NLP and Sentiment Analysis
Report on Twitter Sentiment Analysis of 2 Pharmaceutical Companies
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## Pharmaceutical industry

The pharmaceutical industry is important because it is a major source of medical innovation. The U.S. research-based industry invests about 17 percent of sales in R and D, and R and D drives performance of individual firms and industry structure. It is also a heavily regulated industry. Drugs are evaluated for safety, efficacy, and manufacturing quality as a condition of market access.

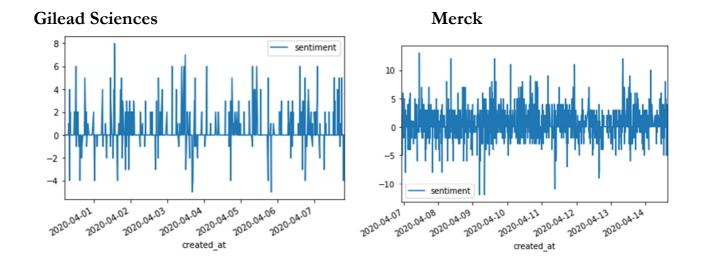
#### **Gilead Sciences Inc**

Gilead Sciences, Inc. is a research-based biopharmaceutical company focused on the discovery, development, and commercialization of innovative medicines. It focuses on human immunodeficiency virus and liver diseases, such as chronic hepatitis C virus infection & chronic hepatitis B virus infection, hematology & oncology, and cardiovascular & inflammation as well as respiratory diseases.

**Remdesivir** (development code **GS-5734**) is an antiviral medication being studied during 2020 as a possible post-infection treatment for COVID-19 illness.

Among one of its competitors is pharmaceutical company **Merck**, In this report various aspects of the Social media (Twitter)text information is analyzed

### The sentiment of the tweets and the timeline they were created



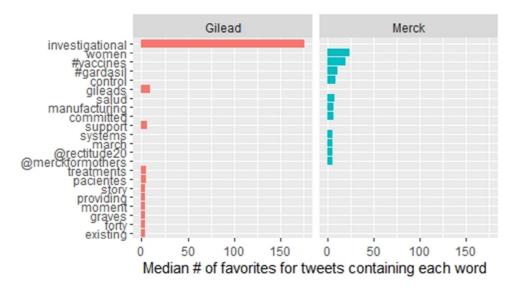
## Which words are most likely to be tweeted for Gilead Sciences vs Merck

The words more likely to be tweeted about Gilead Sciences are "Remdesivir" and "cashing", "giant"

The words more likely to be tweeted about *Merck* are "**foundation**", "**funded**"



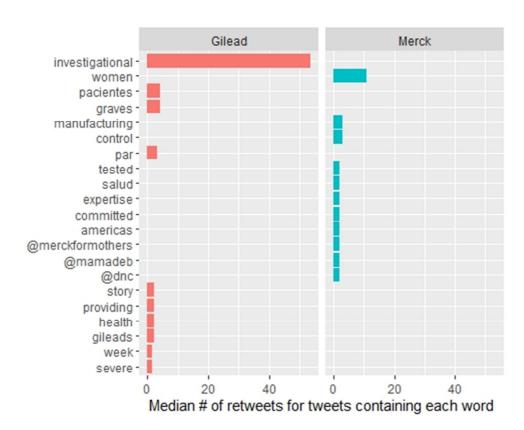
## Tweets with the Words that got the greatest number of Favorites



For Gilead the tweets containing the word "**investigational**" had the highest median number of Favorites

For Merck the tweets containing the word "**vaccines**" and "**women**" had the highest median number of Favorites

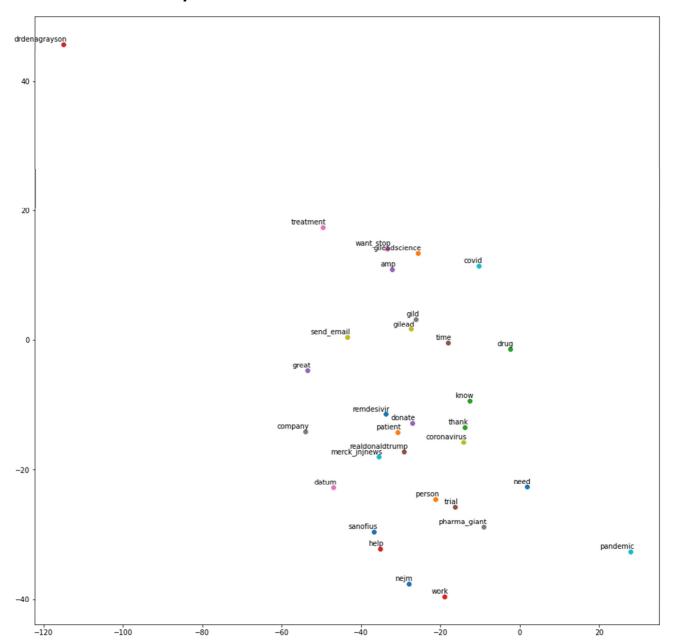
# Tweets with the Words that got the greatest number of Retweets



For Gilead the tweets containing the word "*investigational*" had the highest median (>50) of Retweets

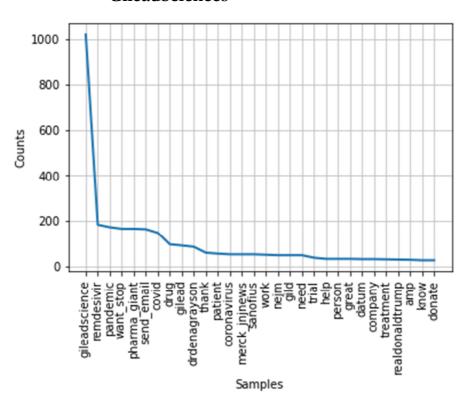
For Merck the tweets containing the word "women" had the highest median number of Retweets

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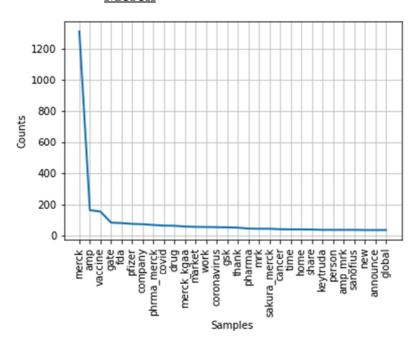


# Frequency of the Top words tweeted about the company

### **GileadSciences**



Merck



### WordCloud for the tweets of GileadSciences



### **Analysis and Conclusion**

- The tweets about Gilead Sciences were Mostly positive when compared with tweets about Merck
- The tweets about Gilead Sciences had greater number of Favorites and Retweets
- The drug "Remdesivir" was most tweeted about (which is part of the clinical studies to evaluate its safety and efficacy in adults diagnosed with COVID-19)

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