JejuMUN 8

Background Guide

AstraZeneca Board of Directors

Agenda

Providing efficient development and fair distribution of safe Oxford-AstraZeneca vaccines for countries in agreement

SDG: 12. Responsible Consumption and Production

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Committee Introduction

Welcome to the Business Fiction Committee of JejuMUN 8! In a business fiction committee, delegates become important leaders and members of a business to discuss solutions to certain issues and discuss bigger goals for the company. In this year's JejuMUN 8 conference, delegates will become part of the AstraZeneca Board of Directors. Members of the committee will gather for an important discussion in the middle of an ongoing pandemic, and the committee is awaiting for a fruitful discussion regarding the development and distribution of the company's new Oxford-AstraZeneca vaccines.

Before the pandemic, AstraZeneca had been developing multiple types of vaccines and medicines, including influenza and insulin shots. They were mostly high-quality, with much of the company's budget invested in similar types of products, also taking care of products related to oncology. However, it is the first time AstraZeneca has manufactured a vaccine for a worldwide virus, especially a coronavirus. AstraZeneca has not created a vaccine in the previous pandemics such as MERS-Cov and the first SARS attack, since those outbreaks did not last as long as COVID-19. The Oxford-AstraZeneca vaccine is a totally new experience for the world and the company itself, making it pretty reasonable that the vaccine is still viewed as imperfect.

This committee is the first ever Business Fiction Committee in JejuMUN, making it very special and unique. While this committee still follows the UNA-USA procedure, it will have some crisis fun in it! Instead of speaking on behalf of a country, delegates will actually represent real-life members of the board and discuss real-life situations based on timeline, just like a crisis committee. Occasional crisis updates will be introduced within the committee for more crisis fun, but still keeping the formality and rules of a General Assembly committee. And most importantly, your decisions made in the committee may even change the fate of the company or even the world.

With the committee being an actual company, delegates would be able to learn more about the real world, whether it is about the world economy or just how things work. The stock market? Customer satisfaction? Product manufacturing procedures? Fair Distribution? Anything related to the company can be an experience of learning more about this world, just like what the chairs and directors hope for.

Agenda Introduction

Ever since the first coronavirus outbreak in Wuhan, China, in 2019, the virus has been spreading worldwide across borders, leading to the current COVID-19 pandemic. The pandemic did not end quickly as many citizens around the world hoped; instead, it lasted for another year and is still ongoing until today, February 1st, 2021. People all around the world have gone through the so-called "quarantine era", and some countries like India have gone through nationwide lockdowns. Nations banned foreigners from entering the country, the world economy is declining, and everyone is living entirely different lives.

By the time this committee begins its discussions, February 1st, 2021, there have already been more than 2 million deaths due to the virus. A majority of the world has had at least one coronavirus case, proving the severity of this long-lasting pandemic. The uncontrollable increase of cases and deaths was a threat to world peace, and there was only one hope left to mark the end of this endless crisis: vaccines. Vaccination can lead to herd immunity where the majority of the vaccinated individuals act as a barrier for the herd and stops the virus from spreading to the unvaccinated minorities. However, the only problem with vaccination, which AstraZeneca has to deal with, is that it requires almost the entire population to be vaccinated in order to create herd immunity. Governments and businesses started planning how to manufacture, retrieve, purchase, and distribute effective vaccines to the entire population without major conflicts. So far, by January 2021, the following vaccines have been approved by some nations and organizations: Janssen vaccine from Johnson & Johnson, Pfizer–BioNTech vaccine from Pfizer and BioNTech, and finally, the Oxford-AstraZeneca vaccine from AstraZeneca. AstraZeneca's new Oxford-AstraZeneca vaccine, official serial number AZD1222, would be the main subject of this committee's agenda during the conference.

With the seemingly everlasting COVID-19 pandemic and soaring demands of the Oxford-AstraZeneca vaccine, there has been a rapid--rather *too rapid*--development of the vaccines in the recent few months. But with society demanding even faster implementation and distribution of the vaccine, hasty clinical tests have been conducted, leading to rare but critical side effects that have not been prevented in the creation of the vaccine. The side effects not only imply that the society's trust for the vaccine will decline, but also that AstraZeneca's reputation as a whole may decline, which can be seen from how countries such as the Netherlands and Ireland suspended the use of the vaccine. This whole situation is a dilemma for many members of the associate board. While clinical tests may cost more money and affect the company's profit, it may lead to saving more lives and improving the business's reputation. Will AstraZeneca be another hope for humanity? Or will it hinder humanity from being free from the virus? That is up to the directors and leaders to decide.

Letter from the Chairs

Dear Members of the Board of Directors of AstraZeneca Inc.,

Welcome to the AstraZeneca Business Fiction committee of JejuMUN 8!

We are Dongha Kim (Anika), Hajin Ruy, and Joy Kim, and we will be serving as your head chairs for the AstraZeneca Board of Directors. We are going to lead you into debates about the Oxford-AstraZeneca vaccine and the ongoing pandemic on February 1st, 2021 when the vaccine has already been first approved by the European Union (EU) and the first allocations of the vaccine are already on the roll. Delegates will be able to discuss multiple issues that have arisen during the pandemic and also that will arise during the conference. We hope to see delegates relating their experiences during the pandemic, but now as one of the executive members of AstraZeneca Inc.

This committee may be a challenge for some delegates, for this committee looks very different from what many of the other UNA-USA committees may look like. Depending on how the delegates engage in debates and interact with each other, the pace of the committee may get very rapid. But none of those would be a worry for you if you have done enough research and preparation before the conference! Just make sure to use sources from before February 1st, 2021.

This may sound like a tough committee, but in fact, it would be easy for delegates who have experienced General Assembly or Crisis committees in the past (basically everyone, with enough research). This committee would follow the normal UNA-USA procedures but with a little crisis fun with it -- the chairs are trying their best to make this committee a great experience for everyone.

If you have any questions or confusions regarding the committee, please feel free to contact any one of us via email or in person, we're always happy to help! We're waiting to see you in a few months!

Sincerely,

Dongha Kim, Hajin Ruy, Joy Kim

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Key Terms

Anaphylaxis:

Anaphylaxis is a fatal reaction from an exposure from allergens. Anaphylaxis is caused from overreaction of the immune system, which produces more immune cells than needed, resulting in a rash, low pulse, and anaphylactic shock. It is one of the most dangerous but rare adverse reactions from vaccination.

Blood Clot:

Blood clots are caused from red blood cells clumping up with each other. Rare, fatal blood clots in unusual locations - brain, bowel, liver, spleen - have been observed as one of the side effects in some Astrazeneca vaccinations cases. Relatively frequent blood clot cases question the safety of the vaccine.

Cash flow:

Generally known as the movement of money in business, cash flow is the net amount of cash (including cash equivalents) that are transferred into and out of a business.

Clinical Tests/Trials:

Clinical tests, also referred to as clinical trials, are research experiments on human participants to test the efficacy of vaccines that are still in the process of being made. Clinical test participants are usually paid for every visit, and are mostly provided with clinical trial insurance in case of death, injury, side effects, etc.

COVAX:

Short for COVID-19 Vaccines Global Access, COVAX is a worldwide initiative founded by the World Health Organization (WHO), European Commission (EC), and the government of France for a global, equitable access of COVID-19 vaccines.

COVID-19:

Short for Coronavirus Disease 2019, COVID-19 is a highly infectious disease caused by a newly discovered coronavirus, with respiratory symptoms ranging from mild to severe.

Herd immunity:

Herd immunity is when over the majority are immune to the disease to the point that diseases are no longer spread. To reach herd immunity, vaccination is needed. Ideally, vaccinations will lower the infection rate significantly so that disease disappears because there's no new host to spread.

Posology:

Posology is a term that refers to the adequate amount of the doses for a desired effect of the drug. For example, Astrazeneca vaccine's posology requires two separate doses of 0.5 ml each, with 4 to 12 week breaks in between the injections.

Delegates can consider an option to decrease the dosage of the product to increase the number of doses.

Pandemic:

Pandemic is an epidemic that occurs over a larger region, affecting a large number of people. It usually refers to worldwide, multi-national outbreak of new disease, such as COVID-19 Pandemic. WHO (World Health Organization) had declared pandemic on diseases like influenza(2009), HIV, and COVID-19.

Return on Investment (ROI):

Return on investment, or ROI, is a performance measure of the profitability of an investment, often used to compare the efficiency of different investment options. Directly measures the amount of return compared to the investment's cost. Can be calculated by dividing the return of an investment by the cost, then expressing the as a percentage/ratio.

Revenue:

The total income from business operations, including all discounts and/or deductions. It is the gross income figure from which costs are subtracted to determine net income. A common calculation method would be:

(Sales Revenue) = (Sales Price) × (Number of Units Sold).

Not to be confused with profit- profit is the amount of income remaining after all expenditures have been calculated.

Risk management plan (RMP)

Risk Management Plan is a document that elucidates a medical product's mechanism, possible triggers, risks, clinical results, or any other necessary information to show the safety and efficiency of the proposed product. RMP is required to be submitted to the government for approval, and subsequent updates are mandatory for the authorization.

Viral Vector Vaccines:

Viral vector vaccines are vaccines that use a type of RNA called messenger RNA instead of viruses or bacteria to trigger an immune response. mRNA from vaccines does not enter the cells' nucleus and does not affect their DNA.

Historical Background

Foundation of AstraZeneca (AZ) [1999]

AstraZeneca was founded in 1999, with a merger between Astra AB, a Swedish pharmaceutical company, and the British Zeneca group. Together, this created the enterprise of what is known today as AstraZeneca (AZ).

The Beginning of the Pandemic (COVID-19) [2019 December]

In December of 2019, the first infectants started to appear from Wuhan, China who got infected from a new type of a virus, SARS-CoV-2. Unfortunately, the infectants in the state were not quarantined with proper management, and exposed the virus with their body out to the globe. With that, the pandemic of COVID-19 struck the continents of the Earth, and started an unprecedented timeline of events due to this. During the start of the event, AstraZeneca decided to take upon the ultimate mission of creating a vaccine that will fight against the pandemic.

Collaboration With Oxford University; the Creation of the Vaccine [2020 April]

In the first half of 2020, AstraZeneca decided to start upon the creation of the vaccine against COVID-19, and in order to do this, holded hands with Oxford University. With Oxford, AstraZeneca created the first vaccines for infectants against COVID-19. Unlike most of the vaccines, AstraZeneca decided to create a viral vector vaccine. AstraZeneca's vaccine contained a harmless adenovirus that was from chimpanzees. This virus also had spike proteins, similar to how COVID-19 virus also does. As the body learns how to build an immune system against these spike-protein-containing viruses, this will also correspondingly build an immune system against COVID-19. After the vaccine was created, it was released to the public for a worldwide use, with the name of 'AZD1222'.

Increasing Customers, Rising Skepticism [2020 August]

As the vaccine was open to use for member nations, nations such as the United Kingdom started to write contracts with AstraZeneca, and import AZD1222 for citizens to use. While it was true that AstraZeneca's earliest vaccines gave a majorly successful results to the citizens of the nations, it did not get as much trust from citizens compared to other vaccines made from different manufacturers, as AstraZeneca did not get any approval officially from the FDA yet, and also the aspect of how the efficacy percentage was only in the 70th percentile, while other manufacturers' vaccines such as Moderna and Pfizer earned the 90th percentile.

COVAX Receives vaccines from AstraZeneca [2021 January]

In the latter part of January, under the agreement previously signed between AstraZeneca and Serum Institute of India (SII), AstraZeneca was able to sell 100 million

doses of vaccines. Under the agreement, the manufacture of such amount of doses led to a great leap in positive terms in the profit the industry made.

AZ Fails to Get Approved by the FDA [2021 February]

In order to gain more trust by the citizens and governments of nations, AstraZeneca made an ample amount of data in regards to the efficacy of their vaccine, and submitted the data to the Food and Drug Administration (FDA), pending for approval. However, in February of 2021, the FDA officially rejected the request of AstraZeneca, claiming that the manufacturer did not give an enough amount of data in order to be passed. As AstraZeneca consistently had challenges receiving the approval of the FDA on their vaccines, this only provoked less trust from nations and customers.

Current State of Affairs

The world is certainly in a hurry to end this pandemic, recognizing the pandemic's severeness. As of February 1st, 2021, the confirmed cases had aggregated to the total of 103,801,539 cases worldwide, with 397,737 cases confirmed just today. There has been a definite decrease of confirmed cases compared to the peak of the first week of January - 840,393 cases confirmed in a single day - but there is always a chance of mutated virus variants including the Alpha (B.1.1.7) variant and Beta (B.1.351) variant inhibiting this decrease. Due to this fear, nations are urging for vaccines, hoping that herd immunity could end this pandemic. Currently, only a few - Pfizer, Moderna, SinoPharm - have either been approved or are allowed for emergency usage globally. AstraZeneca recently has gotten an emergency approval from European Medicines Agency (EMA), where they were authorized inoculating AZD1222 to people above 18 in addition to its original emergency approval from UK Medicines and Healthcare products Regulatory Agency, successfully getting into the list of widely-used vaccines. However, scarcity of safe vaccines lead to competition in vaccine distribution. Competitiveness led to attempts like vaccinating only once to more people rather than fulfilling its two-dose vaccination with weeks of interval between it.

Despite the effort, the essential points to this competition was the money and connection with the companies to buy the vaccines. As a result, MEDCs (More Economically Developed Countries) were the first ones to seize the vaccines. Countries like the United States of America, England, and the EU (European Nation) hurried to order over a million doses from vaccine companies. On the other hand, most LEDCs (Less Economically Developed Country) have less than a million doses, or even worse, none. Nonetheless, these discrepancies are reduced due to the effort of COVAX, led by the World Health Organization (WHO) and Gavi, the vaccine alliance. AstraZeneca in particular, as if confirming their co-partner Oxford Group's primary objective — "non-profit, fair distribution for all"— serves as a magnate for COVAX. AstraZeneca has already agreed to deliver 237 million doses for 142 COVAX participants. 237 million doses would be distributed in two rounds of allocations, one round in February to March and the other in April to May.

In addition to its contract with COVAX, AstraZeneca has come to an agreement with SII(Serum Institute of India) to independently produce 1 billion doses for middle-and-low income countries including India to support the global community. Other than those contracts for non-profit, AstraZeneca has signed to provide 400 million doses to EU by the 4th quarter of 2021, 100 million doses for UK until the 2nd quarter of 2021, 300 million doses to US with 1 billion dollar funding, 120 million doses to Japan, and about 130 million doses more to 8 more countries including Australia, Canada, Switzerland, Bangladesh, Thailand, Philippines, South Korea, and South Africa.

AstraZeneca faced a dilemma of distributing the vaccine between the UK and EU because some of the sites had problems with production, and failed to reach the projected production for the month, hindering proper distribution. According to Pascal Soriot, the Head of AstraZeneca, the company can produce 100 million per month, but the doses still cannot fulfill the excessive demand. Further allocation plans should be discussed in this meeting of AstraZeneca Board on whether the company should reallocate the vaccine distribution to fulfill the contract with the EU. AstraZeneca also faces the need to provide sufficient clinical trial results for FDA approval. Despite its Emergency Approval, AstraZeneca currently does not have FDA approval, which impairs the reputation and safety of AZD1222. The company is aware that there are various vaccines developing at this moment, and other companies such as Pfizer and Moderna are increasing their maximum capacity for production. Any delays in decision making may hinder Astrazeneca.

Similarly, the decreased vaccine efficiency on Beta Variant was only proposed in a small-scale clinical trial in South Africa. University of the Witwatersrand released a report that AZD1222 only has minimal protection against infection among young people of average 31 years. The effectiveness, predicted, is about 60%, compared to 70 to 80% effectiveness in the original virus. In another research from South African Medical Research Council Vaccines and Infectious Diseases Analytics Research Unit, the effectiveness was found to be 21,9%, which they concluded as “does not show protection”. Both problems are still minor, and can be dispelled at this stage. Nevertheless, these problems might hint at a change to the current vaccine to gain its competitive edge with more clinical trials, and even develop a modified version of the vaccine to keep up with the transmuting virus.

What will be the company’s priority, and how will they choose wisely to overcome these problems?

Stances of Parties

Katarina Ageborg

Executive Vice-President, Sustainability and Chief Compliance Officer

Katarina was appointed Executive Vice-President, Sustainability in 2017. She has control for the delivery, design and implementation of the Company's sustainability programme, covering three priority areas: access to healthcare; environmental protection; and ethics and transparency. Katarina has put in huge efforts for the company's sustainability programme for years, but has never made decisions without considering the company's profit as the biggest priority; she never made decisions that negatively impacted the company's revenue or reputation.

Alicyn Campbell

Head of Digital Health, Oncology R&D

Alicyn Campbell completed her masters of Public Health from the University of Connecticut School of Medicine. After claiming her degree. She worked in Pfizer in health economics and outcome research until 2010. Currently, she serves as a head of Digital Health in Oncology R&D in AstraZeneca. In addition to her job in AstraZeneca, Alicyn is a founder of Patient Relevant Evidence group, which aims for optimization in patient's welfare using evidence. The group is non-profitable, and its primary goal is to contribute to an academic enhancement. Moreover, she had been a contributor to numerous health-related policy initiatives, including FDA legislation, which contributed her to have a strong trust in the FDA.

Pam Cheng

Executive Vice-President, Operations and Information Technology

Pam joined AstraZeneca in June 2015 after having spent 18 years with Merck/MSD in Global Manufacturing and Supply Chain and Commercial roles. With a lot of experience regarding supply and manufacturing, Pam wishes for an efficient manufacture of the Oxford-AstraZeneca vaccines. While she does believe profit is one of the main priorities of a company, she still believes the company should sacrifice in order to provide a surplus of vaccines as soon as possible.

Ruud Dobber

Executive Vice-President, BioPharmaceuticals Business Unit

Ruud Dobber began his career in AstraZeneca in 1997, before the merger between Swedish Astra AB and the British Zeneca group. As one of the starting members of the company, Ruud served various leadership roles such as regional vice presidents. Ruud is currently an Executive Vice President, and is a President of

BioPharmaceuticals Business Unit, and is in charge of efficient production and delivery for Cardiovascular, Renal and Metabolism, and Respiratory drugs. He takes great pride for his experiences from senior roles and his company, AstraZeneca. Despite critics' worries on Astrazeneca's turn on commercial vaccines, Ruud, in an interview, has clarified that earning profits from vaccines are at this stage "too speculative".

Cristina Durán

Chief Digital Health Officer, R&D

Cristina Durán serves as a Chief Digital Health Officer, R&D, and has developed solutions reducing the cost for phase II trials, and increasing data quality for qualitative research. Her Digital Health team utilizes innovative technologies to increase the delivery speed and effectiveness of clinical trials. The vision for the team is to change healthcare for patients, with three key strategies: seeking for patient centric trials, augmenting health outcomes by combining treatments with digital health solutions, and reimagining healthcare overall. Cristina, completing the Leading Enterprise Transformation program, shows expertise in global commercial, in-country commercial, finance and R&D.

Li-Ming Gan

Head of Early Clinical Development, Cardiovascular, Renal and Metabolism (CVRM), BioPharmaceuticals R&D

Li-Ming is well-known as a professor in translational cardiovascular research and drug discovery at Sahlgrenska University Hospital in Göteborg, Sweden since 2009. In 2007, Li-Ming was appointed as Disease Area Portfolio Leader and later as Science Director, responsible for establishing new drug projects, until now with the Oxford-AstraZeneca vaccine. Well-knowledgeable about the dangers the virus can bring to the human cardiovascular system, Li-Ming wishes for the best quality vaccine to be manufactured in the near future in order to give humanity hope during this pandemic.

Dominic Kelly (Oxford)

BRC Consultant in Pediatrics and Vaccinology, Honorary Senior Clinical Lecturer

Dominic completed a PhD in 2008 within the Oxford Vaccine Group and began his current post in 2009. Also working with the Children's Hospital in Oxford, he hopes to successfully develop a COVID-19 safe for children. Deeply interested in immunology and vaccinology, Dominic wishes to find relationships between the B-cell receptor genetics and immunity against the coronavirus. He hopes to have a better understanding about the virus and its upcoming variants so that children and people from vulnerable countries can be vaccinated as soon as possible.

Per Lindblom

Director, Global Project Management

Per Lindblom is a director upon drug developments, and has specialty in supervising the development of optimizing drugs created in AstraZeneca, and checking the suitability and safety for the citizens around the globe. Outside of AstraZeneca, he has received the Project Management Professional Certification in 2015, and the Six Sigma Green Belt Certificate focused on project development. After joining AstraZeneca, Lindblom was always focused upon the product development of the drugs in AstraZeneca, and improving the submission processes of drug products. Lindblom prioritizes the development and the guarantee of effectiveness of vaccines in AstraZeneca, and AZD1222 will be no exception to him.

Ashling Mulvaney

VP sustainability, Access to Healthcare & Healthy Heart Africa

After 20 years in the pharmaceutical industry, and being with AstraZeneca since 2008, Ashling has always focused on ensuring patients have access to medicines. She is putting in continuous effort even during this pandemic, in order to assure that people from less wealthy countries and backgrounds are able to get vaccinated. Ashling believes that vaccinating people from riskier environments must be the priority in distribution.

Kirsha Naicker

Global Immuno-oncology Medical Scientist Study Leader

Kirsha Naicker is a leader in Immuno-oncology. Since her career in medics, Naicker has consistently shown her passion and interest in oncology, and the idea to prevent cancer. Naicker joined the group of AstraZeneca in 2015, as a medical scientist involved in the studies of the Global phase 3 Study. Currently, she also is the leader upon data interpretation and monitoring, and prioritizes upon the ethical terms of the drugs, and checking if they safely show their effectiveness. As a leader in interpreting numerous data, Naicker's priority standard is evidently on the effectiveness and development of vaccines towards the optimal safety and efficacy.

Menelas Pangalos

Executive Vice-President, BioPharmaceuticals R&D

Menelas Pangalos is one of the company's Senior Executive team, and is responsible for the company's potential drug discoveries and early development of those. As an Executive Vice-President of BioPharmaceuticals R&D, Menelas has developed Astrazeneca's unique '5R' system in drug development, which stands for Right Target, Right Tissue, Right Safety, Right Patient, and Right Commerce. Simply

put, the system pursues more research before clinical trials and takes more time in ensuring safety of the drug candidates for faster production in big-picture. This 5R system is the basis for Astrazeneca's pharmaceuticals. Melenlas believes that implicating his 5R system will be efficient for solving this vaccine crisis, too.

Andrew Pollard

Oxford Vaccine Group

Andrew Pollard is a professor in paediatric infection and immunity in the University of Oxford. In his career in Oxford, his main focus of research included the clinical evaluation of vaccines, and the development of them. He has supervised over 37 students who have gained PhD, and published over 500 papers upon research exclusively upon paediatric infection and immunity. As a professor who has invested his life in studying the development of vaccines, Pollard's main focus will inevitably be the development of the vaccines, and the assurance that the vaccines will show proper efficacy that was anticipated in the committee.

Jeff Pott

General Counsel

Jeff Pot serves in the general council, and was additionally appointed an additional duty of the Chief Human Resource officer in 2021. Pott has received a Juris Doctor Degree from the Villanova University of Law. Prior to joining the team of AstraZeneca, he specialized in liability litigation of pharmaceutical products in Reath LLP. Experienced upon inspecting the safety of distribution and service of products, Pott focuses importantly upon the aspect of whether the vaccine developed is reliable, and is ready for legal distributions.

Iskra Reic

Executive Vice President (Europe & Canada)

Iskra Reic is an Executive Vice President (EVP) of numerous countries in the EU as well as Canada. She is responsible exclusively for the marketing sales of products distributed and developed in AstraZeneca, and supervising operations done related to commercializations for different products amongst different countries. At the Medical University of Zagreb, Reic was trained as a dental doctor, and increased her experience in the marketing operations of products. After her joining the group in 2001, Reic has worked upon various marketing roles, and was responsible for regional sales in various nations. Reic focuses upon the sale of the product, and upon the aspect of whether the product is advertised and sold in a fluent and profitable manner.

Christine S. Rollier (Oxford)

Associate Professor in Vaccinology

Christine S. Rollier, is an Associate Professor in Vaccinology at Oxford Vaccine Group, and is currently a head of the Novel Vaccine Development team involved in the creation, design, and clinical studies of new or improved vaccines. Five years of experience in new vaccine development in Hepatitis C infection in Netherlands, and three years of experiences in Jenner Institute working on improvements of viral vector vaccine against malaria, made her one of the prominent figures in development of viral vectored vaccine. Since her career was mostly devoted to Oxford Research Center, Christine agrees with Oxfords Groups' initial motivation with the vaccine distribution.

Fredrik Röök

Transaction Director, Business Development Operations

Fredrik gained broad experience in drug development after working in a biotech hub in Vancouver and serving as the CEO of one of Venture Capital Sweden's portfolio companies. With his extensive network of contacts within global biotech communities, he is a great resource when it comes to marketing and partnership. Fredrik believes that partnerships between organizations and firms must be established in order to successfully manufacture the vaccines, which is also a method to reduce expenditures.

Alan Sabirsh

Principal Scientist, Advanced Drug Delivery, Pharmaceutical Sciences, R&D

Alan Sabirsh is the Principal Scientist in Advanced Drug Delivery of Pharmaceutical Sciences, R&D. He has been working on drugs since 1990, and shows an expertise on robotic microscopy and drug development using nanomedical biology. He has some experience on communicating with EU networks, and has strong bonds with fellow molecular biology researchers. He joined Astrazeneca in 2006 as a Senior Research Scientist, and is now in his 15th year advocating for the company. He takes in great pride for recent success in AstraZeneca, and hopes that the reputation is maintained. As a scientist in the R & D section, Alan had learned from his past research that the effectiveness of the drug should be prioritized along with abundant investment on the drug development.

Matthew Snape

Oxford Vaccine Group

Matthew Snape is an Associate Professor of paediatric infection and vaccinology in Oxford. As an associate professor, Snape has invested his life on the vaccinology of numerous diseases including influenza, Respiratory Syncytial Virus (RSV), and Ebola. After being awarded the post-graduate MD in 2009 at the University of Melbourne, Snape worked as the consultant of General Paediatrics and Vaccinology since the same year. Snape has invested his life upon vaccinology, and to

him, the development of vaccines and its efficacy is the main priority; COVID-19 will be no exception.

Anand Subramony

Executive Vice-President, BioPharmaceuticals R&D

Anand Subramony is the vice president of Antibody Discovery and Protein Engineering R&D sector. Anand is responsible for overall management in cell therapy, peptide delivery, oral biologics and Adeno associated virus (AAV), and toxicity-reduced antibody technologies. He believes that his injectable biologic drug-device combination product, an active transdermal patch and a dry powder inhalation device can be the key to differentiate AstraZeneca's vaccine from others in the long-run. However, with his various experience on leading and managing teams, Anand remains skeptical about effectiveness of hasty clinical trials and mass production.

Amy Taylor

Business Planning & Operations Director, Chief Operating Officer, BioPharmaceuticals R&D

Amy Taylor is a director of business planning, and has the role of ensuring the profits and fluency of the market system of AstraZeneca. She has gained a degree in biological sciences in the University of Cambridge, and has worked for the LGBTQ+ committee exclusively after her founding of AstraZeneca's network of women in the UK, and worked as the chair. Currently, her main duty is to make strategy in order to keep the excellence of the profits made in AstraZeneca. Evidently, this makes her lenses to be leaned more towards the profits that the business is making rather than the excellence and development of the vaccine.

Tonya Villafana

Vice President, Global Franchise Head, Infection

Tonya works within BioPharmaceuticals R&D to consider future vaccines and drugs to prevent and treat infectious diseases in the most vulnerable populations in the world. She has been collaborating closely with public health organisations, regulatory authorities, and government representatives and healthcare policymakers on development of the AZD1222 vaccine. She is focused on working on global health initiatives with organizations including the World Bank, the Bill and Melinda Gates Foundation, WHO, IFPMA, and the UK Development Agency for International Development. Tonya believes health initiatives and changes in policies must be made in order for the vaccine to be successfully distributed to vulnerable environments.

Andrew "Andy" Zach

Head of Marketing, Spokesperson AstraZeneca AB

Majoring marketing and minoring public health and journalism in Cambridge University, Andy has worked as a journalist for Digitas Health for 15 years before he was scouted as the Marketing Team Head of the AZD1222 development team. Also as the spokesperson of AstraZeneca AB, Andy is responsible for letting the public know more about the vaccine and how the company is making continuous efforts. Andy believes profit is one of the main priorities of a business, especially a big one like AstraZeneca, but also believes that the company should not hesitate to sacrifice its profits when it comes to the business's reputation.

Possible Solutions

Identifying priority candidates

While the vaccine is available to numerous nations in the world, the most "urgent" countries still do not have access to vaccines, especially communities with lower average income. In order to prevent vulnerable environments from getting compromised by the virus (if not already), it is necessary for the company to come up with standards to identify priority candidates. Members of the board would find it necessary to consider the profits, such as whether the country would be able to pay for the vaccines. If the committee decides to focus on the company's revenue, the priority would be according to the country's ability to pay for the vaccine, but if the committee decides to lend a hand to humanity, vulnerabilities must be a priority. It is up to the committee to decide, but it can't be denied that identifying priority candidates would quicken the distribution progress of the vaccine.

Tracking distribution progress

In order for AstraZeneca to be able to identify priority candidates, the board must come up with a method to track distribution progress. Even if the committee decides not to set new standards for prioritization, it would still be beneficial to efficiently track distribution progress. AstraZeneca already has a tracking system within the company, but the details have never been shared to the public, and many members of the board are wishing to come up with a more efficient way to track distribution progress. Whether or not to share the details with the public is for the committee to decide. Sharing details may enhance reputations and information access, while it may make the company vulnerable to criticism and complaints.

Appealing to the FDA through more successful data

As AstraZeneca is the only company out of the major vaccine manufacturers which have not yet got the approval from the FDA for the safety, this is one of the main glues that hold the feet of different nations from purchasing vaccines from AstraZeneca. In order for the industry to gain more profit, it is important for the industry to gain more trust, and one of the main routes is to continue appealing to the FDA for approval. In order to make such a thing possible, AstraZeneca must get more statistical data, and be approved by many nations. In this way, the vaccines of AstraZeneca would get more hands grabbed by different nations and organizations. This is seen as the only way that could bring the most significant amount of profit to the company.

Enhancing efficacy of the vaccine

Compared to other vaccines created by different manufactures, the vaccine created in AstraZeneca has shown a performance in which it showed more side effects to a wider range of customers, and has therefore made many customers start to deny getting vaccinated with AstraZeneca's vaccine. Furthermore, with the vaccine's current performance, it is also challenging to get the trust and approval from organizations such as the FDA with ease. Therefore, it is important for members to concern themselves with a medical way to enhance the efficacy of the vaccine, and the safety for the wider spectrum of customers.

Questions to Consider

1. How can the board come up with a fair distribution without demeaning certain countries and groups?
2. How will the members of the board utilize their positions in the company to meet the main objectives? (profit, reputation, distribution)
3. How is the board going to keep track of the situations in each country?
4. How frequent are the clinical tests going to be conducted, considering the fast pace of the pandemic?
5. How could the company gain trust from the widest spectrum of nations possible?

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