

STAT+

The cellphones of JPM are crawling with bugs. At least 488 species of them



Alex Hogan/STAT

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SAN FRANCISCO — The drug industry’s annual confab here this week drew thousands of investors and executives from around the world — plus at least 488 microbial species along for the ride on their cellphones.

That’s a key finding of a small, rapid-turnaround [research study](#)¹ conducted at the J.P. Morgan Healthcare Conference over the past few days. Weill Cornell Medicine researchers analyzed the DNA of microbes on 96 cellphones handed over by conference attendees for [sampling during registration](#)² on Sunday.

The researchers found that every single phone was crawling with *Propionibacterium acnes*, a species of bacteria associated with the skin. But the other bugs varied: It turned out that sell-side analysts at JPM had a more diverse swarm of bugs on their iPhones and Androids, compared to attendees on the buy-side. So did men, compared to female attendees.

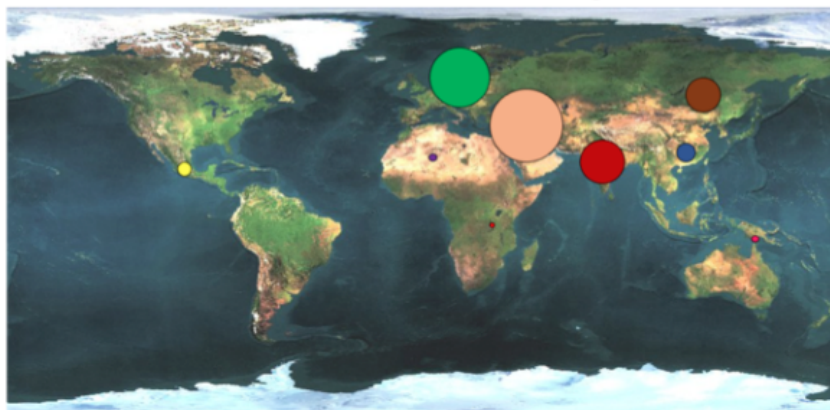
Aside from just being intriguing, the study had a serious purpose: To show that “you can, in 36 hours, collect 100 samples, extract, prep, sequence, analyze, and make a complete report,” Christopher Mason,

the Cornell geneticist who led the study, told a small crowd while presenting the study's results on Wednesday.

The small study seemed to roughly capture the demographics of the infamously white and male conference — 76 percent of study participants identified as male, and 94 percent said they were of Caucasian or South Asian descent. (That's a limitation, too, because there were so few samples from women and other people of color.)

The researchers also detected human DNA on some of the phone samples, which they used to predict the distribution of participants' probable place of ancestry.

Our conference is mostly Caucasian



Size of circle is proportion the number matches

Eran Elhaik/Christopher Mason

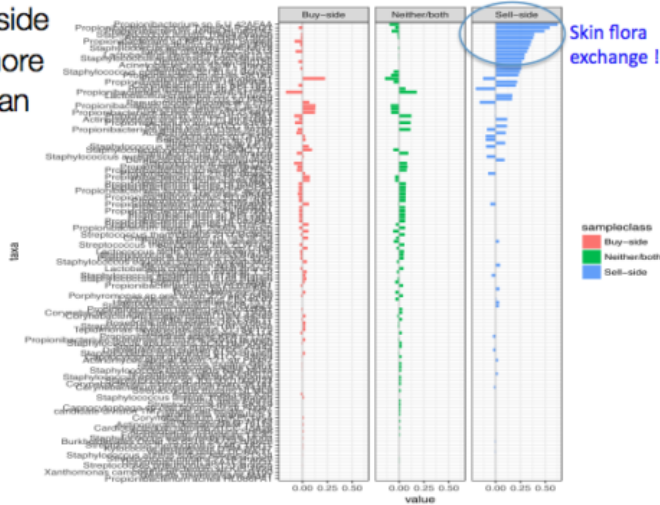
The nearly 500 species of bacteria and viruses detected on the cellphones of JPM represent more diversity than you might normally see in a microbial sampling study, likely because JPM attendees came from so many different places, Mason said.

“It represents the travel history, the interaction history of that person and his or her phone,” Mason told STAT.

Overall, the samples didn't differ much along the lines of participants' professions. Except for the people who identified as either buy- or sell-side.

During his presentation, Mason offered a tentative hypothesis for why the phones of sell-side analysts were crawling with so many types of bugs: Perhaps they picked them up while spending more time meeting people and exchanging handshakes, while people on the buy-side stayed to themselves more. (He cautioned, however, that the results wouldn't resolve the “age-old debate in finance of who's better, who's more important.”)

Evidence for sell-side
People to have more
flora exchange than
buy-side.



Eran Elhaik/Christopher Mason

The researchers are finalizing a draft of a paper on the results of the study and will seek feedback. They plan to conduct a similar study at a science conference in the spring.

Mason doesn't want you to be grossed out by his findings.

When referring to the bugs on your phone, it's better to "use the word 'diverse,' not 'dirty,'" he pleaded. "People will say, 'Oh the grossness!' And I'll say, 'No, it's not. They're just bacteria. They're with us all the time.'"

Links

1. <http://metasub.org/stuckonu2017/>
2. <https://www.statnews.com/2017/01/09/jpm-microbe-cellphone/>

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