Dear Regina,

Welcome to BioMarketing Insight's monthly newsletter.

Last month I covered "Today's advances with genome engineering." If you missed last month's article, click here to read it. This month will cover "From High Tech to Med Tech."

Read on to learn more about this topic and other current news. On the right are quick links to the topics covered in this month's newsletter. The next newsletter will be published on March 15th.

We encourage you to share this newsletter with your colleagues by using the social media icons at the top left, or by simply forwarding the newsletter via email.

Please email me, Regina Au, if you have any questions, comments, or suggestions.

Sincerely,
Regina Au
Principal, Strategic Marketing Consultant
BioMarketing Insight

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The Paradigm Shift to an "Open" Model in Drug Development

I'm pleased to announce that my article "The Paradigm Shift to an 'Open' Model in Drug Development" was published in the December 1st, 2014 issue of Applied and Translational Genomics. To read an electronic version, please click here.

Save the Date: Medical Informatics World Conference - May 4-5, 2015

At the Medical Informatics World Conference, I will present "Designing Your Wearable Technology with Mobile Apps: What is Needed for Successful Product Adoption and Impact."

Wearable technology with mobile apps will become the norm in monitoring patients' vital signs at home or at work for diagnoses, alerts, management, or treatment of diseases. Getting product adoption from all stakeholders (patients, physicians, other healthcare professionals etc.) involved with these devices can be difficult unless the device meets their needs and demonstrates significant benefits to them. Learn the rationale behind what motivates each stakeholder plus the must-have attributes to incorporate that leads to successful product adoption.

I invite you to hear more details on the subject on Tuesday, May 5th at 9:25 AM under Track 5, Leveraging mHealth, Telehealth and the Cloud. For more information on this track click here. For conference details, click here.

Developing a Product?
If you are developing a product and have not conducted the business due diligence to determine commercial viability or success, contact me for an appointment. For successful commercial adoption of your product, contact me for an appointment.

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**From High Tech to MedTech - Medical Devices and Diagnostics**

In the medtech world, the boundaries between the semiconductor and medtech industries have already been blurred with chips, sensors and Micro-Electro-Mechanical Systems (MEMS). Today, the boundaries between high tech and medtech are starting to blur as well. Large high tech companies such as Google, Microsoft are trying to expand into the medtech market and large medtech companies such as Philips Healthcare, Medtronic, Roche are trying to use the expertise of these high tech companies to further innovation in the medical field to improve patient care in both medical devices and eHealth. So who's partnering with whom?

**Medical Devices and Diagnostics**

1) **Philips Healthcare** - when Google Glass was introduced to the market, it was a big hit with consumers, who loved being able to see real-time data right in front of their eyes. Google Glass is just the frame work for any type of application. The auto industry adopted Google Glass to enhance one's driving experience and give drivers information from their GPS, road conditions, or dashboard without taking their eyes off the road.

Philips Healthcare decided to use this innovation to give surgeons in the OR critical and real-time information about their patients. During surgery, it is critical that surgeons focus all their attention on the procedure and looking at monitors for patients' vital signs is a distraction. Philips partnered with Google to develop an application for the OR. Click on the video below to see what surgeons experience with this application.
2) **Alcon (Eye Care Unit of Novartis)** - has partnered with Google to develop a smart contact lens that monitors glucose levels from one's tears. Joe Jimenez, the chief executive of Novartis, stated that the company tried to develop its own glucose-monitoring contact lenses several years ago, but failed.

"One of the biggest hurdles was miniaturization, and that's one of the biggest benefits that Google X brings," Jimenez said. "This is a set of engineers that are really doing incredible things with technology."

The contact lens uses processing chips and a glucose sensor that have been specifically miniaturized for the task, so much so they look like flakes of glitter. The antenna situated next to the chip and sensor is thinner than a human hair. The **sensor** detects glucose levels in the wearer's tears, taking readings once per second, and the antenna transmits the data to an external device.
3) **Medtronic** - diabetes is such a hard disease to control that Medtronic decided to partner with Ford Motor Company and devise a way for diabetics to monitor their glucose while they are wearing a Medtronic continuous glucose monitoring device and driving.

There are two diabetes-specific apps:

- The Medtronic Bluetooth-enabled in-dashboard CGM reader. "Drivers with diabetes who wear a Bluetooth-enabled Medtronic continuous glucose monitoring device could enter a Ford SYNC-equipped vehicle and pair their device - as well as their cellphone - with SYNC, giving them the ability to use voice commands or steering wheel controls to receive audible alerts or center stack displays about deviations and trends related to their blood glucose levels." and

- WellDoc's cellphone-based Diabetes Manager service, which can now be used in your Ford automobile via voice command.

To see a demonstration, click on the video below.

4) **Thermo Fischer Scientific** and Samsung have entered into a partnership where Samsung will supply devices that diagnose acute heart disease, metabolism and inflammatory diseases to Thermo Fisher Scientific, who has the world's largest sales network in the medical equipment sector.

"With over 50 years of experience and massive presence all major countries, Thermo Fisher Scientific will help Samsung in strengthening its medical equipment and diagnostic base across the globe for future expansion," said Mr Cho Soo-in, head of the medical equipment business division at Samsung Electronics.

Samsung recently developed the Labgeo IB10, a portable diagnostic equipment system that performs various tests quickly and accurately in emergency situations and will continue to develop medical
instruments and equipment that are safe and convenient for consumers.

Samsung's Labgeo IB10 portable in-vitro diagnostic.

5) **Microsoft** recently demonstrated a sneak preview of their HoloLens, which is an augmented-reality headset that allows you to mix the virtual world with the real world. When one wears the headset, the glass screen projects a digital overlay on top of the physical world. The digital overlay can be as simple as a Skype window or as complex as a 3D model of a jet engine. In addition, as you move around a hologram object, it stays in place the same way a physical object would. The HoloLens maps physical space using a scanning technology that is very similar to the one used in Kinect.

I'm sure one of the medical device companies will very quickly partner with Microsoft to develop a 3D hologram of the human body that can be used to diagnose disease, plan surgeries and many more applications.

To see a demonstration, click on the video below.
In the medtech world, the boundaries between the semiconductor and medtech industries have already been blurred with chips, sensors and Micro-Electro-Mechanical Systems (MEMS). Today, the boundaries between high tech and medtech are starting to blur as well. Large high tech companies such as Google, Microsoft are trying to expand into the medtech market and large medtech companies such as Philips Healthcare, Medtronic, Roche are trying to use the expertise of these high tech companies to further innovation in the medical field to improve patient care in both medical devices and eHealth. So who's partnering with whom?

**AirStrip**, a Texas mHealth company partnered with Samsung, a mobile tech giant in bringing its mobile healthcare interoperability solutions to Samsung tablets and PCs in clinical settings. The AirStrip’s ONE platform provides security and interoperability services which the company says is the first and only solution certified by the U.S. Air Force for meeting security standards for mobile medical devices.

"Samsung's innovative and wide-ranging product portfolio embraces a range of form factors and supports rapid, secure access to clinical information of all types," AirStrip CEO Alan Portela said in prepared remarks. "Samsung recognizes the need to create powerful technology that supports healthcare mobility in ways that can ultimately transform patient care, regardless of the device that clinicians are using."

**Roche**, a leader in Point-of-Care Diagnostics, has entered into a strategic collaboration with Qualcomm, a world leader in 3G, 4G and next-generation wireless technologies, to improve remote monitoring and management of chronic disease patients.

Roche is incorporating Qualcomm Life's 2net Platform to securely capture data from a patient's medical devices, beginning with anticoagulation meters, and transmit it to Roche's cloud-based back-end services. The 2net Platform is a secure wireless solution that provides a simple and efficient way to exchange relevant health information between chronic disease patients and their care team or clinic to reduce complications and total cost of care.

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**Closing Thoughts**

The world is getting smaller and smaller as our economy becomes more global. As our technologies converge, boundaries between industries will become increasingly permeable and our technologies will be applicable in numerous market segments. A good example is the wearable technology.

In the world of wearable technology application as depicted in this chart by Beecham Research, there are numerous sectors, applications, functions and products. A specific technology could be applied across all sectors for various applications and functions. We will see more and more companies in various industries collaborating with other industries to capitalize on the expertise of each industry, resulting in more innovation and market expansion.
This will also make it harder to get a grasp on the market potential for various products since they may cross multiple sectors, depending on how they are classified and which category they fall into. An example according to this chart is the Medical, Wellness and Sport/fitness sectors. Sleep tracking in Wellness could be classified in the medical sector for products that track and diagnose sleep apnea. Google Glass can be used in medical, as in the example with Philips Healthcare and the Infotainment category according to another market research firm. Devices for monitoring traumatic brain injury could be classified into medical, sports and even military applications. To determine the market potential for one's product, one needs to go deep.

Not all categories will be the same for the data depending on which market research firm you use. Therefore, make sure you hire someone who understands this and knows how to find it. We will eventually have to standardize this as well.

Are you thinking of developing a wearable product and need to determine the market potential? Click [here](#) to contact me to discuss it further.

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About BioMarketing Insight

We help companies de-risk their product development process by conducting the business due diligence to ensure that it is the right product for the right market and the market opportunity for the product meets the business goals of the company. We can then develop marketing strategies to drive adoption for the product.

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