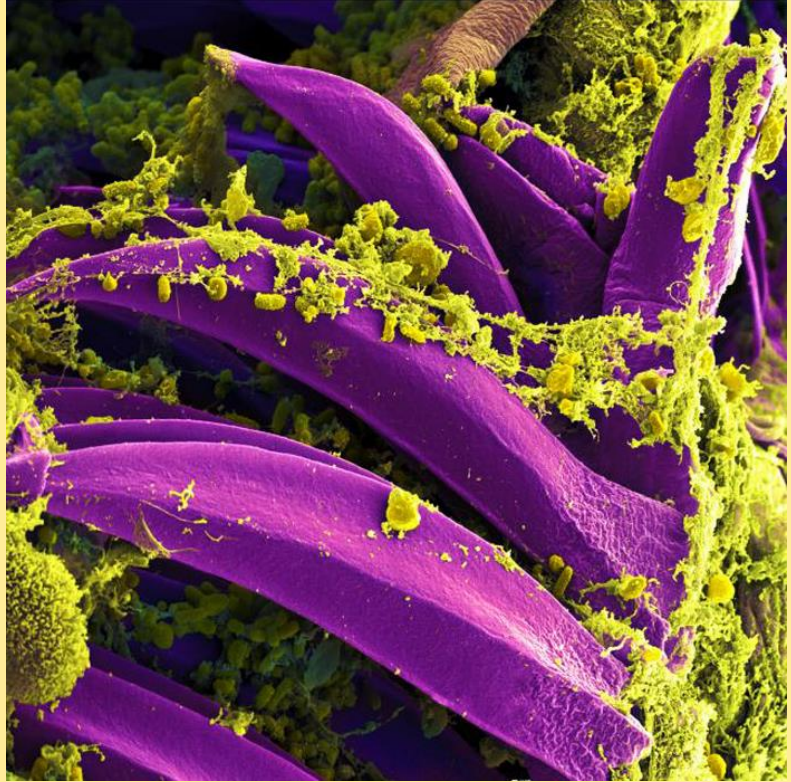
* * *

Brainteasers



Use it or lose it.

Put it to use here...



Y. pestis bacteria shown in yellow are clinging to spines within a flea's digestive system.

This means the ancient version of the plague was mainly pneumonic (rather than bubonic), causing it to spread and kill less quickly, although this form of the disease is 100% fatal if not treated. As a result of this research, it is now thought that the Black Plague was not spread by rats and fleas, rather by human to human means. This may have worked to the bug's benefit, as previous to the Bronze Age there was less movement between groups. Killing its victim too quickly would not allow it to spread. The Bronze Age, with its increased weaponry, led to more wars, which led to more movement. This not only caused people to travel greater distances, but had the added benefit of having many people crowd into smaller and more protected townships and cities. This created a dense population for *Y. pestis* to multiply, and allowed the formation of the more lethal strain.

The seventh skull examined had both the *pla* and *ymt* gene, giving the researchers a reasonable timeline when *Y. pestis* became able to cross into different tissues and use fleas as a vector rather than waiting for someone to breathe around a coughing carrier. This skull was from Armenia in 951 BCE, while the next most recent, which did not have the mutations, was from 1686 BCE.

"The Sandwich"



The word *sandwich* that we use today was born in London during the very late hours one night in 1762 when an English nobleman, John Montagu (1718-1792), the Fourth Earl of Sandwich, was too busy gambling to stop for a meal even though he was hungry. The legend goes that he ordered a waiter to bring him roast-beef between two slices of bread.



The Earl was able to continue his gambling while eating his snack; from that incident, we have inherited that quick-food product that we now know as the sandwich. He apparently had the meat put on slices of bread so he wouldn't get his fingers greasy while he

More than just an interesting historical fact, this study illustrates a concept that is particularly relevant today. Just as *Y. pestis* did, small scale diseases can flourish under the right conditions, and, with just the right mutations, can devastate populations.

Kate Massey

* * *

The ultimate in comfort and economy!

ComfortPRO Labcoats



Features:

- No worries about laundering!
- Tri-laminate spunbound material for better splash barrier
- Knee length for more complete protection
- Breathable to prevent over-heating
- Soft knit collar and cuffs for comfort

was playing cards.

The title, Earl of "Sandwich," comes from the Old English "*Sandwic*," and literally means "sand village," "sandy place," or "place on the sand." The old English *wic* came from the Latin word *vicus*, meaning "hamlet," which also gives us the word vicinity. The first recorded mention of the town was around the year 640.

The Fourth Earl of Sandwich, besides becoming famous for his non-greasy fingers, financed a voyage by Captain Cook, who went on to discover a beautiful chain of islands in the Pacific that he named after his financier: The Sandwich Islands. We now know these islands as Hawaii.

* * *

Get organized in 2016!

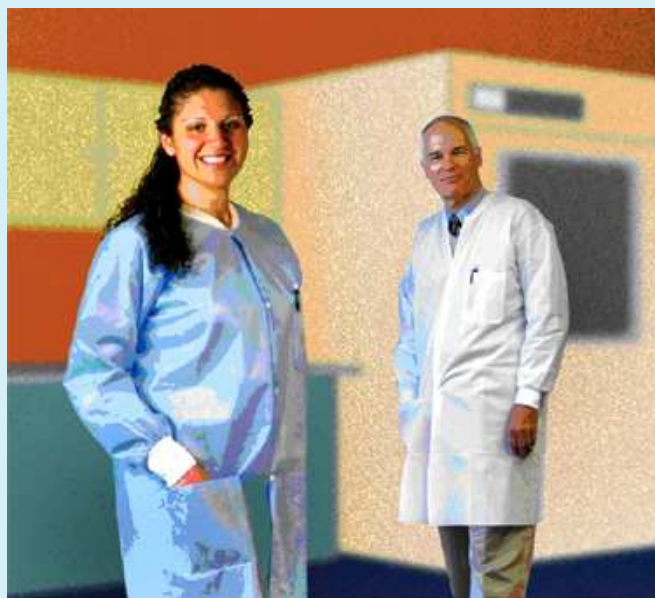
Revolving Petri Plate Rack



Hardy's revolving Petri Plate rack is ideal for dispensing plates and transporting from incubator or refrigerator to bench top.

Plates can be removed from the top or bottom of the stack. This revolving rack holds up to

- Three pockets (2 hip, 1 breast)
- Available in S, M, L, XL, XXL, and XXXL
- Available in blue or white
- Only \$2.64 each! (most sizes)



See the Brochure.

Order now.

Request a free sample.

Online Ordering Made Easy!



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

Pick. Click. You're Done!

* * *

56 standard size Petri plates.

Order now...

All formats available...

Control Organisms

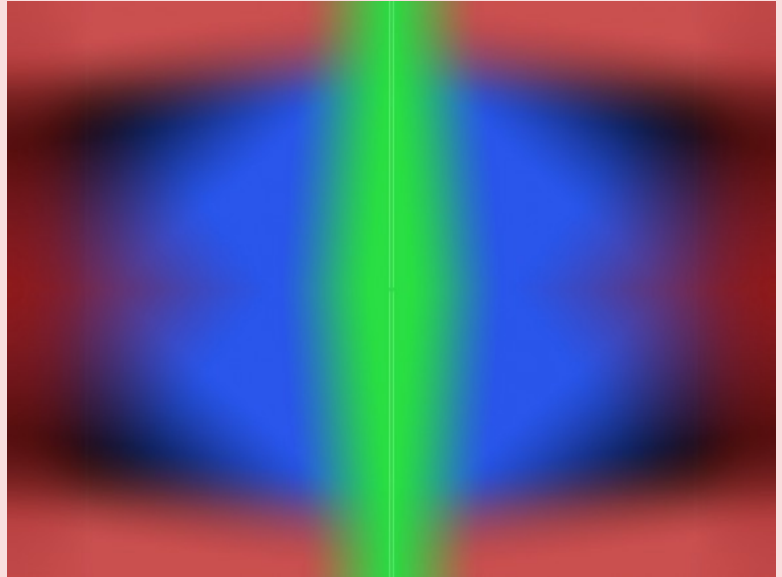


Hardy offers a complete selection of microorganisms for your QC program. These MBL organisms are licensed derivatives from ATCC. They are available in the swab or pellet format; qualitative or quantitative. Order from Hardy for immediate service and delivery.

View the entire catalog online.

Request a paper catalog.

Optical oddities...



Move your head back and forth while staring at the center of this graphic.

For reasons unknown, some colors seem to grow larger others don't.

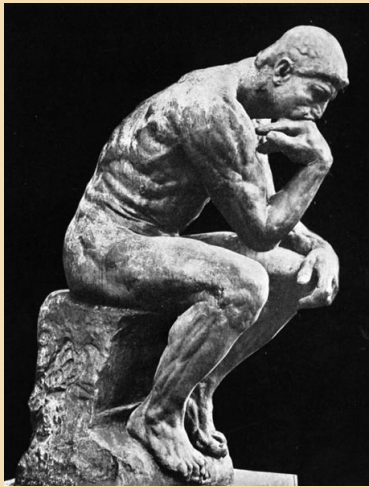
*"Believe half of what you see
and none of what you hear."*

~ Marvin Gaye ~

RUBES



Think about it...



* Why is it that if someone tells you that there are 1 billion stars in the universe, you will believe them; but if they tell you a wall has wet paint, you will have to touch it to be sure?

* If Fed Ex and UPS were to merge, would they call it Fed UP?

* Do Lipton Tea employees take coffee breaks?

* What hair color do they put on the drivers licenses of bald men?

* * *

Save time and money...



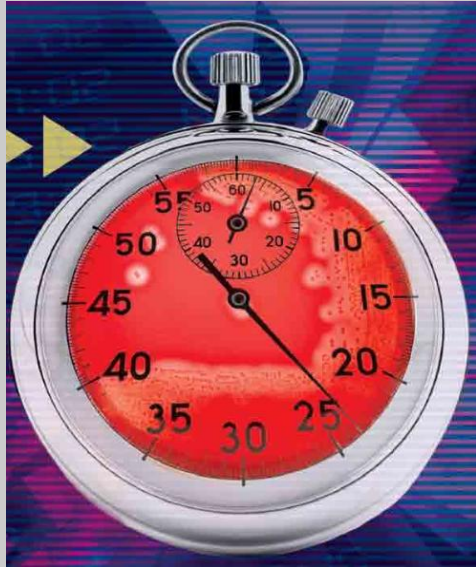
"According to this article, it says that cats are not self-aware, but I strongly disagree. What do you think?"

[Find more](#)

of Leigh Rubin's cartoon humor.

Want to [book Leigh](#) as a speaker at your next event?

Rapid Test Kits



Want to learn how to speed up your identifications?

Hardy offers a 17 page booklet on how to identify bacteria using rapid test methods.

[View](#) the booklet online.

[Request](#) a paper version.

[Contact](#) your account rep for assistance.



Hardy's Carrot Broth for the detection of Group B Strep



"Apparently, it's extremely bad for the heart. But I wouldn't worry – it only affects people who have one."

Warning:

Pun Zone Ahead



- Two hats were hanging on a hat rack in the hallway. One hat said to the other, "You stay

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here. I'll go on a head."

- A hole has been found in the nudist camp wall. The police are looking into it.
- Time flies like an arrow. Fruit flies like a banana.
- Atheism is a non-prophet organization.

* * *

Did you know?



Hardy Diagnostics...

- Manufactures over 2,700 microbiology products for you to choose from.
- Stocks over 13,000 laboratory products to increase your selection.
- Is celebrating its 35th year of serving microbiologists.
- Maintains nine distribution centers in the U.S. for faster turn around time to your lab.
- Is ISO 13485 certified for the

I love to give homemade gifts...



which one of my children do you want?

Democracies

"The best argument against democracy is a five-minute conversation with the average voter."
Winston Churchill

"Remember, democracy never lasts long. It soon wastes, exhausts, and murders itself. There never was a democracy yet that did not commit suicide."
John Adams

"Dictatorship naturally arises out of democracy, and the most aggravated form of tyranny and slavery out of the most extreme

manufacture of medical devices to give you confidence in our products.

- Offers you detailed technical inserts, comprised of over 4,500 pages of information regarding microbiology.
- Services over 10,000 labs and maintains a worldwide network of over 65 distributors.
- Is an Employee-Owned company. *"If we act like we own the place...it's because we do!"*

View a [Corporate Profile](#).
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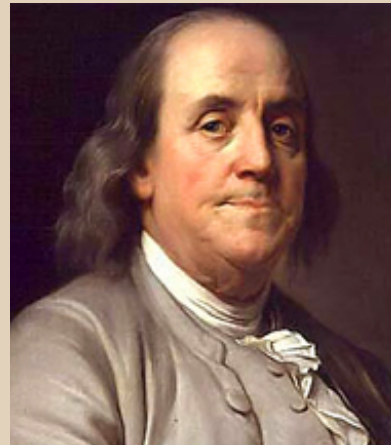
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liberty."
Plato

Upon leaving the Constitutional Convention in 1787, Benjamin Franklin was asked by a female onlooker what sort of government they were planning. He replied, "A republic, if you can keep it."



Did you hear about the
new restaurant on the moon?



The food is out of this world, but

there is no atmosphere.