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## PRESENTATION

### Operator

Good day, ladies and gentlemen, and thank you for standing by. Welcome to the Galapagos R&D Update Conference Call.

At this time, I'd like to turn the conference over to Elizabeth Goodwin. Please go ahead.

**Elizabeth Goodwin** - *Galapagos NV - VP of IR & Corporate Communications*

Hello, all, and welcome to our audio webcast and live presentation here at the Yale Club for Galapagos' Annual R&D Update 2017. I'm Elizabeth Goodwin, Investor Relations, and I'll be hosting the event. This recorded webcast will be accessible via the Galapagos website homepage and will be available for replay later on today. So that your questions may be included, we request that you call in to the telephone number given in the press release today, and I'm going to give it to you one more time. 32 for Belgium, 2404-0659, and the access code is 8093710.

At this time, I'd like to remind everyone that we will be making forward-looking statements during today's webcast. These forward-looking statements include remarks concerning future developments of the pipeline and our company and possible changes in the industry and competitive environment. Because these forward-looking statements involve risks and uncertainties, Galapagos' actual results may differ materially from the results expressed or implied in these statements.

Today's speakers will be Onno van de Stolpe, CEO; Walid Abi-Saab, CMO; and Piet Wigerinck, CSO of Galapagos. Onno, Walid and Piet will go through the business and R&D strategy; Walid and Piet will cover the progress and some of our key programs and Onno will wrap up with the outlook, including the news flow that we expect. You'll see a PowerPoint presentation onscreen, and we estimate that this part of our talk today will take about 90 minutes and this will be followed by a Q&A session. And I would like to notify the callers that we will be alternating between questions in the audience here at the Yale Club and questions on the phone.



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So with that, all the logistics, I'd like to hand over now to Onno to start the presentation.

### **Onno van de Stolpe** - Galapagos NV - Co-Founder, CEO, MD and Executive Director

Thank you, Elizabeth. It's a pleasure to be here. Thanks for coming here to the Yale Club and everybody who is calling in. R&D Day is an important day to update you on what's happening in the pipeline and in the research of Galapagos' R&D efforts.

And let me start with the highlights that we are going to address today. Clearly, filgotinib, our lead program, we're going into detail into the DARWIN 3 data, the long-term extension data, but clearly, the activity as well as the safety reconfirms that we have something very special here in hand. In cystic fibrosis, we're on track with 3 different triples to move into patients. We'll discuss the timelines and the process on how to get to these patients during today's presentation. And then the rest of the pipeline, with some very interesting earlier-stage molecules, with the trials starting in osteoarthritis as well as in idiopathic pulmonary fibrosis with new mode of actions as well as with ones that are currently in the clinic. So in all-in-all, the pipeline is developing according to plan, with very exciting new mode of actions, and we have filgotinib and the CF program that stand out here.

If you look at Galapagos, for those who are not that familiar with the company, we're listed on Euronext and on the NASDAQ. Really focused on new mode of action on targets that we identify in our target discovery platform and as we bring all the way through the clinic. Filgotinib is an excellent example. We've been working on that program since 2003, where we discovered this target, the JAK1 for inflammation, and then developed filgotinib as a drug and brought it all the way to Phase III, where we now with Gilead -- with our partner Gilead, are moving that towards the market.

Next to Gilead, we got AbbVie, MorphoSys and Servier, a French pharmaceutical company, as partners in the various programs. A lot of cash on hand, EUR1.3 billion, very special for a biotech company in the current stage of development, and we got about 550 employees and growing in 4 sites in Europe.

Before going into the hardcore science, I would like to spend a couple of minutes on the journey that Galapagos has gone through over the last 19 years and moving forward. How did we build Galapagos? Because it's a story that is really a success in how to combine different activities in a biotech company. We started really as fee-for-service based on the technology platform that we have developed. Then we moved into very large risk-bearing alliances with pharma companies. And now we're really into a licensing mode, where some of the programs that we need to partner at certain stages, we're looking for partners to further develop those and commercialize it in the areas where we are not going to commercialize it ourselves. All based on, as I said, the backbone of this company, the new mode of action platform based on the adenoviral technology that we developed in the early '90s. This platform is really unique. It's patent protected. And to be honest, we haven't seen in all the years up to now, a better technology to rapidly identify novel targets. What we have done is to engineer adenoviruses to common cold virus with pieces of human DNA, that specifically will knock down a -- the targeted -- target in the cell that is infected with the adenovirus. We have done that for all the druggable genes in the human genome, about 6,000 genes, and so we can, one-by-one, see if we knock down that specific gene, what happens to the cell in the disease model that we have put that cell in. And that way we have identified all these targets in our pipeline.

When we set up this platform, we said, "Well, now we got a technology to identify novel targets. How are we going to move that forward?" And we thought about areas at that time, we're talking early '90s, that were at still at high unmet medical need, that were large, that were opportunities for this specific platform where we could set up disease models using primary human cells, which is the big advantage of using this adenoviral system, and we came up with osteoarthritis, rheumatoid arthritis and osteoporosis. And interestingly enough, we are 17 years later, and we're still very active in RA and OA. So really, the choice that we made at that time has paid off. For the bone and joint diseases, inflammation in general is really the core area of the company by design, and it has resulted in the successes that you have seen today.

But before that, we had a long time revenues coming into the service division. We built it partly in-house and partly through acquisitions that we then integrated in our internal service division, and in the end, we had BioFocus and Argenta as leading European service companies, that we finally sold, about a year before we went to the NASDAQ, to Charles River for EUR 129 million. A very successful unit. It's been profitable for a number of years and brought in quite some money for Galapagos. But clearly, this was not an end goal, but really a way to give investors confidence that Galapagos was on the right track, that we were actually generating revenues and that we had technology that was of interest to partners.



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The next part was the alliance model, and this really has changed the company dramatically when we implemented this. We signed strategic alliances where Galapagos took the upfront risk, all the way to the clinical phase and only got paid through milestones along the way. The partner had an option to buy into the program at Phase I or Phase II and then further develop it, and we would get a single-digit royalty when the product would come to the market. And this was an extremely successful model. We signed 12 alliances since the first one with GSK in 2008, and all the alliances together have brought in actual cash of EUR 800-plus million. So it's really been a very successful way to fund the development of this company.

Interestingly enough, it didn't go as expected, that these alliances actually brought molecules into the clinic and to the market, and we would get royalties, because pretty much all these alliances blew up. And not because the programs didn't deliver, but because pharma changed its strategy. There were mergers, there were site closures, there were management changes, priority changes. You could think of it and it happened. And one-by-one, all these alliances ended and all the rights returned to Galapagos. And that really was very good for the pipeline development. But not only the pipeline development, look at the cumulative cash since the inception of the company. And you see that, for a biotech company, it doesn't have a product on the market and spending very heavily in R&D, we have more cash in the bank than we have ever raised from shareholders over the whole history since its inception on the markets and private placement. So we have got EUR 1,200 million from investors, and we got EUR 1.3 billion in cash. So that's quite a unique situation and really is a result of that alliance model that we've -- we have built.

More importantly, though, is what happens to the pipeline on those alliances based on those alliances. And here is an interesting slide that -- where you see the various programs in the current pipeline, the current partner, but also the history of partners. And you see filgotinib, now partnered with Gilead, that used to be partnered with AbbVie, as most of you know, and maybe not all of you know, it was partnered with GSK before that. So we already had a third pharma partner with that program. And that's not the only one. Look at the Servier program in osteoarthritis, and Piet will talk more about it. That was partnered with GSK as well before. And so you see that most of the programs in the pipeline were actually at some point in time part of an alliance with pharma. So you can say, "Well, they are only recycling programs that pharma didn't like," but that's not the case. These are our programs that we brought from target through the clinic and pharma at a certain point in time has sponsored these programs and made them possible, because many of these programs take a long time and a lot of attrition to move along, and we could have not financed them on our own. So these partners have made it possible to build the pipeline that is there today. So the alliance model has been very successful for us. But clearly, we have moved on, and we're really are moving to a product company with everything in place, moving from target discovery all the way to commercialization.

We continue to focus on new mode of actions, novel drug targets that we identify with our technology platform. Based on that, we come up with molecules to interfere with the target. Some partnered, some proprietary, and we have initiated the building of a commercial organization to bring these products ultimately to the market in certain geographic areas. And with filgotinib, we have negotiated with Gilead a substantial co-promotional rights in the Big 5 in Europe and in the Netherlands and Belgium. And that's the first start of the commercial organization that Galapagos is going to build over the years, and then other programs will be added to that organization. And so we will have a presence as the Galapagos company in the markets with our own products.

So an interesting development over the 19 years that I have been at Galapagos, but we're clearly not there, not at all. We are on a roll. Filgotinib is moving towards the market. We're excited about it. And I hope you'll join that excitement, when you hear the presentations by Piet and Walid. And we'll start with Walid, who is going to talk about the development portfolio -- oh, the platform first.

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### **Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Thank you, Onno. Good morning, all, in the Yale Club here and the people on the phone. So when I'm going out to represent the company, or present the company, I get 2 questions. And the one I would call the short question and the other the long question. The short question is easy. They all ask, "How is your triple combo for CF doing?" And I will touch upon that later. The long question, in fact, is the more interesting one. And there people ask me, "Please explain me, how is it possible that you come with such a broad pipeline?" Because we have investors who see many biotech companies, and we are used to see that the good companies develop a first-in-class novel drug, like to do with filgotinib.

Next to filgotinib, a drug for RA. We're also the only serious competitor to Vertex in the CF space. You bring another mechanism of action towards IPF patients, you bring another mechanism of action to atopic dermatitis patients, and you even start a program in osteoarthritis. How is it possible that



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from a single company that variety of programs can emerge? And I'll try to explain to you that over the coming minutes. In fact, the answer lies in what is really motivating us? What is the challenges we as a company like to take in drug discovery? In fact, it all starts with our disease assays. We're all focused in the company from turning a diseased tissue back into a healthy. And so our focus there is whether or not the most challenging, the most novel models that we think tell us something about the disease, that we can isolate cells out of patients, we can measure what's going wrong in that assay, and we can interrogate the assay and try to find starting points that tell us how to make a diseased tissue back into a healthy tissue. So that's the question that we still ask ourselves every day, every month, every year, and we spend a lot of time in looking around what types of cells out of patients can we put into cultures -- our labs putting into cultures, what can we start to measure? And are we capable of bringing them in a medium throughput culture so that we can interrogate them in a completely unbiased way with our adenoviral platform, in our search for a novel target. But the variety comes from the challenge and the challenge is, what really is an extremely cool assay about the disease, where we know patients are in need for better medication.

And once we have that assay, where we measure something that either it's a scene that tells you about the damage going on, tells you that certain cells are producing way too much cytokines, it's telling us that cartilage is being broken down too quickly. Once we have that assay into culture, we can interrogate what we call for ourselves the druggable genome. It's a library of about 6,000 drug targets, and we add targets on a yearly basis. And then in a complete unbiased way, the experiment will tell us which targets are the best one to turn the diseased tissue into a healthy one. So we end up with a list of targets. And then the next critical step is that for which of these targets do we believe that within a number of years we can come up with a small molecule or an anti-body blocker.

So as far as the assay, interrogate and then really do a deep dive into all the targets in a completely unbiased way, only look what is the best target here, and then select ones that we say, these are ones that, with our knowledge of today in 2017, we can drug and go from there. So it's not that we learn from a disease and go back to the [synergies]. No, it's really the cool assay where we say, "Wow, this is novel for the disease. This is a good starting point for us." And once we've identified the genes, we go further do a screening and find either a small molecule, either an antibody and that will validate filgotinib, now in Phase III.

Last year, I shared with you our ambition what we want to be on the long term. And on the long term, we believe we can deliver or we want to start one Phase III every 2 years. So we really believe we have the research engine ready to deliver candidates for Phase III, which we're going to do ourselves. We're really gearing up, preparing the development group to organize our Phase IIIs ourselves. And where are those Phase III candidates will come from? Well, we plan to do on average 3 proof-of-concept studies a year. So if 1 out of 6 is active over the span of 2 years, we will have 1 Phase III candidate every 2 years. And those proof-of-concepts, where are they going to come from? Well, we typically currently start 3, we select 3 PCCs per year. So with all of those novel drug candidates against a novel target, that's what you call a PCC, we'll put them into preclinical evaluation of Phase I. And the plan there is to try to do 2 or 3 proof-of-concepts per compound. So there is an attrition. We will lose some compounds, but some compounds we will test in more than a single indication. And so that's how we will come up with the 3 proof-of-concepts here. It all started like we are -- we have been starting now for more than 10 years. On average, we start 8 novel projects a year, delivering us 3 PCCs.

So how well did we do versus this ambition in the past 12 months? Well, the Phase III is a bit inflated. Filgotinib started 3 Phase IIIs and this is not a good measure for the coming years, but in anyway, we have started Phase III, but we plan to deliver on 3 proof-of-concepts. So later this year, we'll have the IPF study, we'll have the atopic dermatitis study, we'll show you triple combo data late -- later this year. And then last year, if you look to it, how many PCCs did we select? We selected 3 PCCs. Out of the research engine, we have about 200 people in drug discovery, supplemented with external resources. We on a yearly base on average get 3 PCCs. And there come the novel targets, drug targets. We find the cool assays, and we're -- in an -- in a typical assay, we will select 8 druggable targets.

In terms of diseases, some people think we do everything. No, we have a clear defined focus. So we started -- all started in RA. Thanks to filgotinib, that has been broadened by UC, Crohn's, ankylosing spondylitis, lupus, psoriatic arthritis, so the autoimmune field has been broadened, and we are now going to more specific diseases. Our second big area is fibrosis. On the one-hand side, we have a huge CF program. I'll tell much more about that later. But secondly as well, we're looking to go to lung fibrosis, and we'll move later to liver fibrosis. And then we have 2 tactical areas. So one is type 2 diabetes. This is still in early discovery. PCCs might come over the coming 12 months. And then we have a very tactical program, Hep B. We've geared up that effort about 3, 4 years ago, and also there the coming 12 months, we're going to try to deliver a number of PCCs and putting together a combo treatment to eradicate HBV out of patients.



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And so we know the fields we're doing. What is clearly lacking here a field we never move into is oncology, way too complex for us. The disease of the brain, we typically don't enter those, so we really have our focus and stick to that. Over the 4 different disease areas, you can see the spread. There is almost equal spread in terms of drug discovery, a bit bigger in inflammation; fibrosis, metabolic and Hep B are close. And as I said last year as well in terms of drug discovery in CF, we have the portfolio we need. What we do there is supportive studies that help us designing the Phase II study.

In order to get to 3 PCCs a year, it's a lot hard work, and we have to kill a lot of projects as well. So yearly in the projects -- in the portfolio, we have about 20 to 25 projects, but we kill projects quickly. Very important if we really want to keep the flow there, that we don't stick to those projects that really take us way too long and will never give us any preclinical candidate. So all of that really is an intensive effort. People on one-hand side work on the cool novel assays, come up with the novel targets, and they are pushing us. They are pushing us to start those novel projects, but the consequence as well is that we early on have to kill a number of those projects. And if you look to what we've been doing 4 years ago versus now, it's a huge difference. You hardly find any target we started 4 years ago still into our drug discovery engine. So it's novelty, good throughput, killing fast and then focusing at any way.

All of this has led to a clinical pipeline, where we have 3 big buckets. The CF bucket with a number of projects there. We have 3 axes: potentiator, C1 and C2s. A growing IPF portfolio. We'll have data later on the autotaxin this year. We have 2938, which is a novel mechanism of action. I won't touch on that, but in that -- on that same target, we have better compounds coming forward, so probably one of them will take over 2938 later this year. GPR84 is a novel mechanism of action we tried out in UC a couple of years ago, we've been working hard to find for a novel indication of that. And so in the second half of this year, we plan to announce a novel proof-of-concept with 1205, which is the most advanced compound, and we have a backup compound there as well, 2384. So both tackle the same target, and we'll announce the second and maybe third proof-of-concept on this target.

OA is a singleton, it's ADAMTS-5. I'll tell you more about that later today. But then in the atopic derm area as well, we have 2 different compounds coming. So we have the antibody IL-17C, first-in-class antibody for novel cytokine. It's a locally-acting cytokine. And we have in the same disease a small molecule coming forward, 2534, which will move into Phase I early next year.

And then finally, in the skin diseases, we also have a compound 3121 moving into Phase I early next year for psoriasis.

That's all so far for the platform, and I'll give over to Walid to share with you the filgotinib status.

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### **Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

Thank you, Piet. Good morning, everybody. I'm really very excited to be here today to talk to you about filgotinib and our progress so far. So as you can see with filgotinib, we have a very large Phase II and Phase III program across a number of autoimmune and inflammatory conditions. Our Phase III program in RA and inflammatory bowel diseases, particularly ulcerative colitis and Crohn's disease, are well on their way. In addition, we have initiated 6 Phase II studies across a number of inflammatory disease indications. The first 2 you will see here are small bowel Crohn's disease and fistulizing Crohn's disease. Those would be sort of complementing to our Crohn's disease indication. In addition, we have 4 other indications, Sjogren's syndrome, ankylosing spondylitis, psoriatic arthritis and cutaneous lupus erythematosus.

We're really very excited as we accumulate more and more data with filgotinib. Up until now, we have upwards of 1,700 patient-year exposure with this drug. And with that comes a -- an increased level of certainty as we start to make conclusions and figure out what this drug can do. Of course, the proof will be in the pudding, as we're doing a very large Phase III and Phase II studies to see at the end of it, a very comprehensive efficacy and safety platform. But I think you can imagine from the data that we have to date and the level of investment that we're putting behind this drug, that we are really, have very strong positive beliefs in it. And this stumps -- stems from the fact that based on the data that we have currently to date, we have shown a very high level of efficacy in our Phase II trials with once daily dosing. We can say very nicely when you compare to the other JAK inhibitors out there, that we are the one which has the best lipid profile. In addition, we improved hemoglobin as well in these patients, who if you recall, people with chronic inflammatory conditions tend to become anemic because of chronic disease, so this is a valuable improvement that we bring to the table. We also have an improvement in platelets. Mostly patients with rheumatoid arthritis tend to be thrombocytotic, so they have an increased level of platelets with potential association of hypercoagulability and maybe deep thrombosis and PE





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potentially. And lastly, we have really no impact on our natural killer cells, which should have implication on -- as to our liability to increase the risk of infection, whether they are regular infection or serious infection. And the reason for that, we believe, is mostly driven by the high-selectivity for our compounds. This is really some data that we have generated in-house using whole blood assay. And as you can see, the selectivity for filgotinib for JAK1 over JAK2 is 27 or 28-fold, actually, probably correctly on the slide, compared to the others. This is a whole blood assay where we try to inhibit the cytokine-induced phosphorylation of STAT signaling. So you see a very nice, and whole human blood can demonstrate a very solid level of differentiation in terms of selectivity for filgotinib compared to others. And on the left, you can see on that scale, you have that sort of the balance between JAK1 and JAK2 inhibition to see what ratio will be detrimental in terms of your hemoglobin recovery versus one that would help you to essentially improve towards recovering from anemia of chronic disease, and this is derived from a paper by Pardanani in Leukemia back in 2013.

So today, mostly I'm here to share with you a lot of our longer-term data from our DARWIN 3 study. So let me kind of help set the stage a little bit for this. The DARWIN 3 study is an open-label, long-term extension study which is still ongoing. And in that study, we included patients coming in from DARWIN 1 and DARWIN 2. In DARWIN 1, patients were treated with either once a day or twice daily dosage. And when they come into DARWIN 3, if they were assigned to a BID regimen, they will get to a total dose of 200-milligram, but given as 100 BID. If they come in from the once a day regimen in DARWIN 1, then they will go to 200 once a day in DARWIN 3. In DARWIN 2, all patients were treated monotherapy with filgotinib as once a day. Once they come into DARWIN 3, all of them go to 200-milligram once a day of the drug.

Just to be clear, this is an open-label study and what I'm going to be showing you are observed cases. So please use the usual caveat into interpreting results from an efficacy study when you look at these kinds of things. But having said that, we still think there are some valuable lessons and data to be extracted from this study.

I think I'm ready to go to the next slide. I knew there was something I should tell you about it. So this interim analysis was done when the last patient crossed week 60 in efficacy. So when I share with you the efficacy data, it will only include data up until week 60, because this is the efficacy data. However, by the time that last patient crossed week 60, we had a number of patients who went much further. And for the safety portion of the presentation, we will include all the safety data available at the time of the data cutoff for the interim analysis. So you'll data extending to mostly 96 weeks. There is some case where you can get data up to more than 2 years. I'll be showing you those.

So this is our first slide on efficacy, and we chose to look at the ACR50, because I think it's really a pretty good way to look at a significant endpoint in rheumatoid arthritis. You can see data now over a period of 60 weeks, and again, at the end, you can see at the bottom of each slide, you see a very nice essentially increase initially when they start DARWIN 3, because remember, everybody got to be up to 200 milligrams total daily dose. So those who were on lower doses or on placebo for that matter, get to benefit from it. But then you see very nicely that there is a gradual maintenance of this dose, which is also an important finding because it's something like, for example, you would expect to be maybe a bit different in perhaps biologics, where you have the concern of immunogenicity and potentially lost of signal over time. Although this study was not designed for that purpose, we looked at the patients who were taking the drug once a day versus twice a day. Again, same total daily dose, either 200 or 100 BID. And then you can see across on the left panel, there is no difference between the 2 groups. Similarly for those who were on methotrexate or treated with monotherapy, on the right-hand panel, you don't see any difference between these 2. That's why on this next slide, when we're showing the ACR20 and ACR70 also for completeness, we essentially lumped all of them together and showing them on one slide. You see the same story again, initial bump between baseline and week 12 and in general, it tends to be sustained. Perhaps on the ACR70, because the -- essentially, we set the bar a little bit higher, you see it's more of a 24-week until you get to where you need to be and then you kind of plateau, which again, tells you that the drug continues to be active over time and you can see the (inaudible).

On this last slide, this is the last one of the efficacy slide that I will share with you. We are sharing with you the low disease activity score. So this is the percentage of patients who are meeting the LDA targets and remission. And you see those numbers are, again, gradually increasing over time and stabilizing. Those are taken using the disease activity score 28 CRP, it's a index that is calculated with a complex formula. For the bottom line, to achieve a target of low disease activity, you need to have a score less than 3.2. And for remission, you need to have a score of less than 2 points. And those are commonly used definitions.

So moving on to safety. This is a complex slide. So bear with me a little bit as I try to kind of set it up a little bit for you. So this is mainly driven by our own data and DARWIN 3. And as you can see, we have 1,300 patient-year exposures. And what we tried to do is pull out some of the key major events, adverse events, that are of interest in RA studies, particularly you're looking at death, malignancies excluding non-melanoma skin cancer,



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major adverse cardiovascular events, serious infections and herpes zoster. And what we tried do is to try and pull out, whenever it's available in the literature, and you can see in the far right-hand panel, in the case of adalimumab and tocilizumab, those are drugs that are on the market, so there is a large body of evidence and publications there. You can see the patient-year exposure are pretty high. In the case of tofa and baricitinib, we had to dig, for example, for the case of tofa, to try and pull out the 5-milligram BID, because that was what was ultimately approved and that was not necessarily how the data were shown. So we had to pull those data out of the medical review of the FDA. And also in the case of baricitinib, we still had some data from EULAR and also from publications there.

And I'd like to also point to the fact that again, it's early days relatively for us, but 1,300 patient-year exposure is a respectable number. So we're not at the end of our Phase III right now and the proof will be in the pudding, when we finish our Phase III, and we have a much better estimate of these numbers. But so far, I can't help but look at our numbers across the board, whether it's death, malignancy, MACE, serious infection or herpes zoster, and when you compare to the others, they seem to be favorable. We expect them to continue in that direction. Obviously, only time will tell and that's why we're doing our Phase III program. But we're excited by what we're seeing. And we think this is really mostly driven by selectivity.

And on the next series of slides, I'm going to try and walk through some of the key elements from safety that we think essentially are important and jump -- as they jump out at us. So why don't we start with the infection rate. So here, I'm showing data over about more than 2 years, up to week 120. And I'm looking at the percentage of patients who report an adverse event in the SOC class of infection, so any type of infection will be showing up here. And you see here very nicely that the infection rates decrease over time, and essentially plateau at a relatively low level. So I mean, I think it's safe to say that patients who take filgotinib chronically should expect to have a low risk of infection, and that risk should actually decrease and plateau over time.

Another major area of interest for us and improvement is with hemoglobin. Again, these are data over 96 weeks. You see that there's a gradual increase in hemoglobin, which actually continues throughout the treatment in the DARWIN 3 study. Now keep in mind, these are patients with chronic inflammation, which at baseline, most of them suffer from anemia. So to a great extent, being able to reverse their anemia and increase their hemoglobin level is a very much a desired endpoint here. And that's really key, because it's a key differentiating factor for filgotinib compared to other JAK, and I'll show you on the next slide also a little bit more detail.

So in this study, and again, it's always difficult when you are trying to compare between studies, so just take it for what it's worth. But what we tried to do is pull out our data from our 12-week DARWIN 1 study, and when we look at change from baseline in hemoglobin and I apologize here that the units are gram per deciliter; before it was gram per liter. But the bottom line is, you see a nice -- for 12 weeks, you have a nice increase of 0.2 and 0.4, whereas, you see with other JAK, in general a reduction. And that is actually to be expected because when you try to interfere with the EPO signaling through the JAK2 pathway by blocking JAK2, you end up inhibiting the ability of the body to recover after you treat the underlying condition of inflammation. Chronic diseases lead to chronic anemia. When you treat that chronic disease, you restore the body's ability to get out of the anemia and recover, usually by secreting erythropoietin. If you're blocking this by blocking JAK2, blocking that signaling pathway, that's going to have -- now an open question is, is this medically significant or not? Of course, as we generate more data and the Phase III program will be able to answer more of this question. But honestly, when you take people who are chronically ill and anemic and you give them a drug that's going to essentially stop their ability to restore their hemoglobin levels, because they're blocking the EPO pathway versus one that doesn't, I would imagine at some point, this will be medically meaningful, especially that we're treating chronic conditions. These are diseases (inaudible).

Moving on to another key element, the natural killer cells. Again, DARWIN 3 data, you see that we have really stable levels of NK cells over time with no change. And this is -- we like to believe that ultimately will lead to a lower reduction or lower risk of infections, such as (inaudible). And then this contrasts also very much with the other JAK1s that are available, either on the market or being tested. You can see here from this slide, again, we took data from 12-week controlled trial, and we tried to pull data, and the references are on the bottom, from similarly designed trials with other JAK inhibitors. And I think here you can look at the mean change from baseline -- mean percent change from baseline. And you can see that, that the data are stark, the difference between the 2. And I can't help but think that this could be one reason why in our slide that I showed you previously about the rate of serious AEs, we don't see much of it or we see maybe a lower rate in our -- with filgotinib compared to the others.

There is some data recently that we've seen with upadacitinib, for example, from their CELEST trial, from their balance, either 1 or 2, I can't remember, where even the rate of infection, even at 12-week period, border close to 50% in some cases; in some cases up to 30%. So clearly, I think this could have some implication for further (inaudible).





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Moving on to platelets. This is a topic I think that probably took a little bit more of -- more center stage, so to speak, in the case of baricitinib. I don't know if you've followed some of the focus at EULAR last week, where apparently there seems to be some concern around thrombotic events, potentially with baricitinib. So in our case, we're showing you data from our DARWIN 3 trial. Again, you see a very nice reduction and maintenance. Again, these people, by virtue of their chronic condition, have thrombocytosis as an increase in platelet levels. So when you treat them or treat the underlying condition, you bring these levels down. We see that actually with TNF-alpha inhibitors. We see it with our drug, actually, TNF-alpha rough -- get you to roughly the same situation. It's kind of interesting and you see it more on this slide. Baricitinib is unusual in this case in that -- and forgive me, this slide is maybe a little bit flipped, so up is better. So a reduction in platelets is upwards, and baricitinib is unusual in the fact that actually it makes platelets increase with treatment as opposed to decrease. We have been racking our brains as to why, we don't know really, because other JAKs do not do that. But those are the data and I thought we'd share those.

In our DARWIN 3, also we've been monitoring male hormone levels. We've looked at a number of them. I'm showing you data here on testosterone, which appears to be stable throughout the study. Now I hasten to say, this is not necessarily a question that's going directly address the male safety question that we have, and for that, there is a dedicated study that is about to start imminently to evaluate that following the exact recommendation from the FDA. But we saw these data nonetheless or at least we were happy to see at least there we don't see a decrease in those levels and they are stable over time.

Going through the Phase III program now with filgotinib. I believe we've shared this information in previous fora before. But one of the key messages for us is that it's a pretty large program. It's about maybe 3,300 patients totally. And all of these people from FINCH 1, 2 and 3, they will roll over into FINCH 4, which is an open-label extension study to continue measuring safety over time. What we -- what I like to emphasize about this program is that we fully evaluate both doses, 100-milligram and 200-milligram, in every one of those studies. So that at the end of the day, we will be able to make the appropriate risk-benefit assessment about each dose and what is the value of each one as we are able to move forward. As you know, we are dealing here with a chronic illness. It's not really the sprint that matters, it's actually the marathon. You need to -- these people need to take their medicine for the rest of their lives, and it needs to have the right balance between safety and efficacy. It's one thing to be able to demonstrate good efficacy in a 12-week trial, it's another thing to be able to demonstrate -- I mean, good efficacy and safety in 12-week trial, it's another thing when you have to deal with the safety over a very long period of time, and that's really very key.

And this is the program in the inflammatory bowel disease. We have, again, a program of about 2,600 patients. In Crohn's, 1,300 patient Phase III trial, followed by long-term extension. And in UC, it's a Phase II/III trial, but it's a registrational trial, also the same size, 1 year long and with a long term extension. I touched upon this before about our Phase II studies that we are doing. Other than fistulizing Crohn's and small bowel Crohn's studies that complement the Crohn's disease, there are 4 additional indications that we're going after: Ankylosing spondylitis, which is a large issue with high unmet medical need, affecting about 1 million cases between E.U., U.S. and Japan. We believe that there is clear data in the case of ankylosing spondylitis for the involvement of IL-23 and the T helper cell 17 axis. And our data from our clinical studies has clearly indicated that filgotinib reduces IL-23 markers of TH17 cell as well so that we think we have good reason to believe that this could work in this indication.

Tofacitinib had positive results in Phase II in a PoC study, but I think I'm not sure for a variety of reasons, they decided not to pursue go into Phase III, I don't know if it was in terms of prioritization or not, that they decided on.

For psoriatic arthritis, which constitute about 1/3 of patients with psoriasis, we also have a good reason to believe that our drug would work. I will show you on the next slide some interesting data in a challenging animal model, actually we're very proud of, looking at the potentially down the line pathology involvement of IL-23 in mice. I'll save that for the next slide. But that phase -- our drug is active in this, as I will show you. And so in the case of JAK, tofacitinib has really filed an NDA and with upadacitinib is currently in Phase III, so there's clear activity here.

Moving on to lupus. We decided to target cutaneous lupus, because our data indicate that JAK1 essentially is required to -- for type I interferon signaling through JAK1, as I said, and there's some specific expression in the -- predominantly in the skin, especially for the -- where filgotinib reduces some of the T markers I indicate here. And that's why we were interested to move into cutaneous lupus. There are some activity with JAK1, tofa is to the Phase I and bari is in Phase II, but those are in systemic lupus, not specifically for CLE.

And last but not least is Sjogren's syndrome, where based on the activity of JAK, which acts on IL-6, 17 and 18 in type 1 interferon, we managed to block those things. This is a bit a -- uncharted territory for the JAKs, but we think we have good reason to believe that our drug would work. And



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for that, we're doing a proof-of-concept study. So on to this model, animal model. This is a model in mice. It was developed actually in Merck Laboratories in California, where they managed to activate IL-23 in mice, and they were able to reproduce a number of the joint and tendon symptoms in psoriatic arthritis. And they use essentially a disease score, where they measure disease activity throughout a number of attributes. And we are still tinkering with the model to perfect it. I'm sharing with you some hot-off-the-press data, which probably still would improve. But here when we start treating with filgotinib at 30-milligram per kilogram per day, after about a week, you can -- so we start treating them after about a week and you quickly start seeing a very nice separation between the control and the filgotinib-treated mice. And because a picture is worth a thousand words, this is essentially an imaging technique where you inject something called a ProSense, which is a -- an imaging agent which usually does not fluoresce until it hits cathepsin. Cathepsins are increased in cases of inflammation. So usually, when it comes in contact with it, it lights up, and you can see on the left-hand side, low intensity at the bottom, it's more when it's magenta and blue. You see healthy mouse paws and then you see the diseased mouse paws, with significant level of activity, high-intensity reds, yellows and greens. And then when you treat with filgotinib, I think you can appreciate a significant reduction in the intensity of the inflammation.

So with that, I will turn it over to Piet to walk us through the rest of our pipeline. Thank you.

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**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Thank you, Walid. So second part of my talk will be, I will cover CF portfolio, osteoarthritis drug shortly, IPF timelines and then the atopic dermatitis, the MorphoSys antibody as well.

But let's start with CF. So what's our vision there? Our vision is clear. Coming 5 years, treatments will come that will fundamentally improve the life of almost all CF patients. So the science is there, the molecules are there, it's on the table. We need to turn it into therapy. Together with partner AbbVie, we want to be part of this effort, and we will progress a triple therapy that brings a fundamental change to the disease of more than 90% of the CF patients. Putting together triple therapy with 3 complete novel compounds is complex. So you have to do a lot of combination tox work. So at the beginning of this program, of the clinical program, that's the stage where we're now, we have time for the first compound that have entered the clinic to do a couple of studies in parallel, which are off the critical path, but allow us to learn a lot on how these compounds behave. So I'll share with you, because we got many questions on the ALBATROSS and the other Phase II study.

Let me have a look here. Okay. So over past years, we've gathered what we call a deep CF portfolio. So we have 3 potent potentiators for the triple combination, the focus is on 2451 and 3067, both belong to the same class in are close analogues. In terms of the C1 correctors or the early ones as I call them, we have 2222, well advanced into Phase II, and then a backup 2851, which is a technical backup, we'll move it forward into Phase I, probably there that will stop. And then the real game changers are the C2s or the late correctors. I will show you some data to illustrate again how much of additional efficacy we expect by adding this third component to a dual platform. And there we have 2 compounds, 2737, which today, we announced has completed Phase I. So we've tested it in SAD, MAD, well-tolerated, covers our target exposure range, so we will move it forward into Phase II into a patient study quickly on top of Orkambi on the one-hand side and in our own triple study as well this year. And then we have a second C2 corrector, 3221. I'll show you data as well. It's, in fact, the best we have ever seen, comes somewhat later, but is planned to move into Phase I in Q3 of this year.

Let's start with the FLAMINGO study. All our studies have names of exotic birds and everybody gets confused of it, but at least, if you hear those names, you know it's one of our CF studies. FLAMINGO study is a Phase II study, where we dose 2222 as a monotherapy to patients who are homozygous delta F508. So on the left, you can see the dose response on -- of 2222 in terms of ion current over lung cells. It's a quite potent C1 corrector. On the right, you see in terms of, let's say, efficacy, where do we expect to end? Well, the FLAMINGO study is going to be at the lower end of what has been seen in CF studies, because it's a monotherapy study. So as a monotherapy, it brings about in the in vitro model 80% of the current dual platform of Vertex. So we've modeled all the compounds now, not anymore at Orkambi, but to the combination tezacaftor, ivacaftor. So it's all other monotherapy brings about 80% of infection. They have shown in Phase III, about 5% FEV<sub>1</sub> improvement, so we should expect something between 2%, 3%, 4% of FEV<sub>1</sub>, so really, the lower end. So this is mainly a safety study. What we want to see as well and explore there, is no negative impact on the lung functions, which other C1s have shown in the past.

Notice as well on the right, our dual platform. You combine 2222 with either 2451 or 3067, the data are the same. We almost double in vitro the efficacy compared to Vertex. So we really believe that as a launching platform, our dual for triple is much more efficacious than what Vertex has.



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So really, we look forward as well to generate dual data and see how much additional activity then we will later bring with our triple combination. So it's a safety study. It's a study we've run with the CFF network. So it's the first CF study we run in the U.S. here as well. So we've submitted protocol, optimized with them. We came out with a design with 2 cohorts. So a low-dose cohort A and then moving up to a higher-dose cohort B. Each of the cohorts include 2 dosages. So in total, we study the safety of 4 dosages for about 1 month and this is a placebo-controlled study. So the study runs in the U.S. and in Europe. So it's a lot about safety, PK, but as well sweat chloride, FEV improvements will be measured during this study. So we hope to recruit this study by around year-end, and then report out early next year.

The second study we do with 2221 is the ALBATROSS study. So there in fact we explore the high-end of the FEV improvements, because what we do here is, we dose 2222 on top of Kalydeco in patients with typically the G551D mutation or in other class III mutations. They have already experienced normally a 10% of FEV improvement, and we want to add another 4% to 5% of that. So you can see here as well. So if you add in these patients, where you have 2 defects, so on 1 allele, they have a mutation G551D that closes the channel that's going to be opened by ivacaftor. On the second allele, they have a delta F508 mutation, so they make less of CFTR protein. So also that defect we will correct by adding 2222. And by correcting the 2 deficits, you'll end up at what is expected to be the high-end range of the FEV improvement. So for these patients in total, they came up with an FEV improvement of around 15%. That's what the field expect; 10% they already have gained with starting ivacaftor, which we expect another 5% on top of that with this study.

So this is also a 4-week study, parallel design, 2 dosages included here, placebo-controlled, study mainly is running in Europe, so it's a study which is recruiting quite well, and we will report data out of this study before year-end. So it's a study in Belgium, Czech land, Germany, Ireland and the U.K. So classic measurements: Safety, PK, FEV and sweat chloride. These are the 2 studies where 2222 is as a monotherapy, so the next study is coming with 2222 will be in triple and dual.

Let's now have a look to our triple combination. Okay. So again here, in vitro assays, the currency over the membrane as a function of time as well, so expressed as AUC over time. Compared again, here the dotted line is what's in the same assays we see with the dual Vertex platform. So you can see again in gray, our dual platform almost doubles in vitro on AUC. But then whether we now add 2737 or 3221, we more than triple the efficacy of our own dual platform in vitro. So we really look forward for these triple studies, because they really bring a lot of additional efficacy, so that's really what we think will change the life of many patients. So in green, you have 2737 with 2451. In orange, 2737 plus 3067, but as you can see, the efficacy is similar. And one of the reasons why we're so pushy on 3221 as the second corrector, although, it's coming later, it always performs better than 2737. It's (inaudible) compound. It acts slightly different and really, we see the highest level of efficacy with 3221. So 3221, planned to move into Phase I this year and then moving into triple studies next year.

2737 will be included in our triple combination. We're also initiating a next course of the study on top of Orkambi, so that's the first time going to see -- what our C2, on its own, brings for patients as additional efficacy when they have been dosed chronically with Orkambi. You can see again the same type of graph, so we expect it will be a 3% to 4%, 4% to higher efficacy. So there, the FEV for Orkambi being around 3% to 4%. We really expect them to move up those FEVs during the study. So it's an important study. It's the -- really, the study that will show the impact of our C2 on its own, because in the other study, we put the 3 together, and we'll see the total efficacy.

We'll go first on the individual components. 2222 is a repeat slide of last year, so it has completed Phase I. Nicely escalated, up to 600-milligram QD. That's the dose we don't need. It's way above our target coverage, and it's a compound that in principle can be dosed once a day.

Over to 2737, so that's new of today, so has completed SAD, MAD, so the phase -- the Phase I package as well there exceeded our target exposure. So well tolerated, stable exposure, and we're ready for this compound to start into Phase II. So the first next study will be the add-on to Orkambi, as I showed on the previous slide, and then as well as somewhat later this year will be included in our triple combo study.

2451, the first potentiator for the triple. So SAD and MAD completed up to 14 days. We as well completed dosing in the dual study. Well tolerated, also exceeded nicely our target exposures. It's also a compound we can dose once a day. What we've observed with 2451 that is complicating a bit our development, is that it has a metabolite with -- that behaves as an antibody. So it has a half-life of 1 month. So if you have an antibody that has a half-life of 1 month, we're very happy. So this is now a small molecule that behaves in the same way. But that limited a number of healthy volunteer studies we can do. Antibodies as well, most of the development has -- is to be done in patients so as well for 2451, most of the work will be done in the future in patients. So this compound will be the first potentiator moving into triple. So the plan is to do a multi-country study in



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Europe. There are 2 options, either we file immediately in 5 different countries, but then you can expect 5 different feedbacks, so we've changed our mind. And so we'll now first go in the U.K. for a scientific advice, so that we can optimally design the study, and then go with that study for filing for approval later this year in those 5 European countries. So we've included a scientific advice step that will start in July and will be run in the U.K. The U.K. is a country that did the assessment for Europe on Orkambi, so they're well-prepared. We will have dual and triple studies for CF, and we expect them to give us valuable input and that will then lead us to a smooth approval. The triple study will be run in both homozygous and heterozygous patients.

3067, Phase I still ongoing, SAD completed, MAD ongoing as we speak. Will be in Q3 followed by dual. Healthy volunteers and triple healthy volunteers in Q4, and then moves early next year into triple in patients and in dual probably late this year. So with that study, we can do more healthy volunteers study.

So in terms of triple-patient study, everybody always asking, "How it's going with your triple combo?" So next time, you need to specify your question. Because we'll do multiple triple studies, as you can learn from this slide. So we have the first one, 2737 on top of Orkambi. Then the second, 2451, 2222 and 2737, thinking of second half. Then early next year, which is with potentiator 3067 and we then maintain 2222 and 2737 and on second half next year probably we'll have 3067, 22[22] and then 3221. So we'll launch a number of triple studies to really select the optimal triple-combo treatment for the CF patients for the long term and for the larger Phase IIb studies.

In terms of timeline. So when do we expect readouts? So as I said before, the ALBATROSS on top of Kalydeco before year-end; the FLAMINGO, the monotherapy, early next year; then the triple on top of Orkambi, somewhat later, beginning next year; then our triple -- the first real triple of our own will be around mid of next year that we expect the data there; and then followed by the 37 -- the first 37 triple study start at the beginning so that will bring us into the end of next year. And then second half of next year, we plan for the 3221 study and that will lead us into 2018.

So whatever is there and we have a good triple combo, we will go forward and put it in larger Phase IIb studies, which we have a suite of studies coming, a suite of triple combos coming and we're hopeful that there's going to be a winner amongst these ones.

That's for the CF patient study, but I guess I'll get a couple of questions on that later.

Let's now switch to another lung disease. IPF has been for many years a bit forgotten lung disease. It's also an awful lung disease. About 100,000 patients got this bad diagnosis, really very bad diagnosis, because once you get it, you have a very limited life expectancy. So the goal of treatment now is to slow down the decay. The first treatment has been approved, but we are yet not there that we can stabilize the disease. There is still a quite important unmet medical need for a treatment that is going to help these patients. Also with the new drugs coming up, the diagnosis is picking up and you see the number of patients that are expected to be diagnosed to climb then to 125,000 by 2024.

So the first compound we developed for IPF is 1690. So fully-owned, it's a non-partnered product. It's an autotaxin inhibitor. It's another mode of action. We've discovered this in-house. We've done a 12-week study. And all patients now have left the study, so we are collecting the data. We will close the database and the study is expected to readout in Q3.

So the design was it was a 12-week study, a high dose, and where we have taken care that we really -- because IPF studies are difficult -- that we really have the right patients into the study, with recently confirmed diagnosis. We will measure safety PK. Main goal is to see whether we see consistent drop of the biomarker in serum first, and in the lung fluid, the BALF fluid, second, but we also will measure FVC, quality of life and a variety of -- the method where we've -- an imaging technique. You make an image on how well the lung -- the lung functions, so it's a much more sensitive technique than the FVC, so also that is included. So all of these data, we will get over the coming weeks in and look forward to report them over -- in the summer.

Let's spend now a couple of minutes on osteoarthritis. So osteoarthritis, this should come from orphan diseases like IPF and CF is complete, over -- seems over a 100 million patients. So one of the largest diseases, one of the largest unmet medical needs in society. Also there the prevalence, especially with patients gaining more weight, is still increasing. And in the absence of any effective treatment, expected that this disease will grow further over the coming years. We are developing an ADAMTS-5 inhibitor, so we are -- we have disclosed this target at the OARSI meeting in April. So we are -- we believe we're the first company currently in the race, there has been previously a Pfizer effort. We've made that compound, but it



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doesn't compare at all with what we observed, so we can't see any real activity with the compound also in our high content disease models. Those Pfizer compounds, while they nicely blocked the enzyme, didn't show up any activity, so really, is a complete different world of efficacy if you look to 1972.

What is ADAMTS-5? ADAMTS-5 is an enzyme that degrades one of the 2 materials of cartilage. So cartilage consist out of proteoglycan and a second component. So ADAMTS-5 degrades the proteoglycan. When you degrade the proteoglycan, you get smaller pieces and that's what we call the ARGS level. So you can measure those small pieces, the ARGS, neoepitopes, you can measure them in the serum of patients. So ADAMTS-5 is one of the most validated targets for OA. So many levels of validation, animal models, patient samples, all of that have always shown and indicated ADAMTS-5 normally is one of the more promising target if you want to tackle this disease.

Very proud as well to show you some images of the animal mouse model and what you can see here in dark blue is the amount of cartilage. So healthy people like us, daily, we make cartilage and we degrade cartilage. So in the animal model, we increase the level of -- we increase the speed of degradation. Now as a consequence, the cartilage layer becomes thin, but you can see the areas at on the left, very thin blue layer of cartilage. With increasing dosages, within 12 weeks, we really see a nice restoration of a healthy amount of cartilage in these animal models. And that's also what we're going to try to achieve in patients to really block the degradation and restore a healthy level of cartilage.

We've done up to now a first into human study. In that study, we have been measuring the degradation in serum of cartilage that are the neoepitopes or the ARG neoepitopes. What you can see here is, these are quite stable levels. As you can see, with the placebo, over 14 days these levels remain highly constant. What we've observed and we don't understand fully is that while giving the same dose for 14 days, we saw an increasing amount of degradation blocked by the compounds. So if we now say we block up to 50%, you will agree with me, we can't be sure that this is the maximal. So we really -- so that's one of the reasons why we've planned for a larger Phase Ib study in patients to see you what the maximal level is that we can achieve with 1972 in terms of target blockage.

So that brings me to the 1972 Phase Ib study, which is actually ongoing also in the U.S. here. The first goal of this study is to extend the age range. OA patients typically are -- many of them are older than 65, and there's a normal limit when we do think of studies. So we first have to extend the age range. That's the goal of this study. But secondly as well, we want to confirm the biomarker signal and then see how much further increase we see over 4 weeks with treatment of 1972. And then next is that from next year, we plan a Phase II study, which is going to be a difficult one. Designing, proof of concepts for OA is really the big challenge. So the Phase Ib study, we hope to be fully recruited by year-end. The IND has been opened, and in fact, first patients have been dosed in the U.S. during the month of June. We'll as well start to measure signs and symptoms of OA, but normally for an OA proof of concept, you have to count a trial of 6- to 12-month at least. To set up these studies, we have completed the full tox package with all of the chronic studies, and we're ready as soon as this study comes in to kick off a longer and larger study.

Then the last compound I will touch up today is MOR106, the only antibody in our pipeline. It's an antibody that blocks IL-17C. I'll come back to IL-17C on the next slide, with what it really does. But we're very proud that again, we are here with a first-in-class, novel mechanism of action, for a disease with high unmet medical need. So recently, a first drug got approved, but we believe there is still room for more than one drug. Currently, we dose a compound IV, but over time, we will plan to move to a subcu formulation. This is a project together with MorphoSys where each owns and pays 50% of the cost and benefit.

So IL-17C, for those of you who've dived into what is published about that, it had -- there are couple of papers published. It's claimed that it has dual mechanism of action.

So it's a cytokine that acts locally, has a direct action as cytokine on the epithelia. But as well, it's claimed to activate IL-17A, which is a more and a well-known cytokine in skin diseases. In fact, the beauty of IL-17C is that, what we call a local amplifier. So we've discussed with many people in this field. We don't expect any systematic immune suppression by blocking IL-17C. IL-17C is really sitting in the epithelia on its own doing nothing, but as soon as inflammation kicks, it activates that, it spreads it out. That's like you're in a big room with an iPhone and you want to play music, the cord is not good, you need a docking station. So IL-17C is your docking station, the cytokine comes in and you have sound all over the place, so it's really an amplifier of inflammation in the skin. And many people expect hardly any systematic suppression by blocking IL-17C.





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I'm going to show you some animal model data. So these are mice data, where we induced what we call a TH2 type of skin disease. So many of the cytokines will be working on the TH1 axis. Atopic dermatitis is completely the other corner of inflammation, it's a TH2 corner. So we induce that with a vitamin D analog. And then by applying -- by injecting the antibody, we clearly see a nice reduction of the disease score measured by the thickness in the ear here and by the influx of inflammatory cells after treatment.

We have completed the recruitment in the Phase Ib study. So we've done a single ascending dose in healthy volunteers, multiple cohorts, and then moved to a multiple ascending dose study in patients. So 3 cohorts. All of these patients have been recruited, have been set on treatment. Most of them are off treatment, but last patients are completing treatment as we speak. So we will report out on this study as well somewhere end of Q3 this year.

So in the readout of the Phase I study, lots of safety, but as well, we will include early measurements of efficacy. So we will have the Eczema Area and Severity Index, quality of life and Investigator Global Assessment, all of the more classic measurements in atopic dermatitis. Also couple of biomarkers that either or not will correlate with activity like TARC biomarkers.

For the convenience of all of you, I have gathered here the data of dupilumab, 4 weeks. So it is a gathering of two 4-week studies as a monotherapy. If you want to compare efficacy of different studies, very important, our study patients cannot take a topical corticosteroid, so you really need to go and look into studies where the units of topical corticosteroids is excluded. And that's what as well in the data that I have gathered here on the dupilumab that has happened. So we will bring the same type of readouts and so it will be easy to compare whether or not we see any type of activity, whether we're comparable or whether we're different to dupilumab.

And that concludes my part of the development presentation. Onno, over to you.

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### **Onno van de Stolpe** - Galapagos NV - Co-Founder, CEO, MD and Executive Director

Thank you, Piet. We really would like wrap it up, and clearly, show here again, filgotinib unlocking value in inflammatory disease. There are 3 Phase III studies underway and a number of proof of concept studies in various indications. Very broad program being implemented by Gilead and by Galapagos. And more proof of concept studies in the planning. In CF, 6 studies planned and ongoing. So a lot of news flow will come from the CF program this year. And we hope to be competitive with the triple, first triple, the second and the third triple. We have the right components. It's now a matter of getting them into patients as fast as possible and getting the data. And as Walid and Piet have illustrated, we have more than CF and filgotinib. We have a broad pipeline with very attractive news flow in the remainder of the year, with 1690 and IPF, 1205 will start in a new indication. For those of you who have followed Galapagos in the past, 1205 failed in UC 1.5 years ago, and we will move forward now with this in an indication that we'll disclose at some future moment.

The OA program, a lot of interest in that from the pharma industry. We'll have the trial fully recruited by the end of the year. And as Piet just presented, the atopic dermatitis program with MorphoSys -- is also coming up with data. So if you look at Galapagos going forward, we are in a very good position with filgotinib, with the CF. The other programs, growing number of proprietary programs, very important for us, and we're building a commercial organization to move these forward. And that's all with a balance sheet that is extremely healthy. So we're in good shape, and I hope you have enjoyed the first part of the formal presentation of the R&D activities. And I guess we can open the floor for questions. Elizabeth, back over to you.

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### **Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

Yes, thank you, Onno. It's getting harder and harder for us to fit all the progress into 1.5 hours. I really appreciate everybody bearing with us and getting through that. So as I said at the beginning, we're going to take questions in the room and questions on the phone. So while we're getting the mics ready for the first question from the room, I would like to have the operator instruct callers as to how they can pose a question.





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## QUESTIONS AND ANSWERS

### Operator

(Operator Instructions)

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**Elizabeth Goodwin** - *Galapagos NV - VP of IR & Corporate Communications*

We have our first question from Chris Marai from Instinet Nomura.

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**Christopher N. Marai** - *Instinet, LLC, Research Division - Analyst*

Just really quickly, I think you discussed regarding the triple combination previously, around mid-2017, and it looks like in the presentation, that shifted to maybe 4Q. I know that you're in ongoing discussions with regulators and patient groups. Is this based on any feedback that you've had with them? Number one. And if you could share any, we'd appreciate that. I understand it's sensitive. And then secondarily, just with respect to prioritizing 2451 in the triple, based on that metabolite profile, the active metabolite, with the 1-month half-life, I understand, how should we really look at that being prioritized in the triple going forward? And what kind of additional follow-up data might you need?

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**Piet Wigerinck** - *Galapagos NV - Chief Scientific Officer*

Okay. So first question was about timing of the triple. So we've always said it would start around middle of the year, time it took for us there was having the 2737 SAD/MAD safety data. We've reported them today, meaning that has come out. So there, we are exactly on time. So while we've changed plan is that it's a multi-country trial. And we've been discussing extensively, internally, with partner AbbVie as well, and felt that the risk of getting complete opposite input from 5 different countries was too high a risk. So that we say, "Guys, take your time here, do it well, go to the biggest country, the one with most experience in terms of CF, is the U.K., and let's go for a scientific advice there, so that everybody's comfortable with how we write the dossier and the design of the study." So then the second question was on the metabolite. So it has a PK of an antibody. So that's, I think, by the fact that it's an active metabolite, over time, it will take over. In fact, most of the activity, it will drive the efficacy. In that sense, we've been able of designing a small molecule antibody, which we can be proud of. And what it helps us, as a consequence, is that for a chronic treatment, the plan is to dose a patient daily, anyway, lifelong. That doesn't mean so that should not change the plan. If you do a healthy volunteer study, you should follow up that for a number of months and that might take more time than classic. That is the bigger difference.

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**Christopher N. Marai** - *Instinet, LLC, Research Division - Analyst*

Okay. And then just a quick follow-up on that metabolite. So any concern in your mind regarding, I guess, accumulation, because you want to dose daily, but you'll still have additional half-life...

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**Piet Wigerinck** - *Galapagos NV - Chief Scientific Officer*

Well, with that type of a half-life, we can exactly monitor -- we exactly can predict, we've done in multiple-ascending dose, different types of dosing, so a loading dosing and a maintenance concept dosing. But we were very close to what we have predicted. And so we feel 100% comfortable that the expected exposure will be reached in a safe way in patients, so there should be no problem.

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**Elizabeth Goodwin** - *Galapagos NV - VP of IR & Corporate Communications*

Operator, question from the line please.

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## Operator

We'll go first to Lucy Codrington with Jefferies.

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### **Peter Welford** - *Jefferies LLC, Research Division - Senior Equity Analyst*

It's actually Peter from Jefferies here. I just have a couple of questions. Firstly, just sticking with the 20 -- the active metabolites in 2451, just trying to understand, when you say it would limit the number of healthy subject studies that you're allowed to do, what would the studies be otherwise that you would conduct if there wasn't this active metabolite that you'd like to look at before you plan to move forward with the triple? Secondly then, just looking at the other triples that you're going forward with, I wonder why 3067 seems to be the preferred potentiator at this stage? I think you made the comment about 3221 and why you think that could potentially be best-in-class and better than 2737. So I understand the logic for that. But it seems as though the other 2 triples are also prioritizing 3067 as the potentiator. So I wonder if you could perhaps outline why that is the potentially preferred option? And then finally, just on filgotinib, I was just wondering, with the DARWIN 3 data, is the plan to have this data published in due course, or will we wait for the final analysis of that study at -- after (inaudible) 4 years or 5 years before we get the results from that? And what are the plans for sort of formal publication of those data?

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### **Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

I'm going to give Piet a rest. This is Walid. I'm going to start then with your last questions regarding filgotinib. So I don't have an answer to the official publication of this, but I know that we will be looking at another cut of the data, which is week 84, which I believe we'll be targeting to publish at ACR. But I'm not sure of an official publication, if that was the question.

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### **Peter Welford** - *Jefferies LLC, Research Division - Senior Equity Analyst*

So was that week 84?

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### **Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

Yes.

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### **Elizabeth Goodwin** - *Galapagos NV - VP of IR & Corporate Communications*

I would like add -- this is Elizabeth. Peter, I'd like to add that the EULAR poster presentation for the DARWIN 3 interim readout at 60 weeks efficacy, the data that Walid has shown, is available on our website today.

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### **Piet Wigerinck** - *Galapagos NV - Chief Scientific Officer*

Okay, Peter, thanks for asking on the priorities in the CF portfolio, because also, the previous person asked about the priorities there. We take the triples as they come and we try to develop them as fast as we can. So honestly, we want to give them all a fair chance. In terms of timelines, depending on how smoothly 3067 moves forward, could come close to 2451, then it might take over. Still in an ongoing phase, Phase I. So the teams, we have separated teams on the 2 compounds, and they all go their own way. It's not that we say that one is today more important than the other. So in that sense, priority is not that we have a preferred. No, patient data will tell us which of these gives us the best level of efficacy. And that's the one we will put forward in the competitive environment. 2451, the metabolites with the longer half-life. So it's an antibody. And with antibodies as well, most of the clinical studies have to be done, especially chronic dosing, more apart from the single dose, most or all of the clinical studies, also, the Phase I, have to be done in patients. And that's what is limiting us to do a formulation over a couple of days in a DDI study in healthy volunteers. So this will have to be done in patients in the future. But that is not anything which, in this industry, we can't cope with.



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**Yu Xu** - *William Blair & Company L.L.C., Research Division - Partner and Biotechnology Analyst*

Katherine Xu with William Blair. I'm just wondering, 2 questions. Can you describe the Phase I safety of each of the compounds that you have for the CF program and also the combinatorial tox for the triple? That would be very helpful. And also, 2851, are you not doing anything with it or are you pushing that forward? And also, on filgotinib, the safety of the JAK inhibitors, obviously, you said that the JAK1 to 2 activity ratio potentially is related to -- or correlated to safety, but if you look at like hemoglobin for tofacitinib and upadacitinib, they actually go separate ways, but they have the same ratio of activity. And in any case else, they don't really correlate with that either. So just curious what your thoughts there and probably some other explanations on the safety of these various JAKs.

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**Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

Can I clarify which part goes separate?

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**Yu Xu** - *William Blair & Company L.L.C., Research Division - Partner and Biotechnology Analyst*

Sorry?

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**Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

Well, you said that tofacitinib and baricitinib go different ways.

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**Yu Xu** - *William Blair & Company L.L.C., Research Division - Partner and Biotechnology Analyst*

Yes, so it's actually tofacitinib and upadacitinib, if you look at the hemoglobin, they actually went -- go separate ways and then both are about 10x JAK1 over JAK2. So just curious what other explanations there are?

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**Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

I'm trying to recall the slide. I'm not sure how much of a difference we see.

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**Piet Wigerinck** - *Galapagos NV - Chief Scientific Officer*

Sorry, what slide?

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**Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

The hemoglobin. So you're referring to this one, right?

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**Yu Xu** - *William Blair & Company L.L.C., Research Division - Partner and Biotechnology Analyst*

Well, my question was tofa and upada, they seem to have the same JAK1 over JAK2 activity, but then for hemoglobin, they're going separate ways, so I'm curious about their correlation?

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**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

It does seem to be a dose response. I mean, it seems like if you go with higher with tofa, you're losing it. I would imagine if you go even higher, it will drop. And with upadacitinib, it's a low dose, it goes up and then it goes down. So it's a -- I think it actually further strengthens the issue of selectivity. As you up the dose, you lose it, and then you start hitting the other thing. And again, this is always the dance between safety and efficacy. If you have a drug that's very highly selective, then you can move up without hitting the ceiling, whereas if you're dealing with a drug that doesn't have a lot of selectivity, you have to really try to walk a tight rope between hitting your target and not hitting the undesired effect.

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Okay, CF. I got a question on the Phase I safety. So let me repeat, 2737, indeed is an important moment, competitive-wise. It's the first of our C2s that has completed Phase I. To illustrate, in fact, both during the SAD and the MAD, we have added a higher dose, not because we weren't comfortable -- that the exposure was too low. No, we reached the target exposure, as I said before, but because really, safety-wise, we did not pick up any signals that was telling us you have a safety problem here, an immersion problem, in GI toxicity, whatever. We really haven't seen any dose-limiting toxicities with 2737. Combination tox, so we need to do dual and triple combination tox studies, probably 2 species, in theory, only 1, but probably 2 species. We're taking the worst-case here. What we look for there is that you don't see an additional organs popping up in terms of toxicity when you're combining agents. And as so far as we can see, we haven't seen that for 2451, 2222, 2737, we have the package in terms of combo tox ready now to move into the triple combo study. So for 3067, this is still in the makings. But as we're working within the same chemical class as 2451, we don't expect anything special there. Then there was a question on 2851, that is a backup C1. It's moving swiftly to Phase I. And probably after that, we will partner that compound. We have 2222, which really performs as good as we have hoped up to now. And mentally, we've more or less locked ourselves up to 2222. And so the 2851, we'll bring it towards Phase I and then stop probably at the end of Phase I. That was the question, right, 2851? Okay.

**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

Okay. Now another question from the line, operator.

**Operator**

We'll go next to Anastasia Karpova with Kempen.

**Anastasia Karpova** - Kempen & Co. N.V., Research Division - Research Analyst

Three quick questions, if I may. Given that 3067 triple will read out almost shortly after the original triple, would you wait for those results to deciding which one would you like to move to Phase III? Then on SAPHIRA 1 and SAPHIRA 2, you hit lower than expected exposures with the first potentiator, what will you do to address this risk, specifically for the triple trials? And finally, can you elaborate a little bit more on Servier opt-in option for the osteoarthritis program? Will they -- should they opt in for the European rights, or do they have the rights to opt in for the U.S. rights? And should they not opt in, would you progress the program forward on your own?

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

So Onno, will you start with the Servier option?

**Onno van de Stolpe** - Galapagos NV - Co-Founder, CEO, MD and Executive Director

Yes, I'll start with the Servier option. Servier has an option to license molecules for every indication for the whole world except the U.S. We have sole rights in there. That is the option.



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**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Okay, then, learnings from -- yes, sorry.

**Anastasia Karpova** - Kempen & Co. N.V., Research Division - Research Analyst

Sorry, if they decide not to opt in for whatever reason, would you develop the compound forward yourself, considering the future cost of Phase II and especially Phase III trials? Especially, would you move it to Phase II?

**Onno van de Stolpe** - Galapagos NV - Co-Founder, CEO, MD and Executive Director

So definitely develop the Phase II ourselves and then we'll make up our mind if we need to partner for further geographic areas.

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Okay. Moving to the comment on the SAPHIRA 1 and 2 studies. Indeed, one of the big learnings for us from the SAPHIRA studies was that you really need to only push forward compounds where during Phase I, you've exceeded with a factor 2 to 4 your target exposure. You can always have a somewhat less-than-expected exposure, or the calculations are not 100% right. And that for every compound we currently have in portfolio, 2222, 2451, 2737, those that have completed Phase I in MAD, we've been exceeding our target exposure, so we should have sufficient margin there that we can dose high enough to really get up to the plateau level in the dose response. On 3067, depending on how fast and smoothly everything progresses, might come close. 2451, we'll do in heterozygous and homozygous patients. We might, to accelerate 3067, limit to 1 of the 2 or do both as well. Waiting is not part of my working methods. So people in the company know that there is no shop industry that sells time, so waiting is not the right work there, but we will see. And as soon as we have a good triple that we believe is competitive within current environment, we will move that forward into patients.

**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

Okay. I see a question from Matthew Harrison.

**Matthew Kelsey Harrison** - Morgan Stanley, Research Division - Executive Director

I probably have 2 or 3. So I guess, first, just to clarify, Piet, can you walk us through, beyond the metabolite, what are the differences between 3067 and 2451? Are there any other preclinical differences you've noticed between those compounds or expected efficacy differences? Second, maybe just to clarify on the comment you just made around how you're going to think about the Phase IIb start for the triples, so should we expect potentially multiple Phase IIbs or -- because obviously, it looks like the readouts are going to come about a quarter part for 3 different triples, so will you add arms to the Phase IIb? How should we think about that Phase IIb developing as you think about the triple? And then finally, you didn't talk about filgotinib in atopic dermatitis, is that a potential study you might start there?

**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

Yes, I cannot say more, I think, at this point, atopic dermatitis is something that we're evaluating to see whether there is good rationale to go forward with this indication at this point. Again, I might use a lifeline. I don't know what has been communicated previously about it. But at this point, this is still under consideration, but we haven't made a final decision on it.



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**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Okay. The question that seems to trigger everybody's mind is 3067, 2451. So both are potentiators, chemically closely related. So preclinical as well, they behave similar, as you would expect from -- in terms of target or organ toxicity. It's exactly the same picture. So with 2451, it's clearly the once a day, and with the metabolite, we even could dose less frequent. 3067 will be BID or QD, needs to be seen in -- during the multiple ascending dose. So it's really a PK difference there. And then, see from our experience as well, speed of development moving forward there, 3067 might have an advantage, which we hope to learn that over the coming months by as well talking to the regulator there. Plans for Phase IIb. I think, honestly, you might see a first program centering around 2737. And then, eventually, later one around 3221. And that's it. Maximal 2, I would say. But if we can progress both C2s through a Phase Ib and both behave as expected, 2737 should kick off first, and then it's up to 3221, whether it shows further superiority or whether we've reached there a ceiling and we don't expect any further superiority. But mentally there, they are 2 different mechanisms of action in terms of C2. They bind differently to the protein and we might give both a chance, let's say like that.

**Matthew Kelsey Harrison** - Morgan Stanley, Research Division - Executive Director

Piet, can I just follow up. How are you going to -- I guess, the other part of the question is how are you going to decide which potentiator to use as the backbone then?

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

What data we will learn quickly over the coming months. So -- and then the timing will play there, but if 3067 is the easy one, we might include that one. The whole idea of the first 2451 study as well is it's not that time-critical, because all that we learned there is we have some time waiting for the chronic 3-month combo tox. So in that sense, both will come very closely in terms of timeline. So I would not focus too much around that. Going to be the complete data package, safety margins, PK coverage and then efficacy in triple studies.

**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

Operator, we need another question from the line.

**Operator**

There are no further phone questions on the line.

**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

Okay. We've got lots of questions here. I see Phil Nadeau in the back. Go ahead.

**Philip M. Nadeau** - Cowen and Company, LLC, Research Division - MD and Senior Research Analyst

Phil Nadeau from Cowen. Just a couple more on fibrosis. First, on the trial design issues that you're going to discuss with the U.K., could you give us some sense of where the controversy could lie? What issues in particular do you want to get input from the U.K. regulators on? And then second, on 2451 and 2737, could you talk a little bit more about the pharmacokinetics on the Phase I trial, in particular, how consistent was PK for the patient, intra-patient variability?

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Okay, so questions to me. First of all, trial design, we will go in with a proposal, which will include a dual control and a triple efficacy and a triple arm, so that out of that study, we both have a read on dual activity and triple activity, needs to be discussed with the authorities, whether they





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agree to that design. But in principle, we don't see big, big problems around that. Questions will more be on the combo tox. Is this package now sufficient for them? And if it is sufficient, do we have to have the 1 and the 2 species tox before we move into the 3-month programs? Because that could work on the timelines. And there is -- well, with the regulators, it's a very technical package, because you bring 3 novel compounds on that one, then you really want that they -- that you build up the logic in a way that they fully understand and the complexity of the program. Because just dumping 3 INDs on their desk is not going to work. We've discussed with some of the people before and then to just, "Hey, guys, we're going with 3 INDs, in principle, at once." What's going to happen? Well, we don't know. So just sending that package is way too risky. Then there was a question on 2737, did you ask me for patient PK? Was that the question?

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**Philip M. Nadeau** - Cowen and Company, LLC, Research Division - MD and Senior Research Analyst

Right. Is there any intra-patient variability in the pharmacokinetics?

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**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Well, it was mentioned on the slides, so we've completed the healthy volunteers, as of the MAD, and we have the bioavailability in patients ongoing as we speak. But in view of the profiles that we have seen in healthy volunteers, this was not what we call a compound with problems or limitations. And so we expect a normal absorption, excretion and distribution pattern in patients there.

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**Philip M. Nadeau** - Cowen and Company, LLC, Research Division - MD and Senior Research Analyst

If I could follow up on the trial design issue. There's been some question whether the first triple combo would be in healthy volunteers or in patients. When you say a Q4 start in patients, is that in fibrosis patients? Or is there a chance that you have to dose the triple in healthy volunteers first?

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**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

So the request to the authorities will be triple in patients, in CF patients.

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**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

I had a -- I thought Dane Leone had a question up here in the front.

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**Dane Vincent Leone** - BTIG, LLC, Research Division - Director and Diagnostics and Life Sciences Analyst

Maybe one for Walid and one for Piet. Maybe changing up first, so regarding filgotinib and some of the data that you went through regarding potential safety advantages, when we look at the long-term data for tofacitinib, the 21% discontinuation rate, which would be something you could differentiate against, how do you actually attribute discontinuation between safety versus loss of response?

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**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

Okay. So it's a -- DARWIN, the [DARWIN 3] trial, I think, has, if I recall, a couple of things that affected the retention of the patients. One thing initially, I think we were doing a quantiferon assay, to try and see if people have any positive quantiferon, which doesn't mean that they have TB, but potentially could make a risk. And at the time, I think it was decided with our then partner, AbbVie, at the time, to remove these patients from the study. I think that reduced the amount of patients in DARWIN 3. That is no longer being done currently in the patient program that we have ongoing. So I guess what I was trying to say is that what you've seen in the DARWIN 3 is not necessarily going to reflect reality. And so far, I think, we're quite happy with the retention of the subjects for the duration of the trial. But that confounding variable initially around quantiferon, I think is going to make it difficult to compare apples to apples.



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**Dane Vincent Leone** - *BTIG, LLC, Research Division - Director and Diagnostics and Life Sciences Analyst*

And then one for Pete. Regarding the CF program broadly and as the trials accumulate, so what's been, I guess, less appreciated in the CF landscape is you're probably going to find more heterogeneity of response, especially in the residual function mutations if you actually looked at it across patients. Is this something that you're actually going to actively start looking at, given that you're going to have multiple triple combinations in development in different stages, but actually looking if you have the cell lines, the different residual function mutations and ultimately, where you may be able to segment out the market to maybe a finer point of where these combinations are getting more or less effective.

**Piet Wigerinck** - *Galapagos NV - Chief Scientific Officer*

So the question was about efficacy in residual activity mutations. So we've profiled a number of them. And it's clear it's more difficult to show there, because those patient lines, their cell lines show a cutoff. And they, if you have G551D mutation, the channel is completely blocked. Opening that channel gives you a clear signal in the residual mutation. There is quite important baseline activity, and you can add a bit on top of that and that depends on the mutation, how much baseline activity is there. So it's indeed, a more difficult population. Let's say that, thirdly, what I think everybody wants to see is first the del 508 homozygotes. How much do we see? Do we go from 5%, 10%, or do we get stuck at 8%? And then, second big question is the heterozygote minus patients, not the residual activity, but the minus patients. They don't have any access to effective treatment today. Can we bring there a level of efficacy where we would say, okay, something between 5% and 10%, is that possible? And if that's possible, probably, it's going to be a high rate of approval, because that's where the biggest medical need is. And that would be a signal, and I guess, most of the people would say, with this patient population, it's good enough for approval in the absence of any effective treatment today. So that is where currently our focus is. So it's less about residual activity mutation. But we see activity there, but it's, like other compounds, pending on the data.

**Elizabeth Goodwin** - *Galapagos NV - VP of IR & Corporate Communications*

Okay. We go now to Adam Walsh with Stifel.

**Adam Anderson Walsh** - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD and Senior Analyst*

I have a couple of questions. My first is on the triple combination therapy. I believe you said that you're running the trial over in Europe. And I was just wondering if you have a strategy to run trials here or if you think that's necessary to do here in the U.S.? And then my second question is on filgotinib and the testicular tox studies that's ongoing. When will we get the results from that? And do you still believe that you'll be able to dose the 200-milligram filgotinib dose in male IBD patients prior to that trial concluding?

**Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

I think I can answer the first question. We are dosing 200-milligram in IBD. We are dosing it in IBD patients right now, with no issues on it.

**Adam Anderson Walsh** - *Stifel, Nicolaus & Company, Incorporated, Research Division - MD and Senior Analyst*

Right. It was my understanding in the U.S., the top dose was 100. Am I correct in that?

**Walid Abi-Saab** - *Galapagos NV - Chief Medical Officer*

Yes, that was the (inaudible).



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**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

During the Phase II, we were limited indeed in the U.S. to dose only 100 in male patients, but in Phase III, that restriction has been removed, and both in IBD and in RA patients, we're allowed in the U.S. to dose the 200-milligram.

**Adam Anderson Walsh** - Stifel, Nicolaus & Company, Incorporated, Research Division - MD and Senior Analyst

Okay, perfect. And then on the testicular tox study, when will we see those results?

**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

I cannot share at this point the timeline for it. I know that study is going to start like imminently, but I don't know -- I don't think we're prepared to share the timeline, just simply because we haven't yet figured out how quickly this could recruit.

**Adam Anderson Walsh** - Stifel, Nicolaus & Company, Incorporated, Research Division - MD and Senior Analyst

Okay, fair enough. And then on the CF, the strategy for trials here in the U.S.?

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

So trials in the U.S., as I said, they're now -- the FLAMINGO trial is the first study we opened in the U.S., so we have an open IND for the FLAMINGO, and we have a plan where we, for each compound, open INDs over the coming months. So meaning the combination studies -- I should have looked to the planning phase the requirement of the FDA, the finalized report adds to our -- the way we can develop, that adds 4 to 5 months, and that's why it's always late. But there is no reason why we actively stay and wait, so only we include the U.S. somewhat later. And we kick it off early in Europe. We say that the environment for early studies in Europe, a number of countries have specialized on that to really allow you to move quickly into patients and to -- and allow you to -- they grant you fast response times. You always get tough questions, but within 2 to 3 weeks, you'll get rolling. And so we've organized ourselves in such a way that we have all those documents available in the format that they require. And then in the second Phase Is, European studies have started, we start to prepare for the U.S., but for the Phase IIb, don't worry, we will be there. And there is an active plan to open all the INDs there.

**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

Vamil, I think you had a question?

**Vamil Kishore Divan** - Credit Suisse AG, Research Division - Senior Analyst

Yes, just following up on a couple of questions from before. So again, on the long-term safety study with filgotinib. I thought last year, you had mentioned that there'd actually be data by the end of (inaudible), I believe that's what my notes say. So has there been a delay in that? Has it been pushed out, the start of that? If so, why? And just can you give a little more color on exactly what you've committed to in terms of number of patients and what's the -- what exactly that study would involve? And then, the second question was just around the regulatory discussions you mentioned. Can you give some color on what level of discussions you've already had? I'm just trying to get a sense of, if you're starting the discussion in July in the U.K., you have the confidence level that within 3 to 6 months after that, you'll be able to start a trial. Has there already been a level of discussion that's taken place that's giving you that comfort or what are you basing that confidence on?



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**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

So let me start with the first question, but can I clarify, your question is about the longer-term safety of filgotinib from the DARWIN study, or was there something specific?

**Vamil Kishore Divan** - Credit Suisse AG, Research Division - Senior Analyst

I just thought that it was supposed to have started already, and the data will be coming like later this year. So maybe I'm wrong on that, but can you...

**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

You're talking about the testicular toxicity there?

**Vamil Kishore Divan** - Credit Suisse AG, Research Division - Senior Analyst

Yes, the long term...

**Walid Abi-Saab** - Galapagos NV - Chief Medical Officer

Okay, sorry. You guys know what was shared before, I apologize, because it kind of preceded me coming here, so I don't know what was shared. I'm not aware of any timeline delays. I think this was part of the discussions with the FDA, and making sure that we follow the guidelines around those. So I don't think there has been any change as far as I know. I don't know, Piet, do you want to add something?

**Piet Wigerinck** - Galapagos NV - Chief Scientific Officer

Well, just if we refer to filgotinib, end of the year, it's what we planned to present at ACR and that's then going to be DARWIN 3. And out of DARWIN 3, we might analyze in a similar way as we've analyzed before, but that's as far as we can report out anything on safety. So we plan to submit abstract, and then present all data there, which is going to be about novel studies, so that was the confusion.

Then on the regulatory discussions, so we're going to have them as what we call the portfolio level and the CTA level. So the portfolio level, if you go and visit them, you don't dive into specific scientific issues or questions, but you just ask them, this is our plan moving forward. And for CF, then this is the plan moving forward with at least 3 compounds that needs to be combined for patient studies into a triple. How do you see that working? What do we have to avoid in order that you don't block us off submitting a study because you're still waiting for answers or for the completion of previous study. So these are discussions at the portfolio level, which we have had on how to organize the admissions of 3 novel compounds at once. Because from a regulatory point of view, they're all open for it, but it's quite complicated. In terms of scientific CTA, so clinical trial application questions, and we haven't had yet with the authority, so that's what we kick off now. We have a proposal for the design. We'll submit that with the updated IBs that contain all the info preclinical Phase I, the combination tox and discuss with them whether they feel okay that we move forward with this program, with this triple program into patients and those then for a month.

**Elizabeth Goodwin** - Galapagos NV - VP of IR & Corporate Communications

All right. Thank you, everyone. Sorry, we're going to have to wrap up. This concludes the Q&A portion of the call. Our next webcast is going to be on the 28th of July, when we have our first half 2017 financial results. I want to thank all of our audience members, many of them here today, and many of our callers, too, for their support and participation. So thank you, and goodbye.



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## Operator

And this concludes today's conference. Thank you for your participation. You may now disconnect.

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