Innovative Glasses Enable Clinical Laboratory Phlebotomists to See Vasculature Through the Skin [Dar...}

E-Briefing Categories

- Laboratory Pathology (http://www.darkdaily.com/category/laboratory-pathology)
- Coding, Billing, and Collections (http://www.darkdaily.com/category/coding-billing-collectio
- Compliance, Legal, and Malpractice (http://www.darkdaily.com/category/compliance-legal-malpractice)
- Digital Pathology (http://www.darkdaily.com/category/digital-pathology/laboratory-pathology2)
- Instruments & Equipment (http://www.darkdaily.com/category/instruments-equipment)
- Laboratory Hiring & Human Resources (http://www.darkdaily.com/category/laboratory-pathology/laboratory-hiring-human-resources)
- Laboratory Instruments & Laboratory Equipment (http://www.darkdaily.com/category/laboratory-pathology/laboratory-instruments-laboratory-equipment)
- Laboratory News (http://www.darkdaily.com/category/laboratory-pathology/laboratory-news)
- Laboratory Operations (http://www.darkdaily.com/category/laboratory-pathology/laboratory-operations)
- Laboratory Sales and Marketing (http://www.darkdaily.com/category/laboratory-pathology/laboratory-sales-marketing)

Todays Popular Posts

- Single Certification Means Good-byes to Med Techs (MTs) and Clinical Lab Scientists (CLSs) (http://www.darkdaily.com/single-certification-means-good-byes-to-med-techs-mts-and-clinical-lab-scientists)

All-Time Popular Posts

- Single Certification Means Good-byes to Med Techs (MTs) and Clinical Lab Scientists (CLSs) (http://www.darkdaily.com/single-certification-means-good-byes-to-med-techs-mts-and-clinical-lab-scientists)
Innovative Glasses Enable Clinical Laboratory Phlebotomists to See Vasculature Through the Skin

New eyewear technology could make venipuncture easier for phlebotomists and increase patient satisfaction with that medical laboratory service

New technology now makes it possible for the wearer of a special pair of glasses to detect hidden vasculature and changes in the blood through the skin. Some experts predict that this innovative technology might be used by medical laboratory (http://en.wikipedia.org/wiki/Medical_laboratory) phlebotomists to improve the collection of blood—thus raising patient satisfaction with phlebotomy services.

Eyewear Technology Shows Serious Potential for Medical Use

Developed by 2A1 Labs, a company based in Boise, Idaho, the glasses amplify fluctuations of oxygen levels in hemoglobin (http://en.wikipedia.org/wiki/Hemoglobin) just beneath the skin. The story (http://www.technologyreview.com/view/422245/see-right-through-you-glasses-to-read-people/) was reported in Technology Review (http://www.technologyreview.com/).

The technology has important potential in a variety of medical applications, not the least of which would be use in clinical laboratory (http://en.wikipedia.org/wiki/Clinical_laboratory) phlebotomy (http://en.wikipedia.org/wiki/Phlebotomy), departments. The patented eyewear is reportedly in phase testing at two regional hospitals.

Researcher and evolutionary biologist, Mark A. Changizi, Ph.D. (http://changizi.com/), serves as Director of Human Cognition at 2A1 Labs (http://2a1labs.com/). Changizi’s research showed that the ability to see color evolved so that primates could perceive these fluctuations of oxygen in blood hemoglobin. This was important because such fluctuations indicate significant “social signals.” These signals reveal information about the emotional states, such as embarrassment or anger.

Based on research the demonstrated that primates have evolved with the ability to visually recognize changes in the level of oxygen in blood hemoglobin, scientists at 2A1 Labs created eyeglasses that allow humans to see vasculature under the skin. The company is preparing a version of these eyeglasses that can be worn by clinical laboratory phlebotomists when they are drawing blood, hopefully in ways that improve the patient experience during such phlebotomy procedures. (Photo copyright 2A1 Labs.)

The human eye is specifically tuned to see blood and the amount of oxygen in blood, right through the skin,” Changizi wrote on his website (http://2a1labs.com/). “Your eyes naturally see two kinds of color change due to variations in your blood: oxygenation (http://en.wikipedia.org/wiki/Oxygenation) and concentration. (See O2Amp web page (http://o2amp.com/).) O2Amp lenses perfect what the eye does naturally, by removing noise from the blood signal, giving a clearer view of people, their health, vitality, and state of mind.”
Here's how Changizi describes his three different patented eyewear technologies on his website's medical applications page:

- The Oxy-Leo (http://i2iamo.com/medical.html) isolates and enhances perception of blood oxygenation under the skin. This is useful for phlebotomists, nurses, and other clinical personnel involved in medical procedures where perception of vasculature is important.
- The Hemo-Leo (http://i2iamo.com/medical.html) isolates and enhances perception of blood concentration under the skin. This is useful for emergency departments, operating theaters, intensive care, and paramedics.
- The Oxy-Amp (http://i2iamo.com/medical.html) amplifies perception of health and emotion signals on the skin while maintaining full perception of the natural world. This is useful for medical procedures, urgent care, anesthesiology, surgery, as well as assessment and diagnosis.

According to the website, the glasses retail for just under $300. A set of the three different products costs $847. Once purchased, the glasses can be used countless times. Another benefit is that there are no consumables involved with each use.

### New Glasses Could Help Boost Lab Patient Satisfaction Scores

In recent years, patient surveys from companies such as Press Ganey Associates (http://www.pressganey.com/index.aspx), showed that laboratory services ranked very low compared to other clinical service categories measured. (See Dark Daily, "Hospital Laboratories Pursue Higher Patient Satisfaction Scores with Innovative Services (http://www.darkdaily.com/hospital-laboratories-pursue-higher-patient-satisfaction-scores-with-innovative-services-416#axzz26YAq6QlL") This is largely due to the discomfort and even fear that many patients experience in connection with blood draws. It was Dark Daily’s sister publication, THE DARK REPORT (http://www.darkreport.com/), that first brought this situation to the attention of pathology (http://en.wikipedia.org/wiki/Pathology) and medical laboratory scientists (http://en.wikipedia.org/wiki/Medical_laboratory_scientist). (See THE DARK REPORT, "Phlebotomy Is Closely Linked to Hospital Satisfaction Scores (http://www.darkreport.com/dark/11_19_2007.html)."

To raise these low patient satisfaction scores, hospital and health system CEOs and administrators became more open to spending money on phlebotomy products. Their goal was to improve the phlebotomy experience for patients.

That is why, in recent years a number of products to improve the phlebotomy experience for patients have appeared on the market. This is important for providers, including clinical pathology laboratories (http://en.wikipedia.org/wiki/Clinical_pathology), because phlebotomy is closely linked to hospital patient satisfaction scores.

Pathologists (http://en.wikipedia.org/wiki/Pathologist) and clinical laboratory managers will recognize the importance of opportunities to improve patient satisfaction in connection with laboratory procedures. They will also recognize that products and procedures that lessen patient discomfort during blood sample collection could translate into competitive edge in the marketplace.

—Pamela Scherer McLeod

### Related information:


These Awesome Glasses Will Make Your Veins Glow So Nurses Won’t Have to Keep Stabbing You (http://al.com/metro/5922974/these-awesome-glasses-will-make-your-veins-glow-so-nurses-don’t-have-to-keep-stabbing-you)

To see illustrations of the effects of the various glasses, go to: (http://ichanpli.com/02Amp necessità2jpg)

Abstract: Bare skin, blood and the evolution of primate colour vision (http://171.68.127.192/content/2/2/217.full)

Hospital Laboratories Pursue Higher Patient Satisfaction Scores with Innovative Services (http://www.darkdaily.com/hospital-laboratories-pursue-higher-patient-satisfaction-scores-with-innovative-services-416#axzz265Y3qLd4)


### 2 Responses to “Innovative Glasses Enable Clinical Laboratory Phlebotomists to See Vasculature Through the Skin”

1. **Gerald Higgins, M.D., Ph.D.** (http://www.genomepharm.org) says:
   October 1, 2012 at 1:55 pm (http://www.darkdaily.com/innovative-glasses-enable-clinical-laboratory-phlebotomists-to-see-vasculature-through-the-skin-1001/comment-page-1#comment-638610)
   
   The anus is the on the Company that is selling these glasses to provide some kind of evidence of clinical utility. Or, they are at risk – both in terms of liability or regulatory oversight.

2. **Sookra Chanka** says:
   October 1, 2012 at 5:22 pm (http://www.darkdaily.com/innovative-glasses-enable-clinical-laboratory-phlebotomists-to-see-vasculature-through-the-skin-1001/comment-page-1#comment-638679)
   
   Looking forward to the time when they are available

### Leave a Reply

Name (required)

Mail (will not be published) (required)

Website