



# Chocolate X wine

**François Chartier**

Chartier Créateur d'Harmonies

**Ramon Morató**

Creative Director Cacao Barry®



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## Chocolate meets wine

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In this new bulletin from Cacao Barry, we will report on the result of the collaboration between the Canadian sommelier and world champion François Chartier and the creative team of Cacao Barry.

In September, François Chartier presented the results of his aromatic science to the renowned pastry arts association Relais Desserts during its international seminar in Yssingeaux (France) together with Philippe Bertrand and Ramon Morató.

In October, François Chartier and Ramon Morató repeated the experience and presented the results of their latest experiments during the prestigious Wine & Culinary International Forum in Barcelona. Further details on their collaboration are given below.



## What is Chartier's science?

For almost 30 years, Chartier has conducted intensive experimentation and research into the field of sommellerie. In addition, he has studied various world cuisines and has read exhaustively about culinary science, oenology and wine growing. Chartier's theories of "Molecular Harmonies and Sommellerie" can be summarised as follows:

By combining ingredients and/or liquids that are generally comprised of one or more aromatic molecules of the same family, the result is greater than the sum of its parts. By the effect of "aromatic harmony",  $1+1=3$ , and even at times, 4. Hence, this translates into a "new formula of taste".

The scientific reason behind the harmony between wine and food is explained, as is understanding the creation and success of thousands of recipes that are indeed the culinary heritage of the world. Furthermore, it opens up new possibilities in the area of culinary creativity.

To better understand its principles, let's take clove as an example. Of the hundreds of aromatic molecules that make up clove, only one predominates and hence defines its aromatic profile.

In some way, this aromatic molecule is its aromatic DNA. The dominant aromatic molecule, called eugenol, is also found in Thai basil, red beetroot and cooked mozzarella and some variety of chocolates, as well as in wines aged in oak barrels, particularly in Spanish wines made from Tempranillo grapes from the Ribera del Duero, Toro and Rioja DOs.

If a dish is prepared using chocolate, red beetroot and Thai basil or cloves, the desired "aromatic harmony" can be achieved, creating the perfect balance of tastes. The resulting taste of this duo (or trio) of ingredients with the dominant molecules from the same family will be magnified. Furthermore, if a wine that has been aged in oak barrels is also served, this "aromatic harmony" between the dish and the wine will be all the more evident. The harmony between the food and the wine will be a success and a harmonic place of comfort can be achieved.

A "new formula of taste" is in play:  $1 + 1 = 3$

### Famille aromatique du CHOCOLAT NOIR

UILE DE  
SÈSAME  
GRILLÉ

GAÏACOL

VIANDE FUMÉE  
ET GRILLÉE

SUCRE BR

LA FAMILLE AROMATIQUE

DIMETHYL-  
PYRAZINES

POISSON  
GRILLÉ

SCOTCH

VIANDE FUMÉE  
ET GRILLÉE

RE SAUVAGE  
SOUFLE

CHIPOTLÉ  
FUMÉ

MALT

CYCLOTONES

LACTONES

FURFURALES

CARAMEL

DE COCO

CAFÉ

ÉRABLE

CAFÉ



# The experiment

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For the presentation at the Wine & Culinary International Forum in Barcelona, the aim was to present the work between a sommelier and a chef through three exclusive bonbons created using three of Cacao Barry's most representative chocolates.

The chocolates selected by Ramon Morató were analysed by François Chartier and based on his aromatic science, François challenged Ramon by suggesting a long list of possible combinations for each one, seeking to stimulate creativity and open the way to new combinations.

Furthermore, the challenge continued throughout the tasting, as each bonbon would be paired with a different wine.



# 1. Zéphyr™

## White chocolate (34% cocoa)

A modern white chocolate with a low percentage of sugar  
and higher in milk solids, rich and intense





**Zéphyr™ white chocolate (34% cocoa)**

Possible combinations proposed:

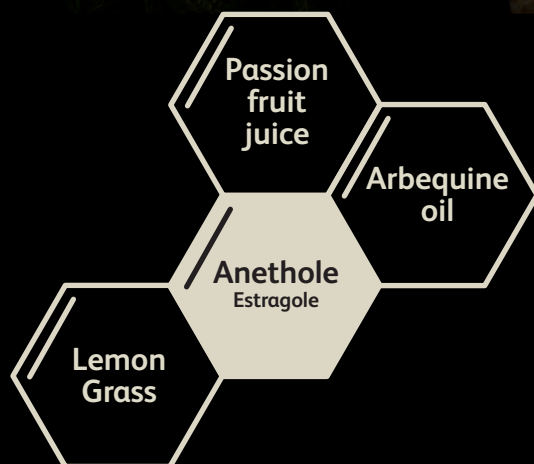


**François Chartier**  
Chartier Créateur d'Harmonies



**Ramon Morató**  
Creative Director Cacao Barry®

**Zéphyr™ white chocolate (34% cocoa)**  
Final selection



# White chocolate and passion fruit – olive oil – basil

Ingredients for approx. 4 moulds of 40 units

## **Zephyr white chocolate and passion fruit truffle**

400 g Passion fruit purée  
70 g DE 44 glucose syrup  
70 g Invert sugar  
70 g Sorbitol  
775 g Zephyr™ white chocolate (34 % cocoa)  
150 g cocoa butter  
2 g salt

- 1.Mix the passion fruit purée with the sugars and salt.
- 2.Dissolve.
- 3.Meanwhile, melt the couverture and cocoa butter.
- 4.Add the water-based solution to the couvertures and make sure that the mixture emulsifies properly.
- 5.At 28°C, pour into the moulds previously lined with white couverture and leave to crystallise for 24 hours covered with cling film.

## **Arbequina olive oil and basil interior**

750 g Arbequina olive oil  
245 g cocoa butter  
5 g Sosa wax concept  
1.6 g powdered freeze-dried basil

- 1.Heat the oil to around 50°C and add the basil.
- 2.Mix the wax concept with the cocoa butter, mix with the oil.
- 3.Lower the temperature of the mixture to 30°C, add around 1 % of the tempered cocoa butter or temper the mixture at 23°C to a cold point.
- 4.Pipe into semi-sphere moulds, at the bottom of the chocolate mould and leave to crystallise.

## **Others**

Q.S. Zephyr™ white chocolate (34 % cocoa)  
Q.S. Green paint (cocoa butter and green colouring)  
Q.S. Yellow paint (cocoa butter and yellow colouring)  
Q.S. Orange paint (cocoa butter and orange colouring)

## **Assembly**

- 1.Temper the green paint and with an airbrush, spray droplets on the semi-sphere moulds.
- 2.Then temper the orange paint and using an airbrush, graduate the colour, repeating the operation finally with the yellow paint.
- 3.Finally temper the white chocolate and line the moulds.
- 4.Pipe 2/3 of the passion fruit truffle when at 28°C in the moulds and insert the half sphere of oil interior.
- 5.Fill up with passion fruit truffle.
- 6.Leave to crystallise for a few hours and cover the base with white chocolate.
- 7.Unmould and set aside.





**Zéphyr™ white chocolate (34 % cocoa)**

## The result

After several tests and discussions within the team, it was decided limit the association of aromas to 3 or 4 in each bonbon. Furthermore, the challenge was to employ ingredients haven't been used in the past. Since the desired result was a single bonbon weighing no more than 6 to 8 grammes, the message needed to be clear; each of the aromas must be present without overcoming the others. As well as playing with different textures, the chronology of the taste needed to be controlled. When tasting the bonbon, the flavour present in the semi-liquid texture would be first to arrive. Next would be the creamy ganache texture and then the crunch, etc. The flavour combination was not only important, but also the product's architecture.

For the white chocolate bonbon, a ganache with Zéphyr™ 34 % white chocolate was proposed, perfumed with passion fruit. For the first time, we created a pure Arbequina olive oil liquid filling perfumed with basil, which was then texturized to obtain a creamy mouth feel and piped into the bonbon.

## Tasting

The tasting chronology was first the white chocolate bonbon, then the dark chocolate, and finally the milk chocolate, since it was smoked and contained red miso, giving it greater complexity and personality.

To pair with the white chocolate bonbon, the Penedés wine Fransola 2013 from Torres was chosen. It is a lively, dry wine with passion fruit and basil aromas, two of the ingredients selected.



# 2. Fleur de Cao™

## Dark chocolate (70% cocoa)

Fleur de Cao™ is the result of a blend of various origins: Ecuador, Côte d'Ivoire and Sao Tome. The cocoa varieties used are Arriba and Forastero. The result is a balanced and bitter chocolate with floral and woody notes.





**Fleur de Cao™ Dark chocolate (70% cocoa)**

Possible combinations proposed:

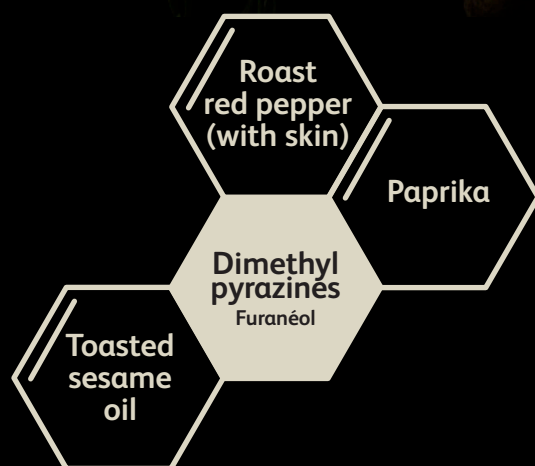


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**Fleur de Cao™ Dark chocolate (70% cocoa)**  
Final selection





# Red pepper – fleur de cacao and pepper ganache – black sesame seed

Ingredients for approx. 4 moulds of 40 units

## Roasted red pepper reduction

- 500 g roasted red pepper liquidised juice
- 100 g glucose syrup (DE 60)
- 100 g sugar
- 4 g salt

1. Roast the red peppers, peel and de-seed (for every 5 peppers, 1 with skin).
2. Blend and set aside 500 g of the juice.
3. Add the sugars, salt, and reduce on a low heat until a Brix of 70/75° is achieved.
4. Rectify the salt, if necessary, and set aside

## Fleur de cacao dark chocolate and long pepper ganache

- 700 g sterilised whipping cream (35 % fat content)
- 100 g water
- 8 g long pepper (Piper longum)
- 100 g invert sugar (Trimoline type)
- 100 g glucose syrup (DE 44)
- 100 g sorbitol
- 3 g salt
- 900 g Fleur de Cacao dark couverture chocolate (70 % cocoa)
- 200 g Lactée Supérieure milk couverture chocolate
- 100 g anhydrous butter

1. Dissolve the sugars and the salt in the cream and the water. Grate in the long pepper using a Microplane.
2. Cool the liquid to 30°C.
3. Separately, melt the couvertures and the anhydrous butter at 45/50°C.
4. Incorporate the liquid in the fatty part and emulsify uniformly.
5. emulsión.
6. Temper at around 32/33°C and pipe.

## Black sesame seed crisp interior

- 160 g Lactée Barry milk couverture chocolate (35 % cocoa)
- 160 g pure black sesame seed paste
- 34 g anhydrous butter
- 20 g cocoa butter
- 2 g salt
- 140 g crisp cereal pieces

1. Melt the couverture, the anhydrous butter and the cocoa butter.
2. Mix and incorporate the sesame paste, salt and the cereal.
3. Temper at around 23°C and spread out on sheets, approximately 1 mm thick.
4. Once crystallised, cut into 1.5 cm diameter discs.

## Others

- Q.S. Fleur de Cacao dark couverture chocolate (70 % cocoa)
- Q.S. Black paint (cocoa butter and black colouring)
- Q.S. Intense red paint (cocoa butter and red colouring)
- Q.S. Light red paint (cocoa butter and red colouring)

## Assembly

1. Temper the black paint and with an airbrush, spray droplets on the semi-sphere moulds.
2. Next, with the same paint graduate the colour on one side, and then repeat with the intense red paint and finally with the light red paint.
3. Finally temper the dark couverture and line the moulds.
4. Pipe a dot of red pepper reduction in the moulds.
5. Then fill up the mould to half way with the dark chocolate truffle and then place a disc of sesame. Finish by filling up with truffle.
6. Leave to crystallise for a few hours and close with Fleur de Cacao dark couverture chocolate (70 % cocoa).
7. Unmould and set aside.



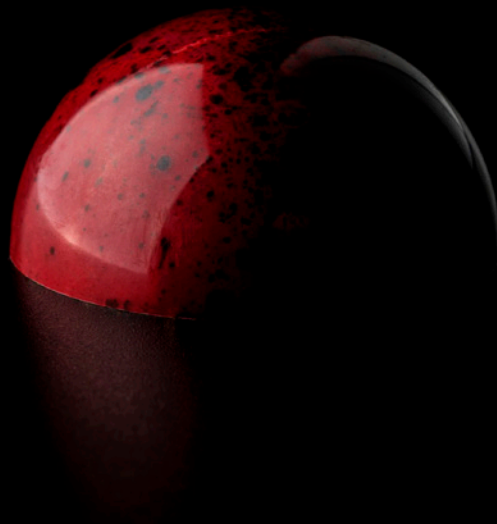
**Fleur de Cao™ Dark chocolate (70% cocoa)**

## The result

For the dark chocolate bonbon, we prepared a concentrate of roasted pepper gel, which we piped into the base of the bonbon. Then we created a ganache with the Fleur de Cao™ dark chocolate and long pepper, which we alternated with a salted black sesame crisp.

## Tasting

For the dark chocolate bonbon, a red Tempranillo from Ribera del Duero, Chartier 2013, was chosen. This wine has a powerful base note of chocolate and shares a molecular profile with the roast red pepper reduction, sesame paste and long pepper.





# 3. Origin Ghana

## Milk chocolate (40% cocoa)

Pure origin milk chocolate in which entirely cocoa from Ghana has been used. The variety is Forastero. The result is a next generation chocolate, a dark milk color that is rich in cocoa solids and with chestnut and caramel notes and a touch of red fruits.



**Origin Ghana Milk chocolate (40% cocoa)**

Possible combinations proposed:



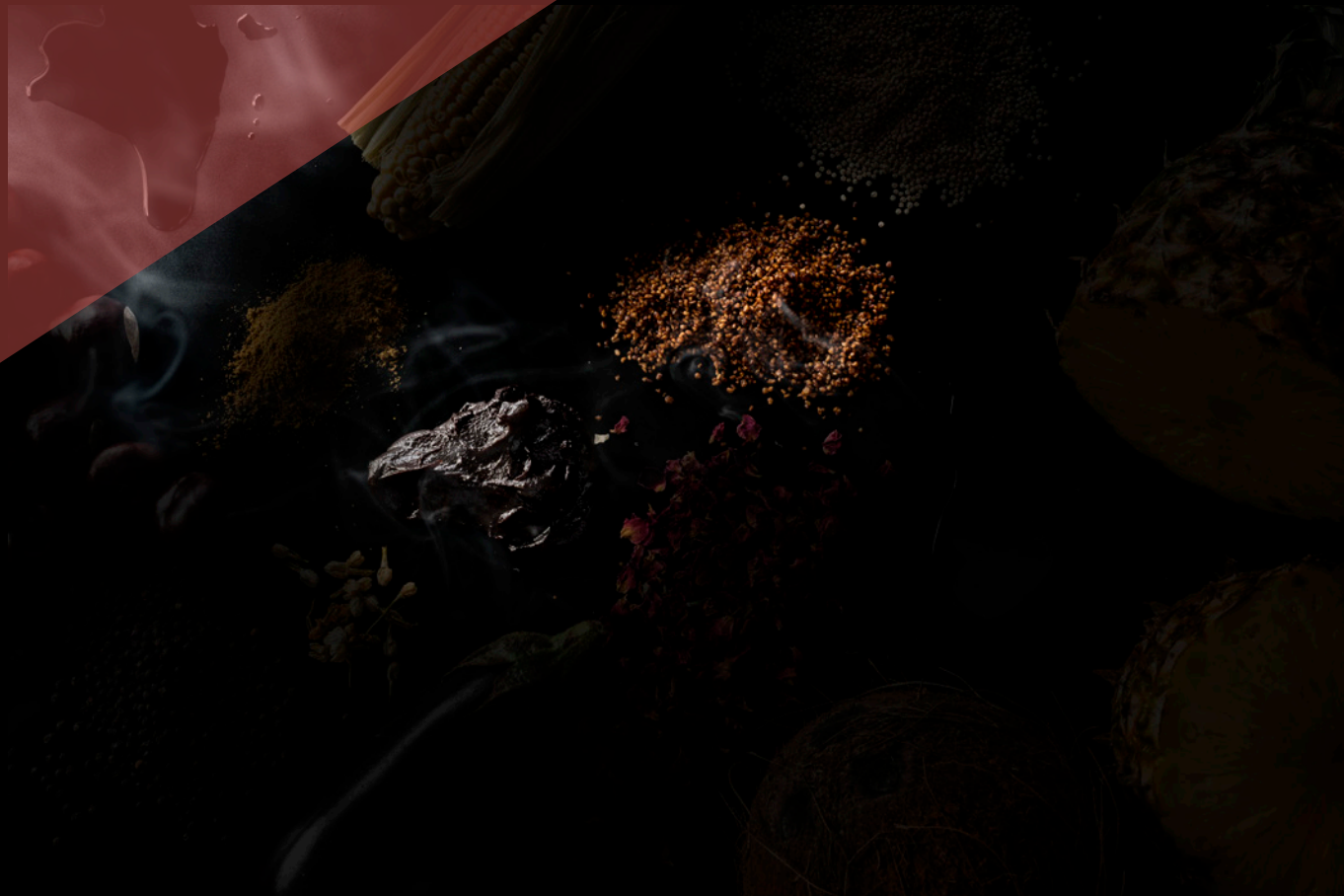


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Chartier Créateur d'Harmonies



**Ramon Morató**  
Creative Director Cacao Barry®

**Origin Ghana Milk chocolate (40% cocoa)**  
Final selection



# Red miso – smoked ganache – soba cha crunch praline

Ingredients for approx. 4 moulds of 40 units

## Aka dashi red miso filling

- 400 g Aka Dashi red miso
- 200 g glucose syrup (DE 60)

- 1.Mix the miso together with the glucose syrup.
- 2.Set aside.

## Smoked chocolate ganache with origine ghana milk chocolate

- 200 g whipping cream (35 % fat content)
- 170 g water
- 80 g invert sugar
- 70 g glucose syrup (DE 44)
- 110 g dextrose
- 3 g salt
- 710 g Origine Ghana milk couverture chocolate (40.5 % cocoa)
- 240 g Origine Ghana “smoked” milk couverture chocolate (40.5 % cocoa)\*
- 100 g cocoa butter

- 1.Dissolve the sugar and salt in the cream and water.
- 2.Pour the sugar-liquid mix over the smoked chocolate and cocoa butter.
- 3.Emulsify correctly and pipe.

\*The “smoked” chocolate has been obtained by smoking in cold system the couverture for 7 hours over pinewood.

## Hazelnut and soba-cha crunch praline

- 160 g Lactée Barry milk couverture chocolate (35 % cocoa)
- 160 g pure hazelnut paste
- 44 g anhydrous butter
- 10 g cocoa butter
- 2 g salt
- 146 g Soba-cha (toasted buckwheat)

- 1.Melt the couverture, the anhydrous butter and the cocoa butter.
- 2.Mix and incorporate the hazelnut paste, salt and cereal.
- 3.Temper at around 23°C and spread out on sheets, approximately 1 mm thick.
- 4.Once crystallised, cut into 2 cm diameter discs.

## Others

- Q.S. Origine Ghana milk couverture chocolate (40 % cocoa)
- Q.S. Grey paint (cocoa butter and grey colouring)
- Q.S. Black paint (cocoa butter and black colouring)
- Q.S. Dark chocolate paint (cocoa butter and red colouring)
- Q.S. Milk chocolate paint and orange colouring

## Assembly

- 1.Temper the grey paint and with an airbrush, spray droplets on the semi-sphere moulds.
- 2.Next, with the black colour paint, graduate the colour on one side, then repeat with the dark chocolate paint and finally, with the milk chocolate and orange colour paint.
- 3.Finally temper the milk chocolate and line the moulds.
- 4.Pipe a dot of red miso filling in the moulds.
- 5.Then fill up the mould to half way with the smoked milk chocolate truffle and then place a disc of Soba-cha praline. Finish by filling up with truffle.
- 6.Leave to crystallise for a few hours and close with Origine Ghana milk couverture chocolate (40 % cocoa).
- 7.Unmould and set aside.





**Origin Ghana Milk chocolate (40% cocoa)**

## The result

For the milk chocolate bonbon, we placed a dot of Aka Dashi red miso in the base of the bonbon. Then we cold-smoked our Ghana 40% chocolate with pine wood over 12 hours and then prepared a smoked ganache, which we alternated with a Soba Cha crisp and a salted hazelnut praliné.

## Tasting

Finally, for the milk chocolate bonbon, two liquids were paired (as an exception). Since this chocolate has chestnut, caramel and red fruit notes, in the molecular universe there are three dominant molecules of the chocolate: sotolon, lactone and pyrazine. This brought us to different ingredients and liquids that share the same underlying identity. Such is the case of the tremendous, penetrating and complex Conca de Barberà Chardonnay Milmanda 2012 from Torres, and the smoked and outstanding tequila Sierra Reposado. The result sought harmony between the Chardonnay wine and the smoked bonbon with miso and soba cha crisp to finally set off the tasting with the emphatic tequila.





### Who is François Chartier?

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Canadian François Chartier “Créateur d’harmonies” is regarded internationally as one of the pioneering researchers in terms of recipe creation and wine and food harmonies. The world-renowned wine critic Robert Parker says he is “Pure genius”, while Ferran Adrià and Juli Soler of elBulli Restaurant qualify him as “the number one expert on flavors”. Since winning the prestigious Best Sommelier in the World award in 1994 (Grand Prix Sopexa, Paris), François never ceased renewing himself and relentlessly pursuing his research. He published the first results of his research in “aromatic harmonies and sommellerie” – a discipline he created in 2004 – in his book *Taste Buds and Molecules: The Art and Science of Food, Wine and Flavour*. In 2010, the book was awarded Best Innovative Cookbook in the World, at the Gourmand World Cookbook Awards in Paris. More recently, in 2016, his recent book *L’Essentiel de Chartier – L’ABC des harmonies aromatiques a table et en cuisine* was also awarded Best in the World in the Innovative category in China.

Consultant for some of the greatest chefs in the world, including Ferran Adrià of the famous elBulli Restaurant, Chartier’s aromatic science never ceases to turn heads. In addition to his culinary endeavors, he has become a vintner and wine merchant. In October 2013, he began to sell his first wines in Canada, which he created in Europe with his colleagues including the Bordeaux oenologist Pascal Chatonnet. Today, Chartier produces over 25 different wine cuvées.

Finally, since 2014, the “créateur d’harmonies” has been working with the Montreal craft brewery Glutenberg to create the *Série Gastronomie*: an innovative range of gastronomic beers inspired and crafted using Chartier’s principles of aromatic harmonies. Several of the beers received awards at the World Beer Cup Awards in 2015 and 2016.

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#### Follow him on:

Twitter: @PapillesetM  
Facebook: Chartier Créateur d’Harmonies  
Instagram: francoischartier  
Web: [www.francoischartier.ca](http://www.francoischartier.ca)

### Who is Ramon Morató?

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Ramon was born in Manlleu, Barcelona into a family with no connections whatsoever to the world of confectionery. After completing his studies, Ramon Morató began his training in a number of different establishments.

He combined his studies with numerous courses offered at the school of the Barcelona Provincial Confectioners’ Association. During a period of stages at several of the best Spanish confectioners, he also went to important schools and technical centres such as ZDS Solingen, Germany and the Richard Conseil school in Lyon, France.

As the result of these years of work, and his ongoing desire for innovation, he published “RAMON MORATO Chocolate”. It won the Best Cookbook in the World on the subject of Chocolate in 2007 at the distinguished Gourmand World Cookbook Awards. More recently, in December 2016 he published the book “Four in One together” with chefs Raul Bernal, Josep Maria Ribé and Miquel Guarro, on the occasion of the celebration of the 20th anniversary of the Chocolate Academy in Barcelona.

The possibility of connecting with many professionals in different fields gave him ample knowledge of the craft and helped him to realise his passion for teaching, researching and creating products related with the world of confectionery.

In recent years, this has brought him to teach courses, seminars and conferences all over the world, as well as special endeavours such as a collaboration project with Harvard University through the Alicia Foundation.

Currently he is Creative Director for the Cacao Barry brand.

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#### Follow him on:

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