PFE - Pfizer at Lehman Brothers Healthcare Conference

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Good morning. I have the distinct pleasure to introduce Dr. Martin Mackay, who is head of the research effort at Pfizer.

We will have a breakout in the Triton Room following this presentation, and I certainly appreciate your attention.

Dr. Mackay, thank you.

Well, thank you very much, Tony. I'm delighted to be here, and it's a very kind invitation to present at this conference.

I'm also delighted to present to you the progress we're making, particularly around our late-stage portfolio, at Pfizer.

Before that I would just like to draw your attention to this cautionary note. I will let you read it.

Okay. Now to business.

So when I took over this role around five months ago, literally on day one we launched a five-point plan within Pfizer's R&D organization. I won't go through each of the points in any detail. Suffice it to say this has really galvanized the R&D organization. It's very simple, and it absolutely focuses on what we need to deliver over the next period.

I will really concentrate on point one of the plan. That's the delivery of the Phase 2 and the Phase 3 portfolio. I will say a little about biotherapeutics on the way.

We've got a lot to deliver. We have 85 distinct new entities in our development pipeline. We've also got many compounds looking for new indications, new formulations and the likes of it. And we go across 10 therapeutic areas, although recently we did an analysis of our disease areas, and we've really focused down on five therapeutic areas. We call them our invest to win category. And we have compounds that are distinct in those therapeutic areas.

Two weeks ago we made public our aggressive goals for delivery of this pipeline, so 15 to 20 Phase 3 starts over the next two years. That will lead to a Phase 3 cohort somewheres between 24 to 28. That will include both new molecular entities and new indications for existing compounds. And that will lead over a two-year period, 2010 to 2012, of some 15 to 20 regulatory submissions. There's no question these are aggressive goals, but we believe we have the substrate to deliver.

This is the pipeline, again, we published very recently on our Web page. I won't go into too much detail on it, but just a couple of highlights. Our Phase 3 cohort is growing. We know that our Phase 3 cadre just now isn't big enough for a company of our size. Compounds are starting to move into that phase from our rich Phase 2 portfolio.

In terms of Phase 2, that's actually dropped in number. And of course it's a very dynamic area. Compounds move into Phase 3. Compounds move in from Phase 1. And then they drop out for attrition. And this time we took a particularly hard look across the whole of our development compounds and made some really substantive decisions on the compounds that we were following, and a number fell out of that Phase 2 piece.
And then lastly to say that our Phase 1 pipeline, very early, for sure, but it is really rich. We have a research organization that's pushing new molecular entities into development to really treat diseases that we most care about. So I believe that this represents a really excellent pipeline for Pfizer.

This is our Phase 3 portfolio as it stands today. I'll just say a couple of words about some of the compounds and show a little data later. We are very pleased with our oncology pipeline at the moment. Axitinib and tremelimumab are two excellent compounds -- axitinib, and I'll show some data in pancreatic cancer, looking very promising, and of course tremelimumab in malignant melanoma, again, looks good. Apixaban is our landmark collaboration, Factor Xa area with Bristol-Myers. And, again, I won't say -- I won't show data on this compound, but suffice it to say it's an excellent collaboration. I can't speak more highly about the colleagues at Bristol.

And then a couple of new entries, recent entries into Phase 3 -- PD-332334, this is an alpha-2 delta ligand, the same class as Neurontin and Lyrica, and we're looking at generalized anxiety disorder for this compound, and that's looking very good. Some excellent Phase 2 results where we put it up against Xanax. And [S,S] reboxetine is our norepinephrine reuptake inhibitor, and, again, some very promising Phase 2 results in fibromyalgia with (inaudible) compounds.

I would not underestimate the new indications for existing compounds. I have said that it's almost a miracle to have an idea and take it into the discovery, into development and launch it. These are truly golden assets that we have, and it's incumbent upon an R&D organization to make sure we maximize the benefits of those assets. And we've got some great compounds both inline and in Phase 3.

There is no better example than Sutent, which is a terrific compound. Again, you know that we gained approval for this compound in renal cell carcinoma and gastrointestinal stromal tumor. At the moment we have three Phase 3 studies running in breast, lung and colorectal, and late-stage Phase 2 in hepatocellular carcinoma and prostate cancer. So, again, the benefit to both patients and to the bottom line is going to be quite promising with this compound.

Similarly, axitinib, whilst we haven't launched it, we were really very pleased with the results that we got in pancreatic cancer. We published the results that you see on this slide before, where we did a combination trial with gemcitabine. And, again, it was a very good compound. We're testing it in a number of other disease areas now, different tumor types, renal cell carcinoma and lung carcinoma, and, again, we feel this is a very good compound.

The ability of our oncology portfolio to start using combinations, whether they be antibodies or low molecular weight compounds like Sutent and axitinib is going to really change the way that we treat cancer over the next period. Again, at ASCO this year we'll show somewheres -- we've submitted over 100 abstracts to that meeting, and we think there's a good chance of the vast majority being accepted.

This is our projected Phase 3 starts over that two-year period I mentioned. I'm going to show some data and highlight some of those compounds. Again, we cross many of the disease areas that we think that are most important, very high medical need, good market potential and with a real good chance of either being first in class or best in class into the market. And, again, we have a good balance with new indications and new molecular entities.

This is our IGF-1R antibody. We showed proof of concept. Here are the data. And, again, lung cancer, and, again, very pleased with what we saw with this antibody. We think it has potential as a standalone. We think it's got a real lot of potential as a combination engine. At the moment we are running survival trials in lung, and other studies will come forward in terms of other tumors to push the antibody forward.

This is CP-690550, our JAK-3 inhibitor. We've shown data on this before. This was a 264-patient study over a four-week period where we really saw excellent results. One of the pieces of work that we've been doing in terms of the process of running clinical trials is to look for big results early. It seems really obvious that you can gear trials this way, and this is a perfect case. Once we saw these results in this four-week early study, we were able to move into (inaudible) 2b very quickly, with longer time frames,
more doses, to really see the horsepower of this mechanism. Similarly, we're working in transplant with JAK-3, and also some other indications such as Crohn's disease. In fact, anything that has an autoimmune aspect, we believe that the JAK-3 mechanism could play a role.

This is our nerve growth factor antibody. This was one of the compounds we acquired when we got the Rinat organization, and it's for pain, (inaudible) humanized antibody, and we thought it looked very interesting. Although when we acquired Rinat we were really focused on the amyloid antibody, which is moving along quite nicely in Phase 1, this one has turned out to be a real gem. It's looking very safe. Many hundreds of patients are being treated now.

And here are some Phase 1/2 results that we have shown before, and this is probably the best pain relief data we've seen from a compound, added to the fact that we're giving it, in this study, once every eight weeks, so two-monthly injections in the pain area. It's really looking very bright. There's other indications that we could be using this for. We're going to push this into Phase 3 this year quickly. The trials are up and running, recruiting very well. And, again, the results to date have been excellent. We did a very good Phase 2 study, which we will describe at a couple of meetings later on this year that really have fortified our hope for this compound.

In terms of the 15 to 20 submissions over that time period, you know, it's great to have a rich Phase 2 portfolio. It's wonderful when they move into Phase 3. But of course what we really need is to translate them into marketed compounds, and hence our real focus on driving those through to submission. We've got a lot of new molecular entities in the disease areas that really matter to us, and, again, many new indications both for inline products and late-stage products to maximize the potential of each one of those compounds.

Just briefly, in terms of our biotherapeutic pipeline, as many of you will know, we hired Corey Goodman at the back end of last year to lead our biotherapeutic and bioinnovation center. This has been an absolutely master stroke. Corey is both a terrific scientist and entrepreneur, and someone that has really brought a lot to the Company already.

Interestingly, when he looked at this pipeline, he thought it was the best kept secret in the industry. He certainly wasn't aware, as many people haven't been, about our growing presence in biotherapeutics. And although our current revenues are relatively modest, you can see with 26 biotherapeutics in development and another 60 in research across several therapeutic areas, different modalities -- antibodies, aptamers, peptides -- this is certainly a growing area for us. And with Corey's new group working hand in hand with the R&D organization, I'm really very confident that we can move this pipeline forward.

It's certainly a tall order for any big pharma company now and particularly with Pfizer to replace some of the revenues that we're going to lose over the next period, but I do sense a real renewed confidence within the Company and then hopefully outside the Company as well. Whilst those words are fine, what does it really translate to? If I look at what we've delivered just since the back end of last year and into 2008, you see a range of approvals, submissions, compounds moving into Phase 3, as mentioned, some spectacular results from our Japanese organization, where we're really working very well with the regulatory authorities there. We're doing deals, some business developments, and they range from early to quite deals -- quite late deals.

I think a real reflection on how our development organization is running is what's happening day to day with the milestones that we're looking at. And since that time we've had three positive proof of concept studies, 11 now first-in-patient studies and 17 first-in-human. It's remarkable to think that every week we go into either volunteers or (inaudible) patient population with another one of our compounds. So, again, it speaks of the health, really, of the pipeline and our ability to progress [from now].

And then lastly, you know, we have a terrific portfolio at Pfizer. We've got strong, established products. We've got very good inline products, and, again, really looking to maximize the potential of each and every one of those products. And then our newer products are really doing very well with the launch of Chantix, Lyrica, Selzentry and Sutent in the last period. We are really exceeding expectations of those compounds, particularly Chantix, Lyrica and Sutent. Selzentry's still got a ways to go, and once we look at the treatment-naive population, I think you could see a nice trajectory for that compound.
Hopefully when I'm invited back in a few years, Tony, maybe not too long, there'll be another full cadre of compounds on this list from the current development pipeline. I'm certainly confident we can deliver those and really match some of the marvelous compounds we have in this pipeline.

I'm going to stop there. Thank you very much.

**QUESTIONS AND ANSWERS**

**Unidentified Audience Member**

(Inaudible question - microphone inaccessible)

**Martin Mackay - Pfizer - President, Global Research & Development**

Absolutely. Yes.

**Unidentified Audience Member**

(Inaudible question - microphone inaccessible)

**Martin Mackay - Pfizer - President, Global Research & Development**

We've got everybody in the breakout room, Tony.

**Unidentified Speaker**

Martin, in the analyst meeting and again today you highlighted some very interesting medicine in pain. And I'm curious -- if we move the science away I'm curious of how you think about especially something like OA of the knee, and how you think about the application of an IV medicine when oftentimes there (inaudible) non-narcotics, NSAIDs, etc. What is the opportunity that you think you're going to actually use a product like that where you (inaudible) why your pain may be gone? How do you -- how does Pfizer think about that from a research standpoint?

**Martin Mackay - Pfizer - President, Global Research & Development**

Yes, well, it's a very good point, Tony, and it's interesting. When we first -- when we just absolutely first looked at Rinat and saw the pain injectable, we absolutely asked those questions. Why would you use IV for pain? Of course, we did a lot of research. We did a lot of research with patients. We did a lot of research in the market. And a couple of things -- and, again, it won't be too surprising -- stand out.

Efficacy would be all important. And, as I said, what we're seeing with NGF antibody is actually the best pain relief we've seen at this stage of a compound. And then, of course, secondary, safety has to be excellent. And, again, we're seeing that with this compound. But then there's other piece here, which is frequency of injection. If it really is once every two months and you get pain relief for that time, I think then it stands very well head to head with the oral medication with less efficacy. Does that make sense?
Martin Mackay - Pfizer - President, Global Research & Development

Yes.

Unidentified Speaker

-- such that we understand that proof of concept really has -- is unique and potentially has good efficacy in later stage (inaudible).

Martin Mackay - Pfizer - President, Global Research & Development

Yes, very good, Tony. So we have a very good pain group in Sandwich, England, and they've (inaudible) actually 12 animal models. Because we talk about pain as if it's a homogenous disease area or condition, and, of course, it's not. And we're able to differentiate between, for example, the NSAIDs that we use, p38 kinase that we're looking at, the NGF antibody, to really come up with a profile for each and every mechanism that we use. And certainly with the NGF the results have been [excellent]. You know, it certainly exceeded our expectations that one mechanism could have such a profound effect.

Now, it's been known for some time that NGF causes pain. If you inject NGF, as people did in the '90s when we looked at that mechanism, people (technical difficulty). So it wasn't too much of an extrapolation to think that an antibody could do something. We just didn't recognize what it could do.

And, as you know from the investor meeting, Gillian Burgess runs the pain group there, and they really have a machine now which moves from preclinical models right into patients. And the biomarkers that we've established with collaborations that we have, say, at Kings University, have really enabled us to do that. And you saw some of the really neat compounds coming through, lots of different mechanisms, the Nav1.7, the Nav1.8. We have a CGRP antibody that's also looking pretty promising in the pain area. I really think it's one of our best therapeutic areas (technical difficulty).

Unidentified Audience Member

You mentioned your relationship with the Bristol-Myers group, and I was just wondering if you could go into a little more detail on how that's working and who's doing what.

Martin Mackay - Pfizer - President, Global Research & Development

Yes. As I say, I couldn't speak highly enough about it. And the project leader on the Pfizer side is (inaudible), and she's presented to a number of leaders in the last couple of weeks. And it's been really interesting that it's being run as if it's one company. And so the [uber] project leader is clearly a Bristol-Myers colleague, and he's just doing a terrific job. A number of the subpieces, though, are run by Pfizer people. Some of them are Bristol, some of them are Pfizer. They're working so closely together on each and every part of that. And when you speak to them they talk as if it's a one company initiative (technical difficulty) [forward].

I really think it comes down to a couple of things. You know, we're both in the same business, big companies, have taken many drugs through to the market. So we know how difficult it is, just the science and the clinical piec. If there was any antagonism going on there, as well, it just wouldn't work as it should. I think it'll become a model collaboration (technical difficulty). Again, can't speak highly enough of the Bristol-Myers colleagues.
Unidentified Audience Member

Thank you. Obviously there's a lot of focus on R&D productivity. That's why we get a lot of questions on that. I tend to look at that in terms of attrition rate. So if you have Phase 2, what percent fail? You're obviously as a company making projections into the future of how many filings you'll have. Are you making dramatically different assumptions today than you would have four or five years ago? And what kind of evidence are you seeing about which direction attrition rates are going at the different phases?

Martin Mackay - Pfizer - President, Global Research & Development

Yes, it's a really great question. The 15 to 20 submissions that I showed we're actually basing on historical attrition rates. And we felt it was very important to do that, because Phase 2 attrition not only in Pfizer but across the industry is a graveyard for us. And despite many really good attempts to increase survival in that phase, it's proven to be very difficult. Our actual attrition rates from Phase 2 to Phase 3 are improving (inaudible) by percentage. We have so many compounds (that can) come through, we're seeing significant improvement. However, we've gone to the historical rates based on submission data.

Some of the things that we're doing in that Phase 2 space, though, is proving very useful. We've got a number of initiatives (technical difficulty) survival. We've had them for many years, from the compound itself, to make sure it just has the absolute best physical-chemical characteristics, right through to the clinical piece. And I've mentioned this before, but Liam Ratcliffe at Pfizer did this very nice analysis, and rather than looking at all the failures in the industry, the failures at Pfizer, of which we have many, being such a big company, he looked at the successes across the industry.

Again, as I kind of alluded earlier, it's not too surprising. Really good compounds declare themselves early and declare themselves [big], JAK-3 being an example, NGF being an example. So if you really hone that Phase 2 program down to look for those big signals early, it gives you the best chance of taking the best compounds through.

The other side of that, of course, is when the compounds aren't effective, or they're showing some signal but not the horsepower, you have to have the courage to stop them. And the analysis that we did at the back end of last year, where we looked at every compound from late-stage preclinical right through to Phase 3, and we terminated 25 programs there. Of the 25, 14 were in development, 11 were in preclinical. And of the 14, nine were in Phase 2, five were in Phase 1. That had never been done at Pfizer before, across the whole portfolio, across every therapeutic area. And we looked at the data, and where we didn't see those big early signals we stopped the program. Does that answer your question?

Okay, thanks, Tony.