

# HANDBOOK OF MOLECULAR GASTRONOMY

## Application to culinary art

HOW NOTE BY NOTE COOKING CAN HELP PATIENTS?



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# WHO ARE WE ?



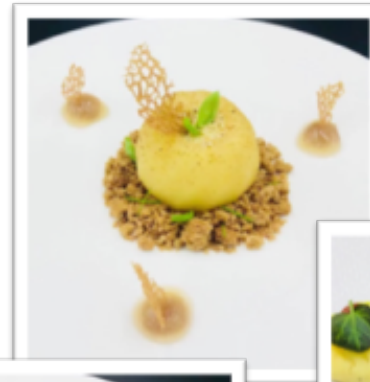
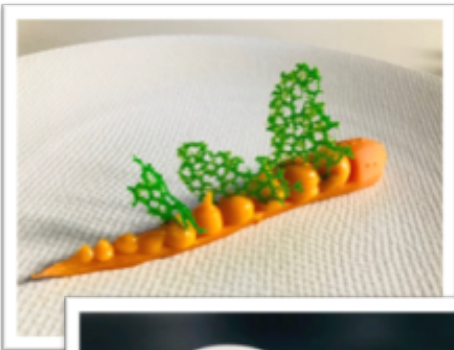
**Dr Dao Nguyen, PhD.**  
Pharmacist  
Co-founder KITCHEN LAB.



**Pasquale Altomonte**  
Culinary artist  
Co-founder KITCHEN LAB.

# CULINARY CONTESTS

Concours d'Art Culinaire de l'Université de Genève (Genève, 2021)  
Une Histoire de Cuisine by Stéphane Décotterd (Corseaux, 2020)  
Swiss Finger Food Trophy by Bocuse d'Or (Genève, 2019)  
Cook'n'salt (Genève, 2019)  
Culinary challenge (Genève, 2019)  
Trophée Passion (Paris, 2019)  
Concours du Macaron (Lyon, 2018)  
Grand Prix Joseph Favre (Martigny, 2018)  
Cuisinier d'Or (Wallisellen, 2018)  
Bon App! TV (Genève, 2018)  
La Cuillère d'Or (Paris, 2018)  
Swiss Culinary Cup (Baden, 2017)  
Championnat romand des cuisiniers (Suisse romande, 2017)  
Trophée Masse (Genève, 2017)  
Concours international Cuisine Note à Note (Paris, 2017)  
Cuisine et émotion de l'Institut Paul Bocuse (Lyon, 2017)  
Grand Prix Joseph Favre (Martigny, 2016)  
Cuisinier d'Or (Wallisellen, 2016)  
Buitoni Grande Concorso (Rorschach, 2016)  
Sciences & Cuisine (Nantes, 2015)  
Concours international Cuisine Note à Note (Paris, 2015)  
Sciences & Cuisine (Nantes, 2014)  
MasterChef des associations (Fribourg, 2013)  
Les Toqués du terroir saison 3 (Vaud, 2013)  
GastroFribourg (Fribourg, 2012)  
Les Toqués du terroir saison 2 (Vaud, 2012)  
UNIGE Nourriture & Santé (Genève, 2011)  
etc. etc. etc.





# NOTE BY NOTE COOKING CONTEST

Forget traditional culinary codes...

Photoshop egg  
found on Pinterest



« Traditional » Coq-au-vin

« La Coque au Vin Note à Note »  
Winning dish of the International  
Note by Note Cooking contest  
by Dao & Pasquale, Paris 2015

# HOW NOTE BY NOTE COOKING CAN HELP PATIENTS ?



# COW'S MILK ALLERGY



## WHAT IS THAT?

Cow's Milk Proteins Allergy is estimated to be 2-3% in children in developed countries (**not to be confused with lactose intolerance**).

## SYMPTOMES

Digestive, Cutaneous, Respiratory, **Anaphylactic shock**.

## MOST COMMON TREATMENT

**Total elimination** of cow's milk proteins, but it is very difficult to avoid milk proteins in processed food.

## TREATMENT

Allergen immunotherapy consists of **administering increasing doses of allergenic extracts**, which will reduce the overactivity of the immune system and inflammation. The aim is to reduce the risk of severe reactions after accidental ingestion of milk proteins and to improve the quality of life of children.

## MILK PROTEIN MUFFIN

By heating the milk, its proteins are broken down. At HUG, in the Pediatric Allergology Unit, a muffin recipe containing a defined amount of cow's milk proteins was developed (baking at 180 °C for 30 minutes). **Every 6 weeks, the cooking time is reduced by 5 minutes, allowing a gradual introduction of allergens.**

# COW'S MILK ALLERGY

## MAJOR DISADVANTAGE

Immunotherapy by **daily ingestion of milk** proteins is long (up to 12 months). Only one recipe has been developed => some children must eat a piece of cake (approx. **150 g**) every day during 1 year! The risk of dropping out of therapy is very high.





# COW'S MILK ALLERGY

## VARIATION AROUND MUFFIN

Fruit or chocolate cake, Chocolate chip cookies, Savory cookies, Milk bread, Olive/vegetable/salmon quiches, Potato gratin, etc. etc. etc.



**After 12 months**, Simon (8 yr.) was able to eat a slice of pizza at the restaurant **for the first time**.

# GASTRIC BYPASS

## WHAT IS IT?

The gastric bypass is a **bariatric surgery** whose objective is to reduce the volume of the stomach (**the size of an espresso cup**) and to modify the food circuit. The absorption of food will be restricted, reducing the daily calorie intake (treatment against obesity).

## THE SUCCESS OF THE TREATMENT DEPENDS ON 3 CONDITIONS :

1. Long-term **change in eating habits** and regular physical activity
2. Daily intake of vitamins and minerals supplements
3. Regular lifelong medical follow-up with the multidisciplinary team



# GASTRIC BYPASS



## SPHERE OF “CHICKEN-CARROT” WITH CUBE OF “CHICKEN BROTH” AND CHIPS OF “BASIL-LEMON”

Personalized dish with the objective of:

- Keep the **pleasure of eating** during the convalescence period
- Food volume reduced to **less than 1dl**
- Importance of exacerbating tastes
- Increased need for **vitamins and proteins**
- The sphere is chewy and fibrous (meaty texture) and looks like an “egg yolk”, it contains a lot of proteins
- The “kiwi layer” has the texture of a slice of pork rind
- The cube is a pork stock
- The basil-lemon chips adds an extra taste and texture to the bite

**Full explanation and recipe in the Handbook of Molecular Gastronomy (pp. 829-830).**

# thank you !



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