Investment Report with research and statistics dealing with Salmonella and the E. coli virus.
April 25, 2018

Professor Louie Centanni
Department of Rhetoric and Writing Studies
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

Dear Professor Centanni,

Here at Bacteria Busters, we are focused on getting regulations passed by the FDA in hopes of reducing the number of outbreaks related to foodborne illness. We believe our organization was born out of a necessity to help combat these lethal bacteria hiding in our food so we can put an end to these unwarranted deaths.

In this report we uncover the alarming statistics behind this huge problem, our plans to decrease them, and how, with your help, we will make a significant change in the way we deal with outbreaks like E. coli and Salmonella. Besides that, we discuss the costs that go with protecting our food and how we will influence the FDA to improve their regulations.

We at Bacteria Busters hope that this report will improve your knowledge on the dangers of foodborne illness and ways to prevent them. If you have any questions regarding the contents of the report, feel free to contact any member of our team and we thank you for taking a look into this fixable problem.

Sincerely,

Victoria Martini
Dylan Plaster

Michael Chen
Taylor Diebert

Mark Garcia
Executive Summary

This report was created to gain the attention of Scott Gottlieb as well as the Food and Drug Administration in general in order to increase the budget for disease outbreaks within the food industry. It also delves into why Bacteria Busters’ needs personal investments to further the nonprofit organization.

We hope to influence the FDA to allocate $6 billion to food sanitation, a $1.1 billion increase, that will go to the improvement of decontamination processes and food sanitation. In the report one will find ample research, statistics, and numbers pointing to an increased budget being more cost effective in the long run. Our research shows that the United States spend $227,263,040 dealing with disease outbreaks, such as E. coli and Salmonella. By focusing more on precautionary measures and ways to avoid foodborne illnesses altogether, less funds will be used to recall products and help those affected and hospitalized.

Our nonprofit has grown immensely since we began fighting for our cause, therefore increasing FDA budgets is not the only goal of this report. We need investors for Bacteria Busters. To expand, we need a building to facilitate our own research as well as to hold meetings with the companies and agencies we work closely with. The cost of a building like this is around $2 million. By conducting our own research focused solely on foodborne illnesses, the FDA would have readily available information to base their decisions on.

Foodborne illnesses affect everyone. We want everyone to be cognizant of what is going on with outbreaks and for support in helping our nonprofit deliver results.

We hope that you invest with us, and your health.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRODUCTION</td>
<td>5</td>
</tr>
<tr>
<td>About Us</td>
<td>5</td>
</tr>
<tr>
<td>Our Story</td>
<td>5</td>
</tr>
<tr>
<td>The Team</td>
<td>5</td>
</tr>
<tr>
<td>WHY BACTERIA BUSTERS MATTERS</td>
<td>6</td>
</tr>
<tr>
<td>RESEARCH AND STATISTICS</td>
<td>7</td>
</tr>
<tr>
<td>TARGET MARKET</td>
<td>10</td>
</tr>
<tr>
<td>COST ANALYSIS</td>
<td>11</td>
</tr>
<tr>
<td>CONCLUSION</td>
<td>13</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>14</td>
</tr>
</tbody>
</table>
ABOUT US
We believe that nobody should have to think twice about consuming food purchased at grocery stores and restaurants. Bacteria Busters pushes for ethical food production and practices and urges the government to take disease outbreaks more seriously.

For the past eight years, BB contributed to the change in governmental policies dealing with food safety and increased funding for the Food and Drug Administration. We strive to decrease the number of outbreaks in the United States as well as protect people from E. coli and Salmonella.

OUR STORY
We started as a group of concerned citizens wanting a change. Affected personally by food poisoning with salmonella and the E. coli virus, our team joined forces and created the nonprofit dedicated to change, Bacteria Busters.

Although we did a lot of campaigning and lobbying to increase the FDA’s budget for controlling outbreaks of E. coli and Salmonella, the team does not intend to stop anytime soon. There are still far too many people affected by unnecessary causes that can be avoided with proper regulations and protocols.

Expansion is what is next for us.

THE TEAM
CHIEF EXECUTIVE – Victoria Martini
HEAD OF FINANCE – Michael Chen
DIRECTOR OF MARKETING – Mark Garcia
HEAD OF OPERATIONS – Dylan Plaster
DIRECTOR OF RESEARCH & DEVELOPMENT – Taylor Diebert
WHY BACTERIA BUSTERS NEEDS YOU

Although we are a nonprofit, we still require some funding; We realize that it will be expensive to make our food cleaner and safer. These are the necessary steps that need to be taken in order to combat upcoming expenses.

Currently, the average American contributes about $8 to the FDA through their taxes. If we could increase this to about $12 per person, we would be able to offset the increased cost of improved decontamination processes. This in turn would hopefully reduce the frequency of foodborne illness cases.

Fortunately, we have an FDA Commissioner in Scott Gottlieb, M.D., whose goal is to advance health in all its facets. Additionally, he recognizes that modern technology is remarkable and provides countless opportunities. In a recent statement, he noted that “work at the FDA is taking place during an inflection point in both science and policy.”\(^1\) However, most of the Federal Drug Administration’s attention is directed at the drug industry. In that same statement that I cited above, nearly 90% of the headlines were regarding drug innovations and medical updates. And none of them had anything to do with food sanitation.

Dr. Gottlieb needs to request more funding from the federal government. In 2016, the FDA received $4.9 billion.\(^2\) If this could be increased to $6 billion by 2019, Bacteria Busters believes that would be enough to cover all costs of sanitation enhancement.

Dr. Gottlieb must also hold suppliers of tainted food accountable. If a single restaurant is responsible for an outbreak, that location will be financially responsible for the cost of dealing with the disease. Similarly, an outbreak that is traced to an ingredient (such as romaine lettuce) rather than a single restaurant location will fall on the supplier of that ingredient batch.

---

\(^1\) [https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm596554.htm](https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm596554.htm)

\(^2\) [https://www.hhs.gov/about/budget/budget-in-brief/fda/index.html](https://www.hhs.gov/about/budget/budget-in-brief/fda/index.html)
E. coli and Salmonella bacteria that thrive in what we call food. E. coli and Salmonella both come from unhealthy and unhygienic environments, for the animals and plants that we later consume as food.

According to the CDC there have been a total of 116 bacterial outbreaks in the United States from the year 2006-2018. Of the 116 outbreaks in the U.S 43 cases were E. coli and 64 cases were Salmonella, as seen in the chart below.

These outbreaks are caused from contaminated foods such as ground beef, poultry, unpasteurized milk and juice, cheese made from unpasteurized dairy, raw fruits, vegetables (especially alfalfa sprouts), melons, and nuts. They are also caused from unhealthy environments for the animals and plants. Salmonella is contracted through the consumption of food that is contaminated with feces. When animals are kept in unhygienic environments, they tend to eat their food off the ground that usually has other animal’s or even their own feces.

There is an organization that has come up with a way to prevent E. coli in the food that they produce for consumption. The organization is called CORE, they take the potentially contaminated meat and place it in a dry chiller for 21-28 days to kill off the E. coli. There is also an organization called Save and Grow that Increases crop yields and reduces the risk from E. coli infections and implement careful monitoring of nitrogen levels in produce to minimize pesticides which can cause the E. coli pathogen to be exposed to the plant.
Research shows that through cleaner environments and keeping the animals healthier, with a better form of fertilizer than animal manure, we can decrease the E. coli and Salmonella outbreaks significantly.

### Outbreaks

<table>
<thead>
<tr>
<th>Year</th>
<th># of Outbreaks</th>
<th>E. coli</th>
<th>Salmonella</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2009</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>2011</td>
<td>14</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>2012</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2013</td>
<td>11</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2014</td>
<td>13</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2015</td>
<td>11</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2016</td>
<td>14</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>2017</td>
<td>8</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2018</td>
<td>7</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Total in the past 12 years</td>
<td>116</td>
<td>43</td>
<td>64</td>
</tr>
</tbody>
</table>

*Note that there were outbreaks other than E. coli and Salmonella*

### Sources of E. coli:
- Contaminated food, especially undercooked ground beef, unpasteurized milk and juice, soft cheeses made from unpasteurized milk, raw fruits, vegetables (sprouts especially)
- Untreated drinking water and untreated swimming water
- Animals and their environment; cows, sheep, goats
- Feces of infected people and animals
- Comes from unhealthy plants and animals that are used for food production
- Animal manure is not a safe fertilizer
- Unhygienic handling of food during production
Incubation Period
- 1-10 days
- 21-28 days in a dry chilling room

Sustainable intensification of crop production
- Save and Grow organization
  - Increases crop yields and reduces the risk from E. coli infections
  - Careful monitoring of nitrogen levels in produce to minimize pesticides which can cause the E. coli pathogen to be exposed to the plant

Sources of Salmonella:
- Contaminated eggs, poultry, meat, unpasteurized milk and juice, cheese, contaminated raw fruits and vegetables (especially alfalfa sprouts, melons), spices, and nuts
- Raw or lightly cooked eggs, undercooked ground beef and poultry
- Animals and their environment: particularly baby chicks and pet food and treats

Incubation Period:
- 12-72 hours
TARGET MARKET

Our primary target in this report is Dr. Scott Gottlieb. He has the direct power to request additional funding from the federal government. Not only would he reduce the amount of foodborne illness cases in the US, he would also reduce the cost of foodborne illness cases in the US. In 2012, the cost of dealing with all reported cases across the nation amounted to $227,263,040.3 An increase in funding to prevent the disease would reduce the cost of dealing with it after the fact.

Our secondary target demographic is adults ages 18-34. They are the most active group on social media and the quickest to raise awareness about an issue. If Bacteria Busters can spearhead a public that voices their disdain towards the Commissioner, then we could accelerate the process of him requesting additional funding.

This age group also consumes the most food from public restaurants. This puts them at a greater risk, as outbreaks from chain restaurants such as Chipotle. In 2015 alone, Chipotle fell victim to five independent outbreaks across 10 states.4 At least 450 people suffered from various strains of E. coli, and Chipotle’s reputation was slightly blemished.

These people need food they can trust. We will make them need it now.

Restaurants and food suppliers will be forced to comply with stricter sanitary regulations. These establishments have grown lax with the way they handle food and something needs to change.

3 https://uspirg.org/sites/pirg/files/reports/USP%20TotalFoodRecall%20final%2012-12.pdf
4 http://www.foodsafetynews.com/2015/12/a-timeline-of-chipotles-five-outbreaks/#.WuFucgwzIU
COST ANALYSIS

Your time and donations would go towards tightening food safety policies around the world.

CITY INCENTIVES

Here at Bacteria Busters we know that San Diego is well known for our superb weather and amazing variety of food. For those reasons, we have to step in and implement stricter policies on the FDA and CDC to ensure safer food in our community.

One of the largest costs we will incur is legal fees. To erase this cost and ensure food protection, we can increase the budgeted amount set aside for the FDA per year, per American from $8.49 to $12.00, which is only a slight increase, equivalent to the average cost of three lattes\(^5\). Furthermore, we will increase industry fees associated with each type of food distributed to prevent companies from subpar treatment and transportation of food products.

On the FDA website, multiple graphics show their budget\(^6\) and how many products they cover under their administration. One of them states, “FDA-regulated products account for about 20 cents of every dollar of annual spending by U.S. consumers,”\(^7\) meaning that with our projected increase that number will increase at the same time providing safer and more effective foods.

\(^5\) FDA budget and its impact
\(^6\) Fact Sheet: FDA at a Glance
\(^7\) FDA budget and its impact
Since our organization wants to ensure food providers and eating establishments properly transport and store food, we will have to properly license ourselves so we can handle and examine food, checking for any possible signs of disease. Each of these licenses runs about $9.00, while each e. Coli O157:H7 case runs $10,048. However, if the e. Coli is non- O157, then the costs decrease to $1,366. Salmonella, non-typhoidal, on the other hand runs $11,086. Looking at the recent increase in all three types of cases, we would estimate a yearly budget of $150,000 would be adequate, since licenses are valid for 3 years and the trends we are seeing throughout the United States.

To become a worldwide organization fighting for safer and effective food products, we need a central location to base our operations out of. There are many properties for sale in San Diego that would cost us $500,000, since we have personal investments and private loans encompassing $1,500,000. Once we get settled in, we would be happy to have volunteers give their time and money to our initiative and help spread the word to implement stricter food safety policies in our community and worldwide.

\[8^\text{th} \text{ U.S. PIRG Total Food Recall}\]
CONCLUSION

With the help of your investment, Bacteria Busters will be able to eliminate the fear of being poisoned by your everyday meals. By being in contact with Dr. Gottlieb directly, we can encourage him to demand for more funding from the government which in turn will result in far lower foodborne outbreaks.

Although lobbying plays a huge role in fixing this problem, Bacteria Busters wants to face the problem head on as well, that is where your investment comes in. With the investment we can obtain licenses and extinguish or prevent any new outbreaks that can harm you directly. Also, we will be able to establish an official location in San Diego where we can spread awareness on food safety, research alternatives for pesticides and fertilizers, and establish a place where those who want to help can volunteer in an effective way.

Together we can put an end to the needless death and illnesses that could be easily avoided. You will be safe knowing that every dollar you invest will be a dollar towards saving the lives of others and maybe even yourself.


“Salmonella.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 9 Mar. 2015

“Foodborne Outbreaks.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 20 Apr. 2018

Stöppler, Melissa Conrad. “Salmonella Causes, Prevention & Incubation Period.” MedicineNet

“Preventing E.coli in Food.” Food Chain Crisis Management Framework.