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# microBYTES™

*A Hardy Diagnostics eNewsletter*



July, 2016

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*The GramPRO 80*

**Gram Stains...  
Consistent  
and Fast**



## *Micro Musings...*

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*"Your prognosis is tied to the outcome of the election."*

## *Improving Patient Care*

# The Patient Safety Atlas

Hardy's GramPRO 80 will rapidly stain your smears and get it right every time! Our patented technology judges the thickness of the smear and adjusts the decolorization step to perfection. Not only that, there are no messy clean-up or maintenance procedures. This new instrument allows up to 80 slides to be loaded for fully automatic processing within one hour! Not only that, but STAT slides can be inserted that will "go to the front of the line!"

[Find out more about all the QuickSlide instruments.](#)

[View the brochure on all of Hardy's automated stainers.](#)

[View a testimonial from a GramPRO 80 user.](#)

[Please contact me to discuss automated slide stainers.](#)

*Hot off the press...*

## New Culture Media Catalog



In March of 2016, in an effort to prevent healthcare associated infections (HAIs), the Centers for Disease and Prevention (CDC) issued a request for all healthcare providers and healthcare facilities to make three critical efforts to further this cause. The CDC also launched the online Patient Safety Atlas in an effort to control the rising threat of resistant bacterial infections.

The following guidelines are succinct and offer very clear advice:

- 1) Prevent infections related to surgery or placement of a catheter.
- 2) Prevent spread of bacteria from spreading between patients.
- 3) Improve antibiotic use.

There are six antibiotic resistant bacteria that are particularly dangerous and are considered urgent or serious threats by the CDC. They are:

- MRSA (methicillin-resistant *Staphylococcus aureus*)
- CRE (carbapenem-resistant Enterobacteriaceae)
- ESBL-producing Enterobacteriaceae (extended-spectrum  $\beta$ -lactamases)
- VRE (vancomycin-resistant enterococci)
- Multi-drug resistant *Pseudomonas*
- Multi-drug resistant *Acinetobacter*

Infections caused by these organisms could lead to sepsis or even death. *C. difficile* infections are the most common HAI found in hospitals, and in many cases, lead to death. However, it is not antibiotic resistant like the others listed above.

**Surgery and Catheters:** The recommendation for

Hardy is proud to announce its new catalog of all culture media offerings. This 85 page booklet contains descriptions of the 2,700 products that Hardy manufactures for the microbiologist.

[View](#) the digital version

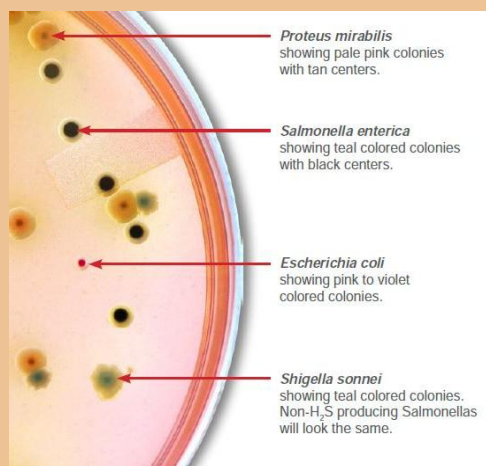
[Send me](#) the paper version.

[Please have](#) an account rep contact me about a price quote.

\* \* \*

*Interference from  
Proteus eliminated!...*

## Spending too much time with stool cultures?



Hardy's unique chromogenic plate will readily differentiate *Proteus* from *Salmonella* and *Shigella*. Get ready for the onslaught of summer stool cultures and stop wasting time working up *Proteus*!

[View more](#) information on HardyCHROM SS.

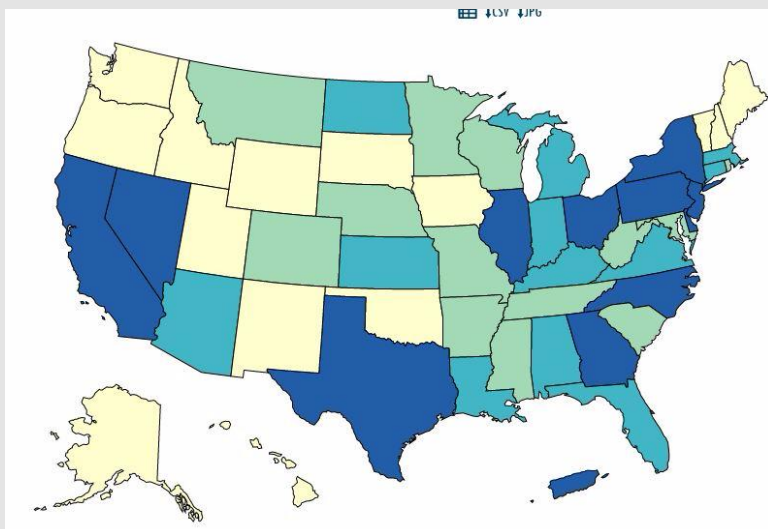
[Send me](#) samples so I can see for myself.

preventing infections from catheters and after surgery include using catheters only when needed, following recommendations for safer surgery and catheter insertion and care, and removing catheters from patients as soon as they are no longer needed.

**Patient Isolation:** For preventing *C.difficile*, it is recommended that healthcare providers are consistent and follow these actions for every patient without exception. When it is appropriate, patients should be isolated, and providers should know antibiotic resistance patterns in their facility and area. In order to prevent dangerous bacteria from spreading, it is recommended that hand hygiene be improved and that gloves, gowns, and dedicated equipment be used for patients who have antibiotic resistant infections.

**Antibiotic Use:** Finally, to improve antibiotic use, it is recommended that cultures be obtained and antibiotics started promptly and reassessed 24 to 48 hours later, especially in cases of sepsis. Cultures should be used to reassess the need for antibiotics and to stop treatment as soon as they are no longer needed. Antibiotics should be used appropriately according to the type of infection and in the proper dosage, frequency, and duration.

**The Patient Safety Atlas:** A patient safety atlas (PSA) was created by the CDC and is a public portal that allows healthcare providers and the greater public to visualize and download data that is based on four years of surveillance (2011-2014) by 4,403 healthcare facilities. These include general acute care hospitals (n=3,676), long term acute care hospitals (n=506), and free-standing inpatient rehabilitation hospitals (n=221).





\* \* \*

## Footwear Sanitizer

# SmartStep

Need a fast and effective way to sanitize footwear in your controlled environments? SmartStep delivers a measured amount of sanitizer to the soles of the shoes before entering a clean area. Firm up your HACCP program with SmartStep!



[View](#) a short video.

[Order](#) yours today.



\* \* \*

## Phraseology

# "Knock on Wood"

The PSA from the CDC will show the incidence of various HAIs. The above map shows CRE incidence with the darker colors showing greater prevalence.

Users can access and visualize national, regional, and state-level antibiotic resistance data from device and procedure related HAIs commonly reported to the CDC's National Healthcare Safety Network (NHSN):

- Central line-associated bloodstream infections (CLABSI)
- Catheter-associated urinary tract infections (CAUTI)
- Surgical site infections (SSI)

There are thirty-one resistant phenotypes reported which include MRSA and CREs. The purpose of this atlas is for both educational purposes and to be used as a tool for developing strategies to combat the growing threat of antibiotic resistance in healthcare facilities across the country. For further information and to access the atlas, please visit this [website](#). Be sure to click on the green "accept" button.

by Marcus Zuzow  
R&D Technician at Hardy Diagnostics

\* \* \*

# Crystal Diagnostics



*Can you detect a variety of food pathogens in less than 10 hours?*

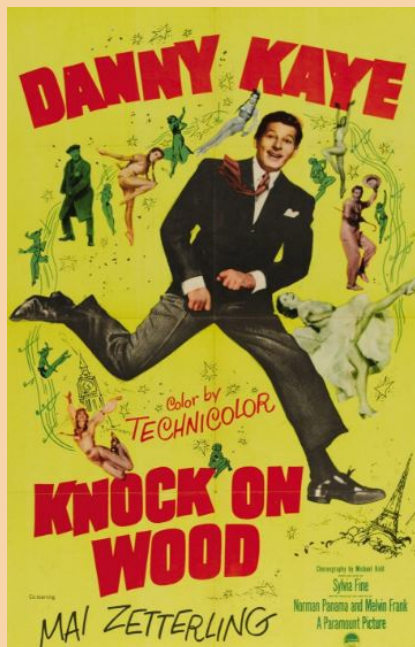
Now you can with the new Crystal Diagnostics XPress. This highly simplified method, using liquid crystals, will revolutionize the way you detect food pathogens, such as *E. coli* O157, *Salmonella*, *Listeria*,



The practice to "knock on wood" has been in use for many centuries. It dates back to pre-Christian times in the British Isles when pagans believed that spirits inhabited trees.



To knock on a tree was believed to invoke the good spirits to not only bring good luck but also to banish the evil spirits. In the UK, this is known as "touch wood." The tradition probably dates back to the Celtic Druids in Ireland.



\* \* \*

and STEC.

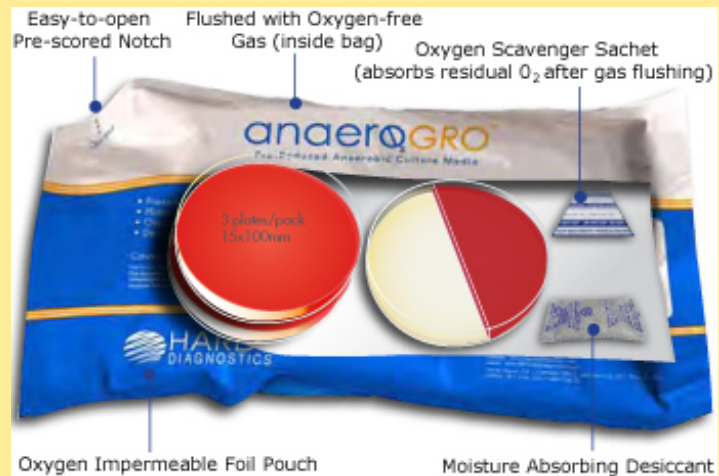
[Watch](#) a short video to learn more...

[See](#) the web page for details.

[Contact](#) us for a demo and price quote.

\* \* \*

## anaeroGRO



Could you be missing important anaerobes? Hardy offers pre-reduced culture media in oxygen impermeable bags that are gassed with nitrogen and contain an oxygen scavenger and desiccant.

[Learn more](#) about anaeroGRO and the many choices of set-up packs.

[Watch](#) a short video explaining the features and benefits of anaeroGRO.

[See](#) our complete catalog of supplies for anaerobes.

[Try a sample](#) pack of anaeroGRO and see how to get better growth of anaerobes.



Anaerobic tubes with Hungate stoppers

## Brain teasers



Here's a test of your brain power...

[Enter here!](#)

*For better specimen collection..*

# TransPRO



Hardy's TransPRO Swab utilizes the new HydraFlock technology for better absorption of the specimen and better elution and release.



The patented HydraFlock features microfibers of unequal length to produce increased surface area to pick up more of the specimen and quickly release it into the transport media or broth.

are available too!

\*\*\*

*Online Ordering Made Easy!*

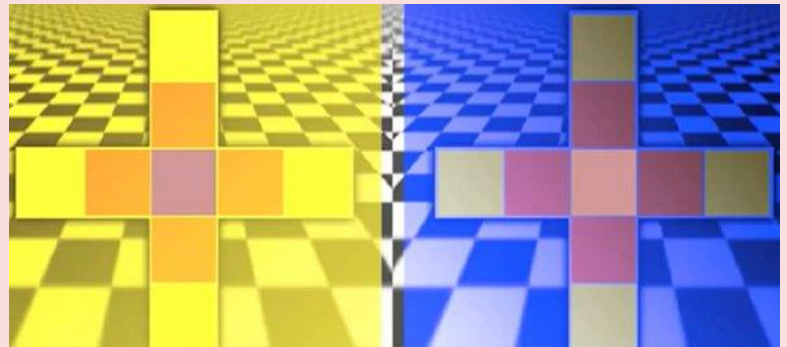


[Watch](#) a short video to learn how easy it is to order from Hardy on-line!

*Pick. Click. You're Done!*

\*\*\*

*Optical oddities...*



The central square is the same color!

It's all about context.  
Scroll to the bottom for another challenge!

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

## *Virchow: A Virtual Genius*



Hardy offers the HydraFlock in Amies Transport media (standard tip, urethral, or nasopharyngeal) or with CVM for Chlamydia, Viruses, and Mycoplasma.

[Learn more...](#)

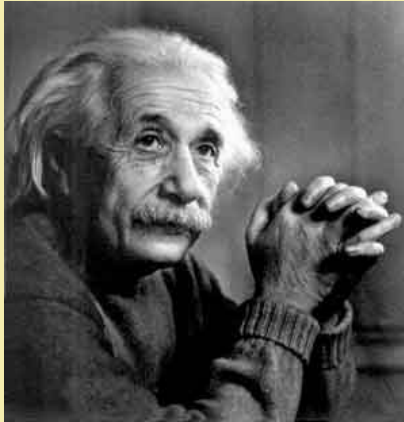
[Request a sample.](#)



In the 19th century, Rudolf Virchow was instrumental in departing from many old methods and continually pushed for a more scientific approach to determining causes, effects, and trends of diseases.

Although Virchow had many titles and achievements, he is most well-known for his work in shaping modern day public health and is known as the "the father of modern pathology."

During his early life, Rudolf showed great intelligence at a young age and was able to learn nine languages fluently. He studied at the Friedrich Wilhelms Institute in Berlin, where he defended his thesis on corneal manifestations of rheumatic disease, earning him his medical degree. Due to his small stature, he acquired the nickname "Der kleine Doktor" (the little doctor). After graduating, Rudolf then proceeded to further his career in pathology. In 1845, he published a scientific paper describing leukemia to the world for the first time, and in 1847, he was given the academic position of *privadozent at Charité*. Other accomplishments of his include discovering the correlation between cancerous and normal cells, developing modern autopsy procedures, and introducing the use of hair analysis in criminal investigations. In 1869, Virchow founded the *German Society for Physical Anthropology, Ethnology, and Prehistory*.



*"There are only two ways to live your life.*

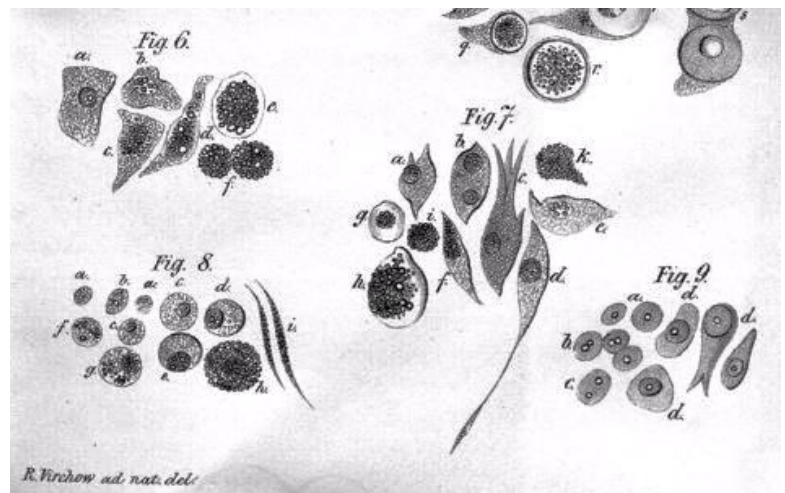
*One is as though nothing is a miracle.*

*The other is as if everything is."*

Albert Einstein

All formats available...

## Control Organisms



Illustrations of cells from *Virchow's Archiv*.

Perhaps Virchow's greatest accomplishment was determining that "disease doesn't affect whole organisms and can be isolated to specific cells or groups of cells." Not only was this a revolutionary idea at the time, it stimulated progress in how physicians treated and diagnosed disease. As a result, diseases became more clearly defined, rather than using obscure labels like "Falling Sickness" or "Winter Fever."



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.

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[Request](#) a paper catalog.



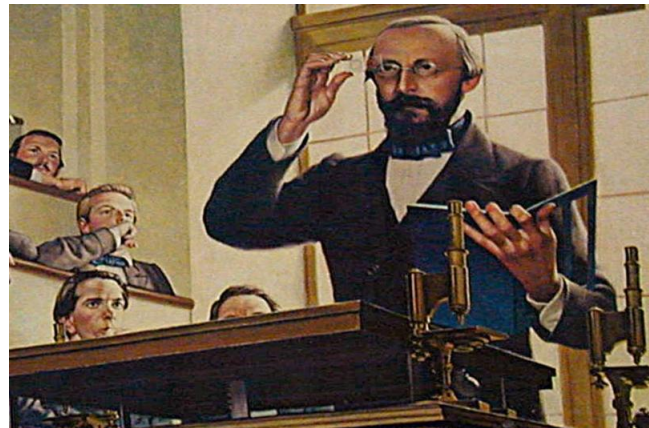
**Think about it...**

Perhaps ahead of his time, Virchow advocated a more holistic approach to medicine. Not fully subscribing to Pasteur and Koch's Germ Theory of disease, Virchow postulated that germs were only using infected organs as habitats, but they were not the cause. He once stated, "If I could live my life over again, I would devote it to proving that germs seek their natural habitat: diseased tissue, rather than being the cause of diseased tissue."

A prolific writer, his scientific writings alone exceeded 2,000 in number. Among his books, *Cellular Pathology* published in 1858 is regarded as the root of modern pathology. This work also popularized the third dictum in cell theory: *Omnis cellula e cellula* ("All cells come from cells").

Virchow was the first to precisely describe and give names of diseases such as leukemia, chordoma, ochronosis, embolism, and thrombosis. He coined scientific terms such as, terchromatin, agenesis, parenchyma, osteoid, amyloid degeneration, and spina bifida.

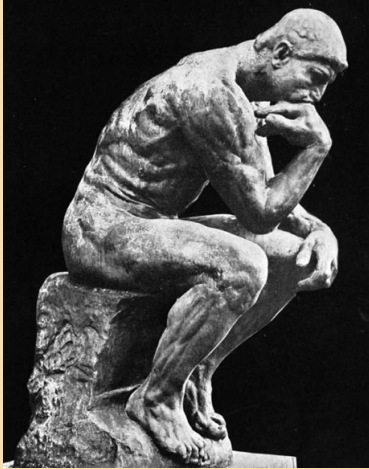
His description of the transmission cycle of the roundworm *Trichinella spiralis*, established the importance of meat inspection, which was started in Berlin. He developed the first systematic method of autopsy involving surgery of all body parts and microscopic examination. A number of medical terms are named after him, including Virchow's node, Virchow-Robin spaces, Virchow-Seckel syndrome, and Virchow's triad. He was the first to use hair analysis in criminal investigations and recognized its limitations. His laborious analyses of the hair, skin, skull type, and eye color of over seven million school children led him to criticize the Aryan Race concept as a myth.



Like so many new ideas in the field of science, Virchow's ideas were not immediately accepted. As cell biology and microbiology were somewhat new topics at the time, claims relating diseases to the two disciplines were often discounted. Virchow sought to "think microscopically" and approach health and disease at a deeper level. Using empirical evidence, he was able to back many of his claims and discount old world ideas.

Although he was mainly a pathologist, Rudolf was well studied and accomplished in other fields including anthropology. His scientific knowledge led him to be very influential with political policy. Even though he considered himself an agnostic, he was an extreme anti-evolutionist and he led many campaigns against Darwin, labeling

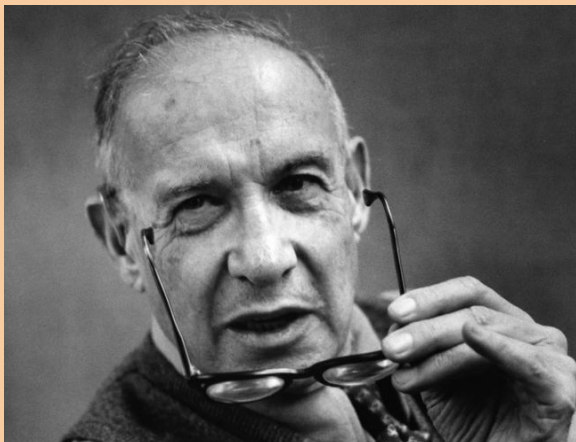




- \* How much deeper would oceans be if sponges didn't live there?
- \* If it's true that we are here to help others, then what exactly are the others here for?
- \* You never really learn to swear until you learn to drive.
- \* Why does no one ever say "It's only a game," when their team is winning?
- \* Ever wonder what the speed of lightning would be if it didn't zigzag?

\* \* \*

### *Wisdom to Ponder...*



### **Peter Drucker**

1909 ~ 2005

*Austrian born, American author, business consultant, and educator. Often called "the Founder of Modern Management."*

"The best way to predict the future is to create it."

him as an "ignoramus." He openly discredited the Neanderthal Man as merely an arthritic and feeble human.

Virchow was a strong proponent against social Darwinism, claiming that it was racist and hazardous for society. A driving philosophy of his life was that disease is a social problem, which can be attributed to poverty and unhygienic practices. These two conditions led to a medical revolution to fight political injustice.

Although some of Virchow's views could be seen as radical, his studies and ideas were revolutionary in propelling modern medicine out of medieval times. His attention to detail and careful investigation of empirical evidence led him to be known as one of the founders of modern medicine.

Ref.

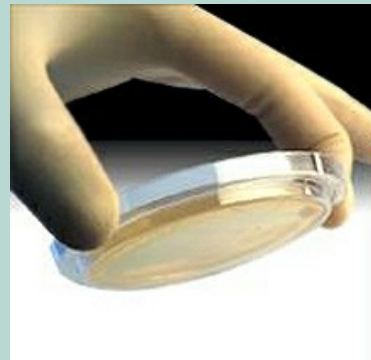
*by Trevor Thorsen*

*Technical Support Specialist at Hardy Diagnostics*

\* \* \*

## *Environmental Monitoring...*

## **Contact Plates**



Hardy offers a complete line of contact plates for your surface monitoring. The Tap-Tight feature assures that the lids will stay securely in place!

"Management is doing things right; leadership is doing the right things."

"The most important thing in communication is hearing what isn't said."

"Time is the scarcest resource and unless it is managed nothing else can be managed."

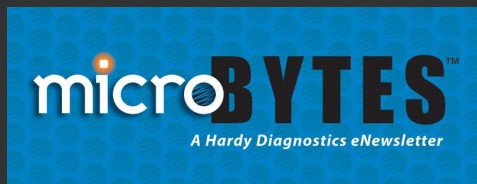
"There is nothing so useless as doing efficiently that which should not be done at all."

"Follow effective action with quiet reflection. From the quiet reflection will come even more effective action."

"Management by objective works - if you know the objectives. Ninety percent of the time you don't."

"Plans are only good intentions unless they degenerate into hard work."

\* \* \*



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*Did you know?*



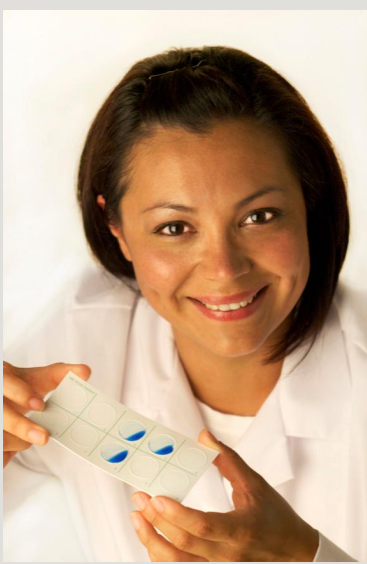
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## RUBES

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## 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 36th year of serving microbiologists.
- Manufactures from three ISO certified factories; one in California, Ohio, and Texas.
- 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 65 distributors.
- Is a 100% Employee-Owned company. *"If we act like we own the place...it's because we do!"*

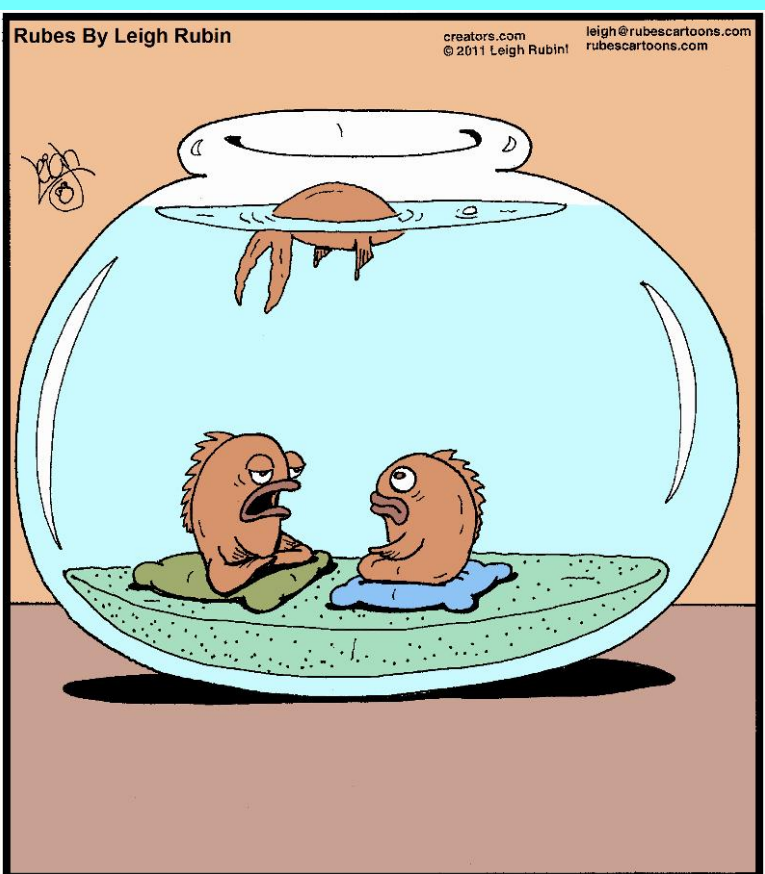
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**QUICK LINKS...**



**"Death is not the end, my son, but simply a physical transcendence from one bowl to the next."**

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of Leigh Rubin's cartoon humor.

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



**Frog Parking Only!**  
**All others will be toad.**

**Seven days without exercise**



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makes one weak.

As Hardy Diagnostics

enters its 36th 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 that we can improve or expand upon our service, would you please let me know?

[Send Jay a message...](#)



Jay Hardy, CLS, SM(NRCM)  
President  
HARDY DIAGNOSTICS

Warning:  
**PUN ZONE  
AHEAD**



\* When Peter Pan punches, they Neverland.

\* Atheists don't solve exponential equations because they don't believe in higher powers.

\* It was an emotional wedding; even the cake was in tiers.

\* The shoemaker did not deny his apprentice anything he needed. He gave him his awl.



"True humility is not thinking less of yourself; it is

thinking of yourself less."

*C.S. Lewis*

\* A bicycle can't stand on its own because it is two-tired.

Did you know?...



Try as you may...No piece of paper can be folded more than seven times.  
Don't believe it? Try it.



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