

**THE CENTER FOR
GENOMIC GASTRONOMY**

The Center for Genomic Gastronomy is an artists-led think tank that examines the biotechnologies and biodiversity of human food systems.

Our mission is to:
map food controversies, prototype alternative culinary futures and imagine a more just, biodiverse & beautiful food system.

GENOMIC GASTRONOMY INVESTIGATES**(GGI)**

GGI is a video series, for viewing on the web and in the gallery, that follows a team of researchers from the Center for Genomic Gastronomy as they uncover and reveal the strange but true stories of our global food system.

All of the information and content about food is factual, but the presentation of the Center and its activities are fantastical, with special attention to costuming, sets, props and symbols.

The first season will contain six episodes. Each episode begins with questions submitted by concerned citizens. Each episode relies on the narrative structure of the (police) procedural genre. The team of scientists, chefs, hackers and artists will uncover clues, facts and ingredients.

Each episode concludes with the team cooking, serving or eating a dish. The dialogue and clues in the show are drawn from primary source documents and interviews with doctors, scientists, policy makers and chefs.

THANKS & CREDITS

THANKS TO:

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Students of Willem de Kooning Academy for taking part in a workshop on Food and Film

Pieter van Boheemen for advice, support and critical perspectives

Heather K. Julius for ongoing collaboration, feedback and recipe development.

TONIGHT'S PROGRAMME

INTRO
WELCOME

EPISODE ONE
SMOG TASTING

Props, costumes, meringue tasting

EPISODE TWO
FISH TOMATO

Script reading & soup

EPISODE THREE
COBALT-60 SAUCE

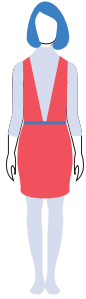
In Conversation:
Zack Denfeld & Pieter van Boheemen

EPISODE FOUR
DORITOS4SNOWDEN

Anja Groten & Selby Gildemacher

EXIT
THANK YOU

CHARACTER SKETCHES



PUBLIC

The voice of the public appears at the start of each episode as a call-in with questions about the strange but true elements of our global food system. These directives prompt the theme of the episode



OPERATOR

The Operator takes calls from the "public" and passes them on to the team. She is in charge of financing and leasing.



BOSS

The Boss coordinates the activities of the group and provides leadership in difficult situations. The most experienced of the group, the boss has a birds-eye view of the investigations.

CHIPS

Heat sunflower oil in a pan. Cut corn tortillas into small triangles. Fry in oil until crispy.

SPICES

We still have more work to do to get the right combination of spices to simulate the Doritos cheese flavour, but we experimented with a variety of mixes, and created some new flavour combinations. Experiment with different combinations of the spice ingredients to get your perfect DIY Doritos cheese flavour.

Mix spice mixture and fried tortilla chips to a bag. Shake well to cover chips with spice mix.

DORITOS 4 SNOWDEN

DIY DORITOS

CHIPS

Makes a bag of diy doritos

sunflower oil

1 package corn tortillas

CHEESE FLAVOUR

cheese powder

paprika powder

onion powder

garlic powder

sugar

salt

MSG

For the MSG flavor, we tried both standard msg crystals, and bonito flakes. The bonito flakes worked well.



CHEF

The Chef is an expert in the art of acquiring and preparing food. S/he has special connections at the local market, and with producers to ask specific questions, or get access to ingredients or special discounts.



DOC

The Doc is an expert in human & environmental health, and when needed can conduct any of the wet or biological research taken on by the team.



HACKER

The Hacker conducts primary source research in databases & does journalistic, human intel and social hacking. Able to speak the domain-specific jargon on the phone or in person, and can sneak into places.



MAKER

The Maker creates field kits and hacks hardware. She appears whenever the team needs to go into the field or requires specific gear. Think "Q" in James Bond series.

SMOG TASTING

The team is tasked with collecting and tasting smog from polluted cities all over the world. DOC discovers how smog affects our sense of taste, and CHEF creates flavour pairing recipes for smogs in Beijing, New Delhi and Milan. MAKER invents a tool for harvesting air pollution and the team decides to send their polluted meringues to politicians and clean up the air that is changing the way our taste buds work.

When Edward Snowden was interviewed by Christian Stroebele, he was asked what he missed the most from America. His answer was Doritos. As a thank you to Snowden for his contribution as a whistleblower, we decided to start the work of creating an open source doritos recipe.

In addition to testing flavour combinations and recipes, we are also asking contacts in Russia to help us identify and locate ingredients that would be available in Moscow.

Drawing connections between our additions to junk food and information, we try to uncover the hidden secrets of the junk food industry, creating an open source recipe with infinite combinations.

DORITOS 4 SNOWDEN

The team is asked to make an open source Dorito Recipe for Edward Snowden. Chef begins the ingredient research, and DOC looks for healthy and local alternatives to MSG and cheese powder. HACKER investigates the connection between the surveillance state and the fast food industry. The answers will surprise you! The team develops some tools for resisting the corporate colonization of our taste buds.

This episode is based on our research into Smog Tasting, which draws connection between urban air quality, cuisine and human health. We are currently developing further research in collaboration with Nicola Twilley of Edible Geography.

Smog Tasting 1.0 maps air quality by harvesting air from highly polluted areas. Egg foams are up to 90% air, and whipping the eggs causes particulate matter to be trapped in the batter. Smog from different locations can be tasted and compared. The batter can be tested for heavy metals and VOCs, compared under a microscope or baked and served as trojan horse sweets.

Take a snapshot of the air quality in any location. Serve it to politicians or business owners for a blind taste test of the air quality in their area. One shouldn't worry too much about getting sick from these cookies: we breath this air everyday!

Smog Tasting 2.0

In this version of Smog Tasting, air quality data from different cities around the world is translated into recipes, which can be tasted and compared. The tragedy of the commons never tasted so good!

Smog Tasting 3.0

New research is being developed in conjunction with public health researchers which will be released in 2015 as part of the GGI Smog Tasting Episode.

SMOG TASTING**SMOG TASTING 2.0 MERINGUE RECIPE***Makes 16 meringues***MERINGUE**

4 Egg Whites, room temperature

200g Caster Sugar

Lemon Slice

Pinch of Salt

SPICE MIXES

Black Pepper = Particulate Matter (PM10)

Wasabi Powder = Nitrogen Dioxide (NO2)

Indian Black Salt (kala namak) = Sulphur Dioxide (SO2)

AIR QUALITY DATA TO SPICE MIX CONVERSIONSmog data point*

$$160 \times (\text{number of eggs}) = \text{number of tsp}$$

*Smog data point (PM10, NO2 and SO2) given in one-millionth of a gram per cubic meter air ($\mu\text{g}/\text{m}^3$)

1.

Quarter and slice onions. In a pot, add 3 tbs canola oil: heat over medium high. Add onions. Stir to coat with oil. Sweat onions 10 mins till translucent; reduce heat to med high and stir in 1 cup sugar. Cook, stir occasionally, until onions have caramelized, about 10 minutes. Do not burn. When onions are caramelized, stir in 3 cups wine, 1½ cups port, 2 cups whiskey, and salt. Cook off the alcohol for about 10-20 minutes. Set aside.

2.

Place pumpkin seeds on cookie sheets—distributed evenly. Toast in low oven until browned. Do not burn. Set aside and let cool. Grind in blender or food processor. Do not over-grind into nut butter.

3.

Add all ingredients except citrus and apple cider vinegar to a large pot. Add a couple of handfuls of sugar. Simmer all ingredients in large pot until tomatoes are sweet (3-4 hours).

4.

Let cool (1-2 hours). Working in batches (as necessary), ladle sauce into a food processor/ blender and make a smooth puree. Press each pureed batch through a sieve into a bowl or another large pot. When this process is complete, add all citrus juice. Taste. Add salt and apple cider vinegar to taste.

COBALT-60 SAUCE**BBQ SAUCE****INGREDIENTS***Makes about 32 cups*40-60 whole dried milder,
smoky chile4 cups peppermint tea
(made with 4-6 teabags)

1 cup Calrose rice

¼ cup cumin

¼ cup coriander

3 tbs cloves

2 cups raw pumpkin seeds

2 ruby red/rio star
grapefruits, juiced

8 oranges, juiced

8 limes, juiced

3 bulbs garlic, chopped

10 red onions (1.6 kg)

2 bottles of ketchup
(20 oz each)3 cans of tomatoes
(28 fl oz each)

1 bottle of soy sauce (20 oz)

1 bottle of canola oil

1 bottle apple cider vinegar
(473 ml)

1 bottle red wine

1 bottle port

2 cups Macallan's scotch
whiskey

2 lbs sugar

salt

PREP CHILECut the stems off the chile
and slice open to remove seeds
and ribs. Set aside.**PREP RICE POWDER**Heat heavy skillet. Toast rice
over medium high till brown
and toasted. Do not burn. Let
cool. Put in spice grinder
or food processor to make a
powder.**PREP SPICES**Toast the spices in a small
skillet until fragrant. Let
cool. Grind to fine powder in
spice grinder or blender.

1.

Preheat the oven to 140°C and line 2 baking sheets
with parchment paper.

2.

Make sure all cooking equipment is very clean. Wipe
a large mixing bowl (ideally not plastic) and your
electric mixer beaters with a lemon slice to help
stabilize the foam.

3.

Place 4 egg whites in the mixing bowl with a pinch
of salt.

4.

Beat egg whites on medium speed until the mixture
stands up in stiff peaks.

5.

Slowly add the caster sugar one spoonful at a time,
beating on high. Don't over-beat. The mixture will be
thick and glossy when ready.

6.

Fold in half of the desired smog spice mix using
the *air quality data to spice mix conversion*.
E.g. Rotterdam would be ¼ tsp black pepper, 1 tsp
wasabi powder, ¼ tsp black salt.

7.

On the baking sheets, creating about 16 small
'clouds' using two tablespoons.

8.

Sprinkle remainder of spice mix across the tops
of the meringues.

9.

Bake until crisp, 1 1/4 hour to 1 3/4 hour. Let cool
on the tray.

FISH TOMATO

The team is tasked with tracking down the infamous genetically engineered fish tomato. Did it ever exist? If it did, how do they find it? DOC asks a question that gets him in trouble while the rest of the team uncover a bizarre tale of botched experiments, smuggled tobacco and shareholder guinea pigs. BOSS needs to decide between two conflicting agendas that will define the future of the group. The episode ends with CHEF serving the perfect recipe for cooking the fish tomato.

Mutation (or radiation) breeding is the process of exposing plants and seeds to radiation to cause random mutations. The mutated plants that show desirable attributes can then be reproduced, creating a mutant variety from the original stock.

Mutation breeding is an agricultural technology that has proliferated globally since the end of World War II. For over 60 years, scientists on six continents have been exposing plants and seeds to radiation and chemicals, in order to induce mutations.

More than 2,500 mutant crop varieties have been registered with the United Nations and the International Atomic Energy Agency (IAEA). Commercially-released varieties can be found in the database of Mutation-Enhanced Technologies for Agriculture (META). These organisms populate our human food systems and sit anonymously on our supermarket shelves. The Center for Genomic Gastronomy wants to understand the history of this technology; scientifically, culturally and economically, to see how it became accepted and forgotten. Will the same happen to emerging technologies? Cobalt-60 Sauce is a reminder of this history, featuring five radiation-bred ingredients: Rio Red Grapefruit, Milns Golden Promise Barley, Todd's Mitcham Peppermint, Calrose 76 Rice and Soy.

COBALT-60 SAUCE

HACKER is tasked with locating and collecting the hidden mutation bred ingredients that are silently sitting on supermarket shelves, and CHEF decides to combine them together into a barbecue sauce. DOC attempts to answer the PUBLIC'S questions about the possible unknown health consequences of mutation bred ingredients, and BOSS discovers that biodiversity is in the eye of the beholder.

Where do failed GMOs go to die?
Who gets to taste them?

The Fish Tomato project is a historical reenactment of Science. The goal of the project is to find and cook with the infamous but misunderstood frost-tolerant Fish Tomato genome using the Vegetarian Bouillabaisse recipe.

Although canonical in the history of Agriculture and Biotechnology, this ingredient has somehow slipped through the cracks of history, much like it's original creator DNA Plant Technology.

The Center is currently documenting the history of this plant and is seeking information about whether any copies of the genetic material (seeds or cryogenically preserved plant tissue culture / germplasm) remain on the planet.

In the process of tracking down and cooking a transgenic Fish Tomato soup we hope to make public the processes that led to the creation, hype and abandonment of this genome and to dispel popular myths surrounding it. Cultural probes created as part of this process will be designed to engender debate about scientific production and communication, biotechnology, and cultural amnesia.

FISH TOMATO**VEGETARIAN BOUILLABAISSE****VEGETARIAN BOUILLABAISSE**

3.2 kg fish tomatoes
 Generous pinch saffron
 1 bottle white wine
 4 onions, chopped
 4 stalks celery, chopped
 6 carrots, chopped
 1 fennel bulb, chopped,
 reserve fronds
 4 leeks, chopped
 6 cloves of garlic, chopped
 170g tomato paste
 Peel from one orange
 1 bay leaf
 Handful of seaweed
 1 cup olive oil
 Pimenton

PA AMB TOMAQUET

5 slices artisan bread
 2 tomatoes
 2 garlic cloves
 Salt
 Pepper
 Olive oil

LEMON AIOLI

2 garlic cloves
 2 egg yolks
 Juice from 1 lemon
 ½ cup olive oil
 ½ cup vegetable oil
 1 tsp sherry vinegar
 ¼ tsp salt
 ¼ tsp black pepper

1.

Put tomato paste and 1 tablespoon of olive oil in a stockpot and cook over medium heat until browned. Add olive oil, onions, celery, carrots, fennel bulb, leeks, garlic, bay leaf and orange peel. Cook until vegetables are fragrant and soft, but not browned. Add tomatoes and mash with a spatula or spoon in the pot. Add white wine. Bring to a boil and simmer for about 40 minutes.

2.

To prepare the pa amb tomaquet, first grill the bread over a flame or toast in the oven, ensuring that both sides are browned. Cut garlic cloves in half & use to rub both sides of the bread slices. Cut the tomatoes in half and rub both sides of the bread slices. Sprinkle bread with salt, pepper & then drizzle with olive oil. Cut the bread slices in half and set aside.

3.

Next, to prepare the lemon aioli: slice the garlic cloves and crush along with a pinch of salt to form a paste using a mortar and pestle. In a bowl, whisk the egg yolks and lemon juice. Add the oils in a thin steady stream to the egg yolks and lemon juice, whisking constantly. After the mixture has emulsified, whisk in the garlic mixture, vinegar, salt and pepper.

4.

Pass ½ to ¾ of the cooked soup from the pot through a food mill or blender to reach the desired consistency. A chunky consistency is most desirable. Garnish with pa amb tomaquet, lemon aioli, fennel fronds and pimenton.