Fun Fact:
When applied to soil this microbe has been shown to enhance growth of both tobacco and peanut

Paenibacillus elgii

Where we found it:
On a Mars Exploration Rover before launch (2004) at the Jet Propulsion Laboratory (JPL-NASA, Pasadena, CA)

Why it’s awesome:
This microbe produces (currently unknown) antimicrobials effective against a wide range of fungi and bacteria

Regular Season Stats

<table>
<thead>
<tr>
<th>Stat</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to saturation:</td>
<td>83 hrs</td>
</tr>
<tr>
<td>Time to exponential growth:</td>
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</tr>
<tr>
<td>Growth density:</td>
<td>52%</td>
</tr>
</tbody>
</table>

Description: Gram variable, facultative anaerobe, rod-shaped, spore forming

**Kocuria rosea**

**Fun Fact:**
This microbe is so commonly found on microbiology plates at UC Davis that the students have nicknamed it “Henry”

**Where we found it:**
On a Mars Exploration Rover before launch (2004) at the Jet Propulsion Laboratory (JPL-NASA, Pasadena, CA)

**Why it’s awesome:**
This microbe is being studied for its ability to degrade feathers which would have applications in industrial waste management

**Regular Season Stats**
- **Time to saturation:** 67 hrs
- **Time to exponential growth:** 9 hrs
- **Growth density:** 100%

**Description:** Gram-positive, coccoid, anaerobic

**Originally isolated:** In Germany as “Micrococcus roseus” in 1889

(Pho by Alex Alexiev)
**Bacillus horikoshii**

**Fun Fact:**
This microbe was found to be one of several that produces tetrodotoxin in pufferfish.

**Where we found it:**
On a football field sample collected by the Pop Warner Saints cheerleaders (Port Reading, NJ).

**Why it's awesome:**
This microbe has been isolated from diverse marine organisms where it appears to produce useful enzymes.

**Regular Season Stats**
- **Time to saturation:** 39 hrs
- **Time to exponential growth:** 6 hrs
- **Growth density:** 94%

**Description:** Gram-positive, spore-forming aerobic

**Originally isolated from:** Soil in Germany (1995)
**Fun Fact:**
This microbe is often sold as a microbiology “standard” for testing new media and assays.

**Curtobacterium pusillum**

**Where we found it:**
On the outside of Aggie Stadium, UC Davis, CA.

**Why it’s awesome:**
Several other members of this genus are plant pathogens but this one was isolated hundreds of meters under the surface in an oil brine.

**Regular Season Stats**
- **Time to saturation:** 44 hrs
- **Time to exponential growth:** 27 hrs
- **Growth density:** 69%

**Description:** Gram-positive, aerobic, motile, irregular rods

**Originally isolated from:** A deep oil brine in Japan (1965)
**Micrococcus luteus (3)**

**Where we found it:**
On a football field goalpost sample collected by the Lake Brantley Pop Warner cheerleaders (Orlando, FL)

**Why it's awesome:**
This microbe can survive under conditions of virtually no water and can withstand massive doses of UV radiation

**Fun Fact:** Because this bacteria is highly resistant to toxic metals it is used in both bioremediation and biotechnology

**Regular Season Stats**

- **Time to saturation:** 27 hrs
- **Time to exponential growth:** 6 hrs
- **Growth density:** 92%

**Description:** Gram-positive, spherical, aerobic, non-motile, yellow-pigmented

**Originally isolated from:** Germany in 1872

(Click to close)
Bacillus flexus

Fun Fact:
A strain of this microbe, isolated from a Saudi lake, has been shown to degrade some important freshwater toxins

Where we found it:
On LP Field (Tennessee Titans)

Why it’s awesome:
This microbe produces a fat-degrading compound that works under very alkaline (basic) conditions, making it of use to the laundry and leather industries

Regular Season Stats
Time to saturation: 66 hrs
Time to exponential growth: 10 hrs
Growth density: 94%

Description: Gram-variable, rod-shaped, aerobic, motile

Originally isolated from: Cooked cabbage in Germany (1884)
**Bacillus amyloliquefaciens**

(2)

**Where we found it:**
On a stadium seat at Gillette Field (New England Patriots)

**Why it’s awesome:**
This is an important industrial organism, used for the production of enzymes that degrade protein, such as those used in contact lens cleaner

**Fun Fact:**
A strain of this bacteria found on plants has been shown to produce a variety of potential “biocontrol” agents that might be used to battle plant pathogens

### Regular Season Stats

- **Time to saturation:** 30 hrs
- **Time to exponential growth:** 8 hrs
- **Growth density:** 98%

**Description:** Gram-positive, rod-shaped, aerobic, motile

**Originally isolated from:**
Japanese soil in 1943
Fun Fact:
This microbe recently had its genome sequenced as part of an undergraduate research project at UC Davis.

Leucobacter chironomi

Where we found it:
In a residential toilet in Davis, CA

Why it’s awesome:
This organism is extremely resistant to chromium

Regular Season Stats

Time to saturation: 98 hrs
Time to exponential growth: 14 hrs
Growth density: 60%

Description: Gram-positive, rod-shaped, aerobic, non-motile, yellow-pigmented

Originally isolated from:
Wastewater in Israel (2009)
**Streptomyces kanamyceticus**

**Where we found it:**
In the kitchen on the set of Kare 11 Morning News (Minneapolis/St. Paul, MN)

**Why it’s awesome:**
One of the earliest antibiotics, kanamycin, was isolated from this microbe in 1957. Plus, it looks cool.

**Fun Fact:**
The antibiotic produced by this microbe is still widely used in industry, research, and medicine

**Regular Season Stats**

- **Time to saturation:** 98 hrs
- **Time to exponential growth:** 48 hrs
- **Growth density:** 46%

**Description:** Gram-positive, aerobic, unusual colony morphology

**Originally isolated from:** Japanese soil (1957)
Unclassified
Spingomonadaceae

Where we found it:
On a stadium seat sample from Niedermeyer Field collected by the Pop Warner Coronado cheerleaders (San Diego, CA)

Why it’s awesome:
After preliminary examination at UC Davis, this bacteria appears to be an entirely new species, maybe even a new genus!

Fun Fact:
No idea… yet! All we know so far is that it’s in the Spingomonadaceae family… (that’s like saying in plants we don’t know if it’s a tomato, potato, chili pepper or tobacco)

Regular Season Stats

NOTE: This microbe doesn’t appear to grow in this assay on earth, but it’s so cool that we’re going to send it to space anyway… maybe it’ll grow there!

Description: Mostly unknown, appears brown, prefers growth at lower temperatures. Details TBA

Originally isolated from: See above (2013)
Fun Fact:
This bacteria has been shown to promote plant growth in barren areas and has been proposed as an aid for re-vegetation projects.

Where we found it:
On a field sample collected by the Pop Warner Broncos cheerleaders (Lauderhill, FL)

Why it's awesome:
This bacteria was first collected from the stratosphere, over 25 miles above the surface of the earth!

Bacillus aryabhatti (1)

Regular Season Stats

Time to saturation: 82 hrs
Time to exponential growth: 30 hrs
Growth density: 22%

Description: Gram-positive, mobile, spore forming,

Originally isolated from: Air sampling from a balloon 25 miles above the earth (2009)
**Bacillus aryabhatti (2)**

**Fun Fact:**
This bacteria has been shown to promote plant growth in barren areas and has been proposed as an aid for re-vegetation projects.

**Where we found it:**
On a practice football field used by the Oakland Raiders.

**Why it's awesome:**
This bacteria was first collected from the stratosphere, over 25 miles above the surface of the earth!

**Regular Season Stats**
- **Time to saturation:** 39 hrs
- **Time to exponential growth:** 6 hrs
- **Growth density:** 89%

**Description:** Gram-positive, mobile, spore forming,

**Originally isolated from:** Air sampling from a balloon 25 miles above the earth (2009)
Fun Fact:
This salt-resistant microbe secretes a compound that is thought to be important in the stabilization of coastal sand dunes.

**Microbacterium arborescens**

**Where we found it:**
On the Viking Mars Orbiter at JPL/NASA before launch in 1975 (Pasadena, CA)

**Why it’s awesome:**
This microbe produces an enzyme used in industrial processes to convert glucose to fructose

**Regular Season Stats**

- **Time to saturation:** 55 hrs
- **Time to exponential growth:** 12 hrs
- **Growth density:** 72%

**Description:** Gram-positive, aerobic, non-motile, rod-shaped

**Originally isolated from:** Lake water under the name *Flavobacterium arborescens* (1889)
**Bacillus safensis**

**Where we found it:**
On a Mars Exploration Rover before launch (2004) at the Jet Propulsion Laboratory (JPL-NASA, Pasadena, CA)

**Why it's awesome:**
This microbe was first discovered and characterized in the “clean” rooms where spacecraft are assembled at JPL.

**Fun Fact:**
This salt-tolerant microbe has been sent into space before, but on a Russian mission that failed during launch.

**Regular Season Stats**

- **Time to saturation:** 17 hrs
- **Time to exponential growth:** 6 hrs
- **Growth density:** 63%

**Description:** Gram-positive, spore-forming, aerobic, chemo-heterotrophic

**Originally isolated from:** MARS Odyssey Spacecraft and associated facilities at JPL (1999-2001)
Fun Fact:
Strains of this microbe found at JPL are resistant to desiccation, UV radiation, and hydrogen peroxide… suggesting the possibility of surviving unprotected spaceflight.

Where we found it:
On a Mars Exploration Rover before launch (2004) at the Jet Propulsion Laboratory (JPL-NASA, Pasadena, CA)

Why it’s awesome:
This common soil microbe has numerous antibacterial and antifungal properties that naturally help both plants and animals thrive.

Regular Season Stats

- Time to saturation: 16 hrs
- Time to exponential growth: 8 hrs
- Growth density: 71%

Description: Gram-positive, spore-forming, aerobic, rod-shaped

Originally isolated from: Plant tissues (1901)
**Bacillus megaterium**

*Fun Fact:*
The species name of this microbe means “big beast” and it is among the largest bacteria ever discovered.

**Where we found it:**  
- On Mars Curiosity Rover before launch at the Jet Propulsion Laboratory (JPL-NASA, Pasadena, CA)

**Why it’s awesome:**  
This is an important industrial organism, used for the production of penicillin, vitamins, various drugs, and numerous enzymes.

**Regular Season Stats**

- **Time to saturation:** 51 hrs  
- **Time to exponential growth:** 5 hrs  
- **Growth density:** 73%

**Description:** Gram-positive, rod-shaped, mainly aerobic, spore-forming

**Originally isolated from:** Germany in 1884
Fun Fact:
During the 1960’s this organism was used in mock biowarfare simulations by the US military as a substitute for harmful bacteria.

**Bacillus atrophaeus (2)**

Where we found it:
On a Mars Exploration Rover before launch (2004) at the Jet Propulsion Laboratory (JPL-NASA, Pasadena, CA)

Why it’s awesome:
This hardy organism is commonly used to test the efficiency of biomedical sterilization procedures.

Regular Season Stats

- **Time to saturation**: 23 hrs
- **Time to exponential growth**: 12 hrs
- **Growth density**: 81%

**Description**: Gram-positive, rod-shaped, facultative anaerobe, motile

**Originally isolated from**: Soil in Colorado (1946)
**Fun Fact:**
At various times this bacteria has been used to treat dysentery, as an alternative medicine, and recently as a probiotic.

**Where we found it:**

**Why it's awesome:**
This organism is extremely well-studied and has been used for the production of laundry detergent and explosives.

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**Regular Season Stats**

- **Time to saturation:** 99 hrs
- **Time to exponential growth:** 5 hrs
- **Growth density:** 60%

**Description:** Gram-positive, rod-shaped, mostly aerobic, motile

**Originally isolated from:**
Germany in 1835
**Fun Fact:** Because this bacteria is highly resistant to toxic metals it is used in both bioremediation and biotechnology

**Micrococcus luteus (1)**

**Where we found it:**
On a sweat mop at a Sacramento Kings basketball game

**Why it’s awesome:**
This microbe can survive under conditions of virtually no water and can withstand massive doses of UV radiation

**Regular Season Stats**

- **Time to saturation:** 42 hrs
- **Time to exponential growth:** 14 hrs
- **Growth density:** 76%

**Description:** Gram-positive, spherical, aerobic, non-motile, yellow-pigmented

**Originally isolated from:**
Germany in 1872
**Kocuria kristinae**

**Where we found it:**
On the court after a San Antonio Spurs game

**Why it’s awesome:**
This microbe is very common on normal human skin and in the mouth

**Fun Fact:**
This species was named after the person from whom the microbe was originally isolated (immortality comes in many forms)

**Regular Season Stats**

- **Time to saturation:** 73 hrs
- **Time to exponential growth:** 14 hrs
- **Growth density:** 96%

**Description:** Gram-positive, facultative anaerobe, often orange or pink

**Originally isolated from:** Healthy human skin under the name “Micrococcus kristinae” (1974)
**Kocuria rhizophila**

**Where we found it:**
On a camera at a Yuri’s Night Party with Buzz Aldrin in Los Angeles, CA

**Why it’s awesome:**
This microbe grows rapidly, to high densities, and is resistant to organic solvents… making it a candidate for industrial applications.

**Fun Fact:**
This bacteria is used throughout the world to test the effectiveness of new antimicrobials.

**Regular Season Stats**

- **Time to saturation:** 46 hrs
- **Time to exponential growth:** 24 hrs
- **Growth density:** 100%
- **Description:** Gram-positive, coccoid
- **Originally isolated from:** Narrowleaf cattail roots (1999)
Fun Fact:
As described in the name, this microbe is capable of using methanol as a carbon source.

Where we found it:
On a doorknob at a Yuri’s Night party in New York.

Why it’s awesome:
This microbe appears to be important in promoting plant growth in the soil.

Regular Season Stats

- **Time to saturation:** 51 hrs
- **Time to exponential growth:** 8 hrs
- **Growth density:** 83%

Description: Gram-positive, rod-shaped, aerobic, motile

Originally isolated from: Rice plant roots in Korea (2010)
**Kocuria marina**

**Where we found it:**
On a water fountain at a Yuri’s Night party in the Museum of Life and Science (Durham, NC)

**Why it's awesome:**
This microbe can tolerate very high levels of salt (up to 15%) that would kill most other bacteria

**Fun Fact:**
This was the first Kocuria species to be found in the ocean, though they are very common on land (and on people)

**Regular Season Stats**

- **Time to saturation:** 76 hrs
- **Time to exponential growth:** 17 hrs
- **Growth density:** 100%

**Description:** Gram-positive, aerobic, non-motile, coccoid

**Originally isolated from:** Marine sediment in the Siberian Sea (2004)
**Bacillus subtilis**

**Where we found it:**
On the game ball at an Orlando Magic basketball game

**Why it’s awesome:**
This organism is extremely well-studied and has been used for the production of laundry detergent and explosives

**Fun Fact:**
At various times this bacteria has been used to treat dysentery, as an alternative medicine, and recently as a probiotic

**Regular Season Stats**

- **Time to saturation:** 41 hrs
- **Time to exponential growth:** 30 hrs
- **Growth density:** 100%

**Description:** Gram-positive, rod-shaped, mostly aerobic, motile

**Originally isolated from:**
Germany in 1835
**Bacillus stratosphericus**

**Fun Fact:**
This organism has been engineered into colonies of cells that produce electricity.

**Where we found it:**
In a butterfly water dish at the Academy of Natural Sciences in Philadelphia, PA

**Why it's awesome:**
This organism is found at high concentrations in the stratosphere (up to 25 miles high!)

**Regular Season Stats**

- **Time to saturation:** 25 hours
- **Time to exponential growth:** 7 hours
- **Growth density:** 27%

**Description:** Gram-positive, rod-shaped, motile

**Originally isolated from:** Air sampling 25 miles high (2001)
**Fun Fact:**
The species name of this microbe means “big beast” and it is among the largest bacteria ever discovered.

**Where we found it:**
- On an antique pressure vessel at the Chemical Heritage Foundation in Philadelphia, PA

**Why it’s awesome:**
This is an important industrial organism, used for the production of penicillin, vitamins, various drugs, and numerous enzymes.

---

**Regular Season Stats**

- **Time to saturation:** 89 hrs
- **Time to exponential growth:** 8 hrs
- **Growth density:** 88%

**Description:** Gram-positive, rod-shaped, mainly aerobic, spore-forming

**Originally isolated from:**
Germany in 1884
**Fun Fact:**
During the 1960’s this organism was used in mock biowarfare simulations by the US military as a substitute for harmful bacteria.

**Where we found it:**
On an antique microscope at the Denver Museum of Natural History.

**Why it’s awesome:**
This hardy organism is commonly used to test the efficiency of biomedical sterilization procedures.

### Regular Season Stats

**Time to saturation:** 79 hrs  
**Time to exponential growth:** 10 hrs  
**Growth density:** 100%

**Description:** Gram-positive, rod-shaped, facultative anaerobe, motile.  
**Originally isolated from:** Soil in Colorado (1946).
**Bacillus amyloliquefaciens** (1)

**Where we found it:**
On the statue of Benjamin Franklin at the Franklin Institute in Philadelphia, PA

**Why it’s awesome:**
This is an important industrial organism, used for the production of enzymes that degrade protein, such as those used in contact lens cleaner

**Fun Fact:**
A strain of this bacteria found on plants has been shown to produce a variety of potential “biocontrol” agents that might be used to battle plant pathogens

**Regular Season Stats**
- **Time to saturation:** 79 hrs
- **Time to exponential growth:** 10 hrs
- **Growth density:** 91%

**Description:** Gram-positive, rod-shaped, aerobic, motile

**Originally isolated from:**
Japanese soil in 1943
**Bacillus megaterium**

*Fun Fact:* The species name of this microbe means “big beast” and it is among the largest bacteria ever discovered.

*Where we found it:* On the Liberty Bell (Philadelphia, PA)

*Why it’s awesome:* This is an important industrial organism, used for the production of penicillin, vitamins, various drugs, and numerous enzymes.

**Regular Season Stats**

- **Time to saturation:** 56 hrs
- **Time to exponential growth:** 10 hrs
- **Growth density:** 83%

**Description:** Gram-positive, rod-shaped, mainly aerobic, spore-forming

**Originally isolated from:** Germany in 1884
**Bacillus tequilensis (1)**

**Where we found it:**
- In the home dugout of the Philadelphia Phillies

**Why it's awesome:**
This microbe produces a compound that has been shown to inhibit the growth of pathogenic bacteria

**Fun Fact:**
This microbe also produces a protein-digesting compound that has been shown to be effective in removing blood stains and dehairing hides

**Regular Season Stats**
- **Time to saturation:** 21 hrs
- **Time to exponential growth:** 5 hrs
- **Growth density:** 59%

**Description:** Gram-positive, rod-shaped, aerobic, spore-forming

**Originally isolated from:** A 2000-year old tomb shaft near Tequila, Mexico
**Bacillus licheniformis**

*Fun Fact:* Because this bacteria is often found on feathers it is being studied for its ability to convert feather waste into livestock feed.

**Where we found it:** On the practice court for the Philadelphia 76ers.

**Why it’s awesome:** This widespread bacteria is used in a variety of industries including leather production, paper production, and laundry detergent.

**Regular Season Stats**

- **Time to saturation:** 99 hrs
- **Time to exponential growth:** 12 hrs
- **Growth density:** 85%

**Description:** Gram-positive, rod-shaped, sporulating,

**Originally isolated from:** Cheese (1898)
Exiguobacterium acetylicum

Where we found it:
- On the 50-yard line at Candlestick Park (San Francisco 49ers)

Why it’s awesome:
This soil microbe helps plants to grow by inhibiting the spread of pathogenic fungi

Fun Fact:
A cold-tolerant strain of this microbe from the Himalayas was found to help wheat seeds germinate at very low soil temperatures

Regular Season Stats

- **Time to saturation:** 44 hrs
- **Time to exponential growth:** 16 hrs
- **Growth density:** 81%

Description: Gram-positive, yellow-pigmented, rod-shaped, non-spore forming

Originally isolated from: Creamery waste (1926)
**Bacillus horikoshii**

**Fun Fact:**
This microbe was found to be one of several that produces tetrodotoxin in pufferfish

**Where we found it:**
On a lobby banister at Parkway Middle School as part of a Broward County STEM teachers event (Lauderdale, FL)

**Why it's awesome:**
This microbe has been isolated from diverse marine organisms where it appears to produce useful enzymes

**Regular Season Stats**

<table>
<thead>
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<th>Stat</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to saturation</td>
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<tr>
<td>Time to exponential growth</td>
<td>11 hrs</td>
</tr>
<tr>
<td>Growth density</td>
<td>85%</td>
</tr>
</tbody>
</table>

**Description:** Gram-positive, spore-forming aerobic

**Originally isolated from:** Soil in Germany (1995)
**Micrococcus luteus (2)**

**Fun Fact:** Because this bacteria is highly resistant to toxic metals it is used in both bioremediation and biotechnology.

**Where we found it:** On a practice mat sample taken by the Pop Warner Apopka cheerleaders (Apopka, FL)

**Why it's awesome:** This microbe can survive under conditions of virtually no water and can withstand massive doses of UV radiation.

**Regular Season Stats**

- **Time to saturation:** 46 hrs
- **Time to exponential growth:** 15 hrs
- **Growth density:** 91%

**Description:** Gram-positive, spherical, aerobic, non-motile, yellow-pigmented

**Originally isolated from:** Germany in 1872
**Bacillus pumilus** (2)

**Fun Fact:**
Strains of this microbe found at JPL-NASA are resistant to desiccation, UV radiation, and hydrogen peroxide... suggesting the possibility of surviving unprotected spaceflight.

**Where we found it:**
Porta-Potty handle sample collected by Pop Warner Chittenango Bears cheerleaders (Chittenango, NY)

**Why it’s awesome:**
This common soil microbe has numerous antibacterial and antifungal properties that naturally help both plants and animals thrive.

**Regular Season Stats**
- **Time to saturation:** 90 hrs
- **Time to exponential growth:** 10 hrs
- **Growth density:** 67%

**Description:** Gram-positive, spore-forming, aerobic, rod-shaped

**Originally isolated from:** Plant tissues (1901)
**Fun Fact:**
This bacteria has been isolated from both seawater and agricultural waste.

**Bacillus marisflavi**

**Where we found it:**
- On grass field sample collected by the Pop Warner Pee Wee Bengals cheerleaders (Wilmington, NC)

**Why it’s awesome:**
This microbe has been induced to form silver nanoparticles that show antibacterial activity.

**Regular Season Stats**

- Time to saturation: 82 hrs
- Time to exponential growth: 18 hrs
- Growth density: 91%

**Description:** Gram positive, rod shaped, spore forming

**Originally isolated from:** Seawater in a tidal flat in Korea (2003)
Fun Fact:

Most members of the Pantoea genus are plant pathogens.

Where we found it:
- On the Mercury Orbiter at the Smithsonian Museum of Air and Space.

Why it's awesome:
Because Project MERCCURI is sending a sample from Project Mercury!

Regular Season Stats

- **Time to saturation:** 63 hrs
- **Time to exponential growth:** 12 hrs
- **Growth density:** 59%

**Description:** Gram negative, non spore-forming, rod shaped, motile, facultative anaerobe.

**Originally isolated from:** Human trachea (1971)
Paenibacillus mucilaginosus

Where we found it:
On “SUE” the T. rex fossil skeleton at the Field Museum in Chicago, IL

Why it’s awesome:
This microbe is very widely used in “microbial fertilizer” for agriculture

Fun Fact:
This microbe secrets compounds that precipitate metals, suggesting applications in both mining and wastewater remediation

Regular Season Stats

Time to saturation: 54 hrs
Time to exponential growth: 8 hrs
Growth density: 79%

Description: Gram variable, facultative anaerobe, rod-shaped, spore forming

Originally isolated from: Russia in 1998
**Fun Fact:**
Enzymes from this microbe may be useful in degrading excess pesticide residues in soil.

**Where we found it:**
On the 50-yard line of McCulloch Stadium in Salem OR, collected by Chapman Hill Elementary School students.

**Why it’s awesome:**
This microbe was found in a screen for organisms who could degrade compounds in contaminated soil.

**Regular Season Stats**
- **Time to saturation:** 46 hrs
- **Time to exponential growth:** 18 hrs
- **Growth density:** 78%

**Description:** Gram-positive, irregular rods, motile, aerobic

**Originally isolated from:** Forest soil in the Czech Republic (2004)
**Bacillus altitudinis**

*Where we found it:*
- At Jim Smith Field, Deerfield Academy, Deerfield, MA

*Why it’s awesome:*
This microbe was originally collected from sampling the upper atmosphere up to 25 miles high!

*Fun Fact:*
This microbe has been shown to be effective in promoting plant growth and inhibiting plant pathogens in the field

**Regular Season Stats**

- **Time to saturation:** 98hrs
- **Time to exponential growth:** 11 hrs
- **Growth density:** 29%

**Description:** Gram-positive, rod shaped, motile

**Originally isolated from:** Balloon sampling of the upper atmosphere (2001)
**Curtobacterium herbarum**

**Fun Fact:**
Other members of this genus are plant pathogens but it is not yet known whether this microbe is problematic as well.

**Where we found it:**
On a stadium seat cushion at Georgia Tech University.

**Why it’s awesome:**
While not well-studied, this microbe has shown up in several studies looking at bacteria resistant to heavy metals.

**Regular Season Stats**

- **Time to saturation:** 42 hrs
- **Time to exponential growth:** 26 hrs
- **Growth density:** 41%

**Description:** Gram-positive, aerobic, motile, irregular rods

**Originally isolated from:** Grasses in Germany (2002)
**Micrococcus yunnanensis**

**Where we found it:**
In a dictionary at the offices of Discover Magazine

**Why it’s awesome:**
This microbe produces a “restriction enzyme” used for cutting DNA in biotechnology applications

**Fun Fact:** Strains of this microbe have been re-classified numerous times. Previous names include *Micrococcus luteus* and *Sarcina subflava*

**Regular Season Stats**

- **Time to saturation:** 82 hrs
- **Time to exponential growth:** 15 hrs
- **Growth density:** 95%

**Description:** Gram-positive, aerobic, non spore forming, coccoid

**Originally isolated from:** Inside plant roots (*Polyspora axillaris*) in China (2009)
Macrococcus equipercicus

Where we found it:
On the floor under a couch at the Catholic Montessori School in Kirtland, OH

Why it’s awesome:
For reasons unknown, this microbe grows to large (non-harmful) populations on horses and ponies but not many other places

Fun Fact: The microbes in this genus are closely related to the much more famous Staphylococcus (e.g. MRSA) genus but have not been shown to cause disease

Regular Season Stats

Time to saturation: 27 hrs
Time to exponential growth: 22 hrs
Growth density: 40%

Description: Gram-positive, non spore forming, non motile,

Originally isolated from: Skin of an Irish thoroughbred horse (1998)
**Fun Fact:**

This microbe was discovered by mixing seawater and crude oil, incubating for weeks in the dark, and seeing what could grow.

**Microbacterium oleivorans**

**Where we found it:**
On the school mascot at St. Joseph’s Preparatory School in Philadelphia, PA

**Why it’s awesome:**
This microbe has been shown to grow on and to degrade crude oil, suggesting applications in bioremediation.

**Regular Season Stats**

- **Time to saturation:** 82 hrs
- **Time to exponential growth:** 32 hrs
- **Growth density:** 74%

**Description:** Gram positive, non spore forming, irregular rod shaped, non motile

**Originally isolated from:** An oil storage cavern in Germany (2005)
**Fun Fact:** The microbes in this genus are closely related to the much more famous *Staphylococcus* (e.g. MRSA) genus but have not been shown to cause disease.

**Where we found it:** On the central keyboard at the WHYY-FM radio studio in Philadelphia, PA

**Why it’s awesome:** Almost nothing is known about this microbe, but hey... isolated from llamas!

**Regular Season Stats**

- **Time to saturation:** 16 hrs
- **Time to exponential growth:** 10 hrs
- **Growth density:** 42%

**Description:** Gram positive, coccoid, facultative anaerobe

**Originally isolated from:** Llama skin in the Czech Republic (2003)
**Exiguobacterium sibiricum**

Where we found it:
On second base at AT&T Park in San Francisco (Giants stadium)

Why it's awesome:
This microbe is so cold-adapted that it can grow at temperatures below freezing!

Fun Fact:
Scientist claim (controversially) to have originally discovered this microbe in 3 million year old permafrost in Siberia

Regular Season Stats

- **Time to saturation:** 99 hrs
- **Time to exponential growth:** 20 hrs
- **Growth density:** 61%

Description: Gram-positive, non spore forming, rod-shaped, motile, facultative anaerobe

Originally isolated from: 3 million year old permafrost in Siberia (2006)
Exiguobacterium indicum

Where we found it:
On the center field logo at FedEx Field (Washington NFL team) in Maryland

Why it’s awesome:
This microbe was isolated from glacial meltwater at an elevation of over 14,000 feet in the Himalayas

Fun Fact:
This microbe is “psychrophilic” meaning it can grow at very low temperatures... even in a fridge!

Regular Season Stats

Time to saturation: 90 hrs
Time to exponential growth: 11 hrs
Growth density: 75%

Description: Gram-positive, motile, rod-shaped, non spore-forming

Bacillus tequilensis (2)

Where we found it:
- In the candy jar on the set of the Today Show

Why it’s awesome:
This microbe produces a compound that has been shown to inhibit the growth of pathogenic bacteria

Fun Fact:
This microbe also produces a protein-digesting compound that has been shown to be effective in removing blood stains and dehairing hides

Regular Season Stats

Time to saturation: 83 hrs
Time to exponential growth: 16 hrs
Growth density: 76%

Description: Gram-positive, rod-shaped, aerobic, spore-forming

Originally isolated from: A 2000-year old tomb shaft near Tequila, Mexico