Fermentation!

• .......a transformative journey
Tonight’s Goals: Discuss --
• History of fermentation
• Health benefits of fermented foods
• My fermentation journey
• Demonstration: Let’s make some kraut!
• Gadgets
• Samples: Let’s eat some kraut!
• NOT touching on: meat, fish, pickling, or brewing
• Food safety!
“Coevolved symbiotic relationships between bacteria and multicellular organisms are a prominent feature of life on Earth.” Xu & Gordon

In our bodies, bacteria outnumber our own cells by 10 to 1, the vast majority (100 trillion!) being found in our intestines. They produce vital nutrients, outcompete invading pathogens, and modulate some of our genetic expressions.

“Evidence of an active dialogue is rapidly unfolding between intestinal bacteria and the immune cells that line the gut.” Kelly et al.
Primary Health Benefits of Fermentation

Pre-digestion of nutrients to more accessible forms

Creation of unique micronutrients

Detoxification and transformation of anti-nutrients into nutrients

Live lactic acid bacteria cultures
Intestinal bacteria play a major role in biotransformation and detoxification and may explain some of the differences in xenobiotic metabolism between individuals.

“Every time you eat or drink, you are either feeding disease or fighting it.”

— Heather Morgan, MS, NLC
To declare war on ninety-nine percent of bacteria when less than one percent of them threaten our health makes no sense. Many of the bacteria we’re killing are our protectors

Sandor Katz
Whatever you’re craving, Devour has a delicious meal just waiting for your mouth to discover.

We put big flavor first because it takes real taste to fulfill real craving.

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Drugmakers go on offense over prices.......................... B6

ON SE ISE

endangers economy

of research at investment
sance Capital, who is recom-
divest from Turkey. “A
in investors are understand-
this environment and see
ements with worry.”
Turkey’s top corporate law
put down following a police
vestigators described as part
igation of the July 15 at-
up. Clients are left trying to
they thought had been confi-
information.
the Capital Markets Board.

The revival of the 86-year-
old company behind the
Twinkie, which briefly dis-
peared four years ago, turned
on one bold decision. Let
Twinkies be Twinkies.

From the start, the focus of
the two investment firms that
bought Hostess snack brands
was the famous pale-yellow cal-
orie tube with a cream-like fill-
ing. Executives decided they
needed to stick to the indulgent
ature of the product aimed at
their biggest group of custom-
ers, the men they internaly re-
fer to as “Bubba in a truck.”

“No one wants to see a diet
Please see SNACK page A12

Hostess revived
spongy snack with
strategic tweaks

BY ANNIE GASPARRO
AND JULIE JARGON

Please see DRUGS page A2
Merck Pushes to Revive Beef Drug

Meatpackers’ Concerns Stall New Studies of Cattle-Fattening Additive, Pulled From Market Last Year

By: Jesse K江门

A sweeping effort by Merck & Co. to revive a livestock drug it pulled from the U.S. market last year is facing amid resistance from the nation’s largest beef processors.

Merck for months has been preparing to conduct a large-scale study this summer to demonstrate the safety of its Zilmax product. The food additive was widely used to promote weight gain in U.S. cattle before Merck suspended sales in August 2013 because of concerns in the beef industry that the drug made it difficult for some animals to walk.

The pharmaceutical company has said it wants to test Zilmax on about 35,000 cattle. In what Merck says would be the most extensive reevaluation, controlled study of any drug tied to cattle, though the cattle involved would represent less than 1% of the annual U.S. cattle slaughter, they would be valued at about $550 million at current prices for slaughter-ready cattle and produce roughly 100 million pounds of beef.

But Merck has delayed plans to begin its field evaluation because of continued concern among Cargill Inc., JBS SA and other meatpackers about animal welfare, as well as some packers’ reluctance to try to market the beef that would be produced during the research, according to people familiar with the matter. Merck confirmed the study has encountered setbacks. “This has become more time-intensive than we anticipated,” said David Yates, a Merck manager who helped design the planned study. He declined to discuss details of negotiations with meatpackers, but said: “We continue to work on the process to make sure we have alignment with all parties.”

The research requires the support of feedlot operators, which farms cattle for slaughter, and the meatpackers that buy and process them into steaks and ground beef. The three-largest U.S. beef processors—Tyson Foods Inc., Brazil-based JBS and Cargill—account for about 40% of total production, according to industry estimates. JBS also operates one of the world’s largest feedlot operations in the U.S.

Mr. Yates declined to specify a new target time frame to begin testing Zilmax on cattle. Zilmax was approved by the U.S. Food and Drug Administration in 2006 and had been tied to more than 25 million cattle before Merck suspended sales of the drug in the U.S. and Canada. The decision came after Tyson, the largest U.S. meat processor by sales, told cattle suppliers it would halt purchases of animals fed with the drug because it had observed arthritic problems with cattle.

Health experts in the beef industry reportedly last summer that some animals arriving at packing plants showed unusual signs of distress, with some
Ted enjoying Hakarl at a fine Reykjavik establishment
Generic Drug Firms Face Possible Collusion Charges

Federal prosecutors, after a lengthy probe, are nearing possible criminal charges for price collusion in the generic-drug industry, according to a person familiar with the matter.

By Peter Loftus, Brent Kendall and Christopher M. Matthews

The person didn’t name the companies that are a focus of the investigation. But the U.S. Justice Department has sent subpoenas to several manufacturers of generic drugs and to some individual executives, according to the companies’ filings with the Securities and Exchange Commission over the past two years.

Companies receiving such subpoenas include Teva Pharmaceutical Industries Ltd.; Mylan NV; Dr. Reddy’s Laboratories; Taro Pharmaceuticals; Endo International PLC; and Actavis, which Allergan PLC recently sold to Teva.

The Justice Department could begin to bring cases before year’s end, though the timing of any potential enforcement actions remains uncertain, according to the person familiar with the matter. A department spokesman sent shares of generic drug makers tumbling. Endo fell 20%, while Teva declined 11%, and Mylan dropped 7%.

In a separate probe, a group of state attorneys general are investigating generic-drug companies for price-fixing, according to another person familiar with the matter. That investigation, which is a civil matter, is being led by Connecticut Attorney General George Jepsen, the person said.

That probe began in 2014 and includes smaller drug companies as well as some of the largest U.S. drug manufac...