Perspectives Podcast

“A Breakthrough in the Fight Against Superbugs”

Transcript, 6 June, 2025

Mike Disabato (00:00):
What's up everyone? And welcome to the weekly edition of sustainability now, where we cover how the environment, our society and corporate governance affects and are affected by our economy. And I'm Mike Disabato, and though I'm talking to you right now, I'm actually not your host this week, Bentley Kaplan is, and what we're doing is a replay episode, actually one of my favorite episodes Bentley has ever done. And it's on the ever present problem of antibiotic resistant superbugs and the companies trying to defeat them. And the reason for this replay is because, well, we may be in the midst of a breakthrough. Roche, the Swiss pharmaceutical company, is planning to move a new antibiotic into what's called late stage clinical trials after early studies showed it had potential to address or maybe tackle common superbugs that have become resistant to other treatments, AKA antibiotic resistant superbugs. Now, if this trial is successful, it would be the first of its kind antibiotic capable of attacking those damn superbugs that threaten us all. And because of this possible breakthrough, we thought we should replay an episode on why investment in this field is both so crucial and also very complicated. So I hope you enjoy it. And as always, stay tuned.

Bentley Kaplan (01:26):
We've all probably been there at some stage, a doctor scribbling out a script for antibiotics, a rushed look over reading glasses, and then somber instruction. You need to finish the course, keep taking it until it is all finished, even if you're feeling better. Got it? Well, I got it, and I hope that you did too. And I got it because my doctor passed along an all too healthy respect for superbugs microbes that could one day fight back against mainstream treatments. But for all of my paranoia and dedication to making sure I finished antibiotic courses that were, let's be honest, quite few and far between, well, we as a planet have still ended up in a bit of a pickle. And to be clear, pathogens would naturally develop resistance to the treatments designed to target them. It happens through mutation. It's called natural selection. It's a whole thing. But what's different with antimicrobial resistance these days is the rate at which it's happening, how much faster than would be typical. And that's mostly through our overuse and misuse of antimicrobials to tell me just how much of a pickle we've landed ourselves in by accelerating antimicrobial resistance. I've got NA meter there, a colleague from MSCIs London office who can wax lyrical about sustainability in the healthcare sector. First things first, NA meter laid out the scope of antimicrobial resistance or a MR and its impact on people healthcare and other less obvious sectors.

Namita Nair (02:58):
EMR is actually turning back the clocks on decades of medical progress. So infections like pneumonia that were once easily treatable or potentially deadly. Again, today, it's responsible for over 1 million direct deaths annually and an additional 3.7 million deaths. Indirectly. A MR kills more people each year than hiv aids, malaria, and most cancers combined. So if it's left unchecked, it could potentially lead to

around 10 million deaths annually by 2050. And the WHO estimates that a MR could cost the global economy around a trillion dollars annually in additional healthcare costs by 2050. So in healthcare, it means longer hospital stays, higher treatment costs and increased mortality rates. Now, I also want to stress that a MR is more than just a healthcare issue. It is a systemic risk, and it cuts across multiple sectors. For example, in agriculture, 73% of all antibiotics antimicrobials that are sold globally are used in livestock, and the rising resistance is already threatening food production.

(04:05):

So if there are diseases in livestock, they're becoming harder to treat, which leads to reduced yields and higher food prices. And the World Bank estimates that a MR could reduce global livestock production by three to 8% by 2050 in low and middle income countries. That could be an almost 11% decline. The financial sector is not going to be immune if there are a lot of heavyweight sectors affected already. By our estimates, around 9% of MSEI aqui, IMI indexes enterprise value, including cash, is directly exposed to a MR related risks. So this means potential market disruptions across multiple industries leading to significant economic instability. A MR is not just a health crisis, it is a threat to global economic stability, food security, and entire industries. And I'd like to emphasize that the time to act is now

Bentley Kaplan (04:59):

Right? So the time to act is now stone words, and we'll get back to why this isn't a can that can be kicked down the road a little later in the show. First, let's just reflect on the meter's broader message there. Antimicrobial resistance sucks, right? If you're a patient, it means that what used to be a routine and bankable procedure can suddenly and unexpectedly become a matter of life and death. For governments, it means a sizable trimming of GDP impacts to food production and a range of downstream consequences. None of them good, but from a company perspective, namita effectively said that around 10% of the value of listed companies globally could be exposed to risks stemming from antimicrobial resistance, which is a pretty big chunk of the pie. And that exposure isn't just affecting healthcare companies, it's touching agricultural producers, food companies, and insurers. And yes, the meter comes off a little like a propaganda for proactive approaches.

(05:58):

When she says that the time to act is now all caps, but that's because there's an inherent time lag in when investment and development of antimicrobials starts and when there's a safe, effective product coming to market. But as the meter started telling me about this time lag, well, I got some recent and unwelcome memories from the COVID-19 pandemic. Remember that that sucked too. It also had this global impact and seemed like a complex problem to solve with this sort of race against time. And though things seemed to move in slow motion at the time, suddenly there was a vaccine. There were actually several vaccines being made by different groups in different parts of the world. So if we, and I use the word we here most generously because my contribution was basically sanitizing groceries and masking up, if we could crank out a few vaccines for COVID-19 in the space of months instead of years, well, why can't we just do the same for antimicrobial resistance?

Namita Nair (07:00):

There are some structural challenges that make EMRA much tougher problem to tackle than COVID-19. The pandemic. First of all, developing new antibiotics is costly and it offers lower returns. So the average cost of developing a new antibiotic is more than a billion US dollars, and it takes about 10 to 15 years. These are not numbers that are very far off from other drugs, but it's important to understand that the pipeline of innovative candidates for antibiotics is really sparse. Only 97 products are in clinical development as of December, 2023. And about 95% of these are going to fail according to traditional statistics. You have to understand that the viable products that we will get at the end of 10 to 15 years

will be very few. Now, when we contrast with the C 19 vaccines, the global market for COVID-19 vaccines was immediate and it was massive.
(07:52):
So it was driven by urgent demand. There was widespread use, but the market for new antibiotics is starkly different. New antibiotics have to be stewarded. They can't be used indiscriminately. They have to be used sparingly to prevent further resistance from developing. And then this limited use results in lower sales volumes. And this might not make it a financially attractive proposition for pharmaceutical companies to invest in the development of new antimicrobials. Another thing is that a MR research faces significant funding gaps. Okay? So there are initiatives like Cardex and the A MR Action Fund that have made strides, but they're not enough. The estimated annual push funding for a MR is less than 200 million US dollars, which is far below what's needed. And the financial viability of antibiotic development is, again, as I mentioned earlier, it's hampered by high failure rates of about 95%. And there's a lot of complexity in the clinical trials also, which makes the process long and expensive and risky.
(08:51):
So there has been an exodus of large pharmaceutical companies from the antibiotics market, and this space is filled. This gap is being filled by small and medium-sized enterprises for whom the financial support is very necessary to move along the product development pipeline. So addressing EMR requires overcoming significant structural barriers. So there's limited market size, there are funding gaps and a lack of urgency because you don't see the threat as immediately as you would've in the COVID-19 pandemic. And there is a requirement for a coordinated effort to address these issues. As such, the development of new antibiotics remains a slow underfunded process at present,

Bentley Kaplan (09:33):
Right? So tackling the challenge of antimicrobial resistance is going to be slow, expensive, and risky. To quote nta, not exactly an enticing trifecta. And aside from the actual difficulty in generating a novel treatment that passes through the various stages of clinical trials, it's about getting funding through those various stages, being able to connect to a market that either has enough volume or high enough margin to make it worth your while. And as n points out, some of the bigger pharma companies have scaled back their antimicrobial programs because the business case for them, as things currently stand, isn't working out. And the smaller operators that have stepped into this gap have less of a financial buffer if and when things get stretched. But there is hope and there are ways to take on the sticky challenge. And sure, many of these ways involve multilateral organizations like the World Health Organization or the United Nations, and things like national policy frameworks or incentive programs set up by different governments.
(10:34):
And there are a bunch of these different programs currently in action, like the PACE Initiative in the us, the CarbX and A MR Action Fund, or the Paste Act and Medicare's N Tap program, but an aggregate, as the meter tells it, these efforts aren't enough. So next month in September, the United Nations General Assembly will be convening a high level meeting on antimicrobial resistance, and world leaders will look at how to meet the threat of A MR and its potential effects on health, food security, and meeting the sustainable development goals. But as charismatic as we are here on ESG, now I'm going to take a guess that most of the listeners to our show are not world leaders. So to close this episode off, I asked Amita if there's any room for investors in the fight against a MR, whether there might be an investment case in solving this particular tragedy of the commons.

Namita Nair (11:26):

The A MR now offers compelling opportunities. So the solutions for A MR, there are compelling opportunities for different types of investors. If you take something like a Sovereign Wealth Fund, these are focused on long-term stability and value preservation. And investing in a MR solutions is a strategic move. So you protect national health systems and economic stability because EMR could lead to about a 3.8 percentage loss in GDP by 2050. So the potential economic risk is enormous. And by investing in something like a MR, you can hedge against these systemic risks and ensure some sort of economic resilience. Now, if you're looking for impact investors, there's a very unique opportunity here to align your financial returns with social good. So a MR disproportionately affects low and middle income countries where access to lifesaving antibiotics is already very limited. And investing in these A MR solutions and stewardship can help to reduce mortality rates and improve global health equity.
(12:25):
And there are initiatives like the A MR Action Fund, which aims to bring four new antibiotics to patients by 2030. And these offer measurable social impact alongside financial returns. And now let's look at some of our more traditional asset managers. For example, you can leverage EMR investments as a form of risk mitigation and diversification. So about 9%, as I mentioned earlier of the global AIC, is exposed to a MR related risks. So investing in solutions can hedge against potential market disruptions in some major industries. So companies that lead in these A MR solutions would likely also benefit from things like a favorable regulatory support, increased market demand, and also strategic positioning as a crisis becomes more pressing. And finally, as a short-term investor, there is significant upside potential in EMR. As they say, high risk comes with high opportunities. So your early stage biotech companies that are focused on a MR solutions, they actually present some opportunities for rapid valuation increases. And additionally, the biotech sector is traditionally one where there are a lot of mergers and acquisitions. So there may be a lucrative exit opportunity also for such investors. And now is the time to invest because we have a very critical window of opportunity. So we have to do this before this opportunity passes us by. The returns in this investing in EMR might not be as immediate and direct as in other sectors, but they are measurable and they are critical to both financial and global health stability.

Bentley Kaplan (14:05):
And that is it for the week. A massive thanks to Namita for her take on the news with a sustainability twist. If you want to find out more about this research, please do go and check out the MSEI Sustainability Institute's website. You'll find the paper titled in Investor's Guide to Antimicrobial Resistance. It was work done in collaboration with the investor action on antimicrobial resistance and the farm Animal Investment Risk and return initiative. And I also want to say thank you very much for tuning in. If you like what we're doing, then let us know. Give us a review. Rate the show on your platform of choice and tell a friend or colleague or a patient about this episode. Thanks again, and until next time, take care of yourself and those around you.
(15:00):
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