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January 2014



BioMarketing Insight Newsletter

Creating Markets and Marketing
Strategies

Dear Regina,

Welcome to BioMarketing Insight's monthly newsletter.

Last month I mentioned that I would be doing an interview with **Neil Exter** from **Third Rock Venture** regarding his perspective on "Where the industry will be in 5-10 years." I'm excited in sharing his interview with you as we gain insight to what influences the industry from politics, to Wall Street and beyond.

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 February 17th.

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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Save the Date: April 28th - 29th, 2014 - Medical Informatics World Conference

The Second Annual Medical Informatics World Conference will be held on April 28th - 29th, 2014 at the World Trade Center in Boston, MA. The conference is about "transforming care delivery models with IT innovation."

I will be moderating the session on "Patients and Consumers Managing Their Own Data," under the Coordinated Patient Care, Engagement and Empowerment Program track. Click [here](#) for more details.

For full information on the conference, click [here](#).

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Interview with Neil Exter, Third Rock Venture - Where Do You See the Industry Going in 5 to 10 Years?

The Pharma, Biotech, Medical Device, and Diagnostic industry have been and will continue to go through a lot of changes with a lot being influenced by Obamacare. So what will the industry look like in 5 to 10 years?



Neil Exter, Third Rock Venture.

I have the pleasure of speaking with Neil Exter from Third Rock Ventures on this topic. For those who may not know Neil, he plays an integral role in the overall formation, development, and business strategy of Third Rock's portfolio companies. He also comes from a pharmaceutical (Millennium and Alantos) background in corporate business development with in-licensing and M&A and a high tech (HP and Wang Labs) background in various executive management roles.

Since Neil has a broad background in the pharma and high tech industry as well as the venture capital world, he can give perspective from many view points.

Regina: Where do you see the industry going in 5 to 10 year?

Neil: I'm not sure I can predict this. We will find out in 10 years. It's such a difficult topic because it is a function of politics. Politics play such an important role particularly as we watch the role out of Obamacare. How will Obamacare really impact things? The politics says either Obamacare is all good according to the democrats or it's a disaster according to the republicans. Neither is exactly right.

Regina: Some of the repercussions of Obamacare are starting to come out.

Neil: I'm not sure what the repercussions really are because everything is influenced by the reporters and how they see things. Both sides are making the Affordable Care Act extremely personal. They are going to pick people or a "poster child" who are sympathetic to their cause. For examples, people who are on the pure republican side are saying Obamacare is disastrous for those whose healthcare plans are being cancelled because their plans don't meet the minimum threshold of the Obamacare. These people may be making a little too much money to get any government subsidies so they had a plan that they could afford but this plan no longer exist. They are now forced to go with an upgraded plan that is more expensive.

Then there are those who are almost in the circumstance where they don't make enough money and their plan is significantly subsidized or they now can get insurance while before they couldn't, are now saying this is amazing. I don't know what the statistics are on both scenarios. And then there is the great middle, I am in the middle where insurance is provided by my employer. I don't really know the true consequences and I think we have plenty of content on each side with data to prove their point.

Regina: I think you are right; there are pluses and minuses to everything. For the people who never had insurance this is wonderful. For the people who had been denied insurance for preexisting diseases this is wonderful. The flip side is the people who've had their insurance cancelled for not meeting the minimum threshold and will have to pay more for their insurance. Or due to all the computer problems people can't register for the Jan. 1st deadline. Then you read about companies that aren't hiring, or letting their employees go through the government exchange rather than buying employer insurance with employees contributions because their plans must meet the minimum standards and their premium may go up significant.

Neil: But by the same token it's all anecdotal, we don't know how many people this entails. There was an article I read in the Times or Globe that was commenting that employers was doing just what you said but they were giving their presently paid employer contributions to healthcare by increasing the employees' gross wages and saying we don't want to be in the insurance business and I totally get that. Why is health care insurance any different than where you choose to live? It is totally your choice. You may think it is silly if your employer gave you a rent subsidy or a housing subsidy. So why shouldn't the money that would have been spent for insurance be incorporated into one's salary.

Regina: Except if you work for a large company, the purchasing power is better and therefore, one can get better insurance at lower premium rates. The exchange is really tough because of how they calculate premiums. In Massachusetts, the premiums are calculated in two parts; base rate plus other factors (age, location, occupation etc.) and the overall expense paid out for each type of plan.

For more information regarding Massachusetts insurance and the impact of Obamacare, click [here](#) to read my December 2013 newsletter.

Regina: How will innovation be impacted?

Neil: Hard to know. Everyone is focused on decreasing the development cost curve whether it is on the drug or device side, and the convergence on big data. Everything is moving towards decreasing healthcare cost and how do you make a difference on people lives? All our portfolio companies are always asking those questions. Is it a big enough unmet medical need and how do you change the quality of someone's life? On the cost side, one has to make sure there is a pharma-economic benefit.

Regina: Yes, pharma-economic is important because of reimbursement.

Neil: That is sometimes hard, because in saving someone's life you get into the question of the value of what a year's of quality life is worth.

Regina: What do you see companies doing? Will there be more licensing, partnership, acquisitions etc?

Neil: I'm not sure they are doing any more. For as long as I've been doing this, everyone has been looking for partnerships. So I'm not sure that has changed. But the public market is strong which increases everyone's interest and appetite. The IPO market being robust for 2013, investors are more willing to put dollars into early stage companies. The larger acquirer or licensors have greater market capital, but they're competing with the IPO market. It's the rising tides lifts all boats in the harbor. I think is a great time now, there is so much innovation going on in Cambridge and in this whole area, an incredible cool time.

Regina: It used to be that when a company was interested in another company's product, they would acquire it. Now there seems to be more partnerships or collaborations on products. Do you see this as a continuing trend?

Neil: Sure and it is dramatically different then it was 3 years ago or 5 years ago. There are more companies whose market cap rate is greater than a billion dollar in biotech sector than 5 years ago.

Regina: Can you do partnerships where a small company collaborates with a larger company and collaborates together or co-develops a product?

Neil: If you are talking about novel, novel companies, this is still really hard and extremely expensive. If you thinking of conducting two clinical trials where this class of products have never been approved before and doing the trials jointly, it does happen but it's really hard and really expensive.

Regina: Do you see acquisitions going up? For example big pharma companies are acquiring to fill the pipeline or device companies acquiring companies to offer a full line of products? The number of large companies is getting smaller and smaller. For example GSK is really three companies.

Neil: The biggest challenge is that the market pays for growth. That is what they are interested in. When you look at market multiples, PE multiple, Wall Street pays a premium for growth. What do you need to do when you have revenue and need to demonstrate growth? If you are a \$20 billion a year company and you want to get 20% growth, that's \$4 billion incremental revenue a year. It is hard to do without doing acquisitions. So once you get to a certain size, it increases your appetite and you need to find things that can be creative to you and add to your top line revenue growth. There are not many things out there and people are constantly looking for them.

And it is equally true today in the Biotech sector than the device sector. The device sector is where the biotech sector was several years ago in focusing on bottom line growth; The first things is improve earnings per share is to increase the stock value through stock buy backs, restructuring or cost cutting. The second thing you could do is increase top line by focusing on growth in the emerging countries where the emphasis is now. And the third thing you can do is figure out how to develop new and innovative product which I think is where we are all now heading once you've restructured and get yourself to be as efficient as possible.

Biotech had gone through a lot of their major restructuring. They, and it varies from company to company are in good space from a financial re-engineering and restructuring perspective. So now this gives them a good opportunity to see if they could acquire someone that maybe has a lot of duplicate infrastructure. They can add to the top line which makes it grow faster and then reduce the duplicate infrastructure to make it much more profitable than doing it alone.

Regina: What about the investors who are developing different business models? I see venture capital doing more internal incubation of companies and then spinning them out. Do you see more investors starting their own companies?

Neil: There are a number of VC companies that like to do it. Flagship and Polaris likes to do it and we also like to do it. There are a number of firms that believe it's one of their core competencies.

Regina: What would be the advantage of doing it?

Neil: It's very early stage but it has a higher risk associate with it. It could be argued that we can ameliorate the risk by having multiple partners all working simultaneously together. We can really incubate things by definition and know the company really well since we've been involved from the gleam in someone's eye. We are willing to be prepared to be all in since we know the company as opposed to making a later stage investment where it's a little harder since you don't have full disclosure of everything. You can be a tremendous strategic partner with these new incubator companies and you are willing to bring everything you have to provide the best supportive environment to ensure the best probability of success with that technology and that company.

Regina: Any comments to the old model where once the founder has gone beyond his/her expertise, the venture people would bring in their own people?

Neil: Maybe, it depends on the philosophy. Just as different operating companies have different cultures, they will think of different strategic advantages. Venture companies have different cultures and they build themselves differently. They think of themselves differently and their investment philosophies are different. That's not to say there is a good or bad model from one to the other, but you architect yourselves to take advantage of what you want to be good at and then you build your organization around that whether it's an operating enterprise or venture capital company. When you build yourselves that way, then you are in a position to exploit what you have built.

Regina: What about academics? I see companies wanting to fill their pipeline want to work with academics. Some in academics are on board and want to work with industry to create companies. Some academics have the old philosophy of big pharma as the big bad wolf. The philosophy is different; in academics they work on research they're interested in and industry want to bring new medications to patients. The timeline is different, academics have no time line, and industry has strict deadlines.

Neil: Institutions are seeing the gaps, so from an institution level they would like to get closer to industry whether it is biotech or pharma. On an individual basis, it depends on the individual PI and what they want to do with their lives, the research they're focused on, and how applicable it is to its commercial enterprise. There are some who like to have a dual orientation especially in Cambridge such as Bob Langer or Eric Lander who are incredibly brilliant and are able to encompass or span the commercial and academic sides in a really effective way. So they are extraordinary role models.

Regina: Do you see more of that going on here? Bob Langer is an exception to the rule. He is also trying to bring scientist and engineers together to solve problems and create innovation. There are a number of people in academics that like the industry world. Do you see that really shifting in terms of more people thinking that way?

Neil: Sure, people would like to because institutions have more of a funding need now. I think there are and Bob is certainly incredibly gracious about his time and I know he starts or advises companies with a fair amount of other PIs. So there is a motivation on everyone's side to do it and see if they can make that work. Will it? We'll see.

Regina: What do you think will make it work?

Neil: I think it will be up to the individuals, the institutions, and what the PI really wants. If a PI only wants to do academic research and not commercial work, there is nothing you can do. But if a PI says "I have come up with something cool and I want to collaborate" then they are individually setting up an opportunity to see if the idea is compelling to investors.

Regina: With respect to emerging markets, where do you see this going? Everyone want to go after the emerging markets for future growth but are finding that it a little more difficult than they originally anticipated not only because of culture and language barriers, but the extremely long-term investment time.

Neil: I think everyone wants it, I don't think that has changed even though it is taking longer.

Regina: Do you think people are just looking at the BRICK with a "K for South Korea" or do you think they are looking at all countries?

Neil: You want to look at everything and people are going to prioritize. Entering a new country I'm sure is expensive and a complex proposition. Can you enter 10 different countries simultaneously and start off with no infrastructure? Probably not.

You go where there are a lot of people and where there is enough economics benefit to make it worthwhile.

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Closing Thoughts

Our industry is very complex and our ecosystem (industry, academics/institutions, healthcare, investors, insurance, etc) is linked to and thrives off of each other. Politics like Neil mentioned whether we like it or not plays an important role in affecting our ecosystem. How everyone is affected will be different depending on the individual, the company, their culture, their philosophy, and what stage the company is in in-terms of revenue and growth.



The market is shifting as we focus on emerging markets for growth, decreasing the development cost structure and developing true "innovation" to save lives and increase quality of life with the added benefit of cost savings to the healthcare system. We have no choice but to change with the market or get left behind or become obsolete.

For health insurance, this too will affect people and companies differently depending on the individual and what companies decide to do with providing health insurance for their employees. As discussed above, there are those who will be affected negatively, others positively and some they may not see much of a difference. How the percentages work out, only time will tell and then we will have to adjust.

Will Obamacare level the playing field for all (including individuals and small companies) in terms of healthcare premiums? This may be very difficult if we are not on the same basic system or similar methodology and then tweak it for individual/ group segments since one size does not fit all.

I also think we need to focus on the inefficiencies or perceived efficiency that is really inefficient within our healthcare system to help reduce healthcare spending. When a company acquires another company, if there is duplicate infrastructure, one wouldn't keep both. Or the other day when I got blood work done, I asked the woman taking my information, why she was doing it this way when it's duplicate work? She said she didn't know and that's the way the system works or that's the way we've been doing it for years.

Will Obamacare or mandatory insurance bring monthly premiums down? The theory is unless everyone signs up particularly young healthy individual to offset the cost of individuals with health issue, then healthcare premiums will decrease or become more affordable. Only time will tell.

So stay warm and stay tuned as I will continue to cover the trends and news in the industry.

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New Technology - A Drug Delivery System, DNA-based Molecules That Can "Walk" Along the

Surface of Nanotubes?

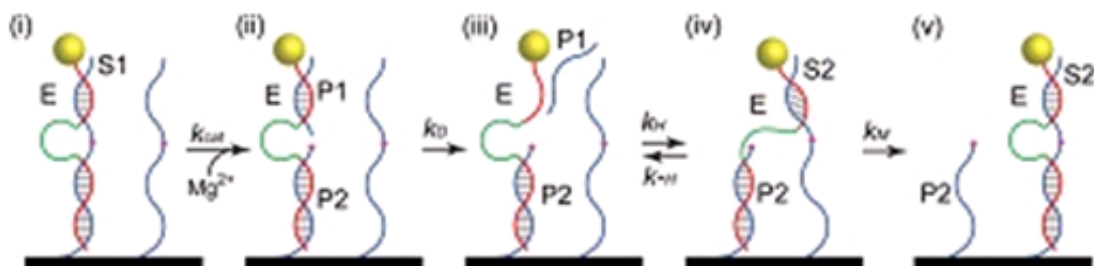


Illustration of a synthetic DNA molecule "walking" along the surface of a nanotube.--
Courtesy of Purdue from *FierceDrugDelivery*.

Living cells possess protein-based motors that allow them to travel as far as a micrometer (1,000 nanometers) by changing its shape and binding to consecutive parts of the cell's tube surface traveling 8 nanometers steps at a time.

Inspired by these living cells, researchers at Purdue University have developed a DNA-based molecule that can "walk" across the surface of nanotubes eventually carry nanomed with them, according to the team's abstract in the journal *Nature Nanotechnology*.

This molecule is made up of a core and two DNA arms, according to a university report. "Using strands of RNA, the molecule moves from one to the next across the surface, like Tarzan using vines to swing through the jungle. Each strand gives the molecule energy to keep moving forward."

"Our motors extract chemical energy from RNA molecules decorated on the nanotubes and use that energy to fuel autonomous walking along the carbon nanotube track," lead researcher Jong Hyun Choi said in a statement. "We are in the very early stages of developing these kinds of synthetic molecular motors."

To read more on this article from *FierceDrugDelivery*, click [here](#).

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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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BioMarketing Insight | 39 Kilby Street | Woburn | MA | 01801