



美食实验

Gourmet Labs

为尽情发挥烹调上的创意，有厨师开始设立自己的实验室，在一个属于自己的天地里，把奇想通过科学的方法，变成餐桌上的佳肴。

TEXT 陈彬雁 & LIM HUI SIN

西班牙历史最悠久的米其林三星餐馆Arzak藏身圣塞瓦斯蒂安一幢19世纪乡村建筑。1897年开设的Arzak，是第一家获三星荣誉的巴斯克餐馆。elBulli出现前，Arzak占西班牙美食首席位置。

2000年，Arzak第三代掌门人、也是新巴斯克菜（nueva cocina vasca）奠基人之一及“分子料理之父”Ferran Adria的导师Juan Mari Arzak，落实了实验室大计。

对此，其女、也是“2012年Veuve Clicquot世界最佳女厨师”的Elena Arzak说：“设立实验室是必要的。我们在厨房烹饪时常有许多新的想法，但没有时间有系统地记录下来。”

Arzak实验室除了各种精密器材，最特殊的是它的食材库，脱水收藏1500多种来自世界各地的香料和食材，如米、草本植物等。有时一道菜不够完美，Elena总能在这里找到灵感。实验室每年跟着季节走，目标是创出60道新菜，而一切实验、构想和成果，均系统地记录在案。

在Arzak之后，西班牙米其林2星餐馆Mugaritz也在2003年开始实验室运作。这家餐馆有35名厨师，为鼓励创意，餐馆厨房和创意空间经特别设计。

创办人Andoni Aduriz说：“厨房卫生整洁，我们重视大自然，但也有一系列实用的现代高科技器材，如传统烹饪实验工具、新科技旋转蒸发器、精密水浴锅等。”

Aduriz被誉为“西班牙烹饪之未来”，他分享了近期最令他满意的实验成果：“那是关于食用气泡的实验。”

让生活更美好

曾踏入elBulli实验室，并称之为“改变人生的发现”，Elena说：“有些人觉得实验室冷冰冰的，事实上这里的一切都有可能让生活更美好。例如我们做过颜色测试，发现食物颜色将影响食客情绪，于是我们在构思菜色时，会对菜的颜色更敏感。”

两年前，餐馆对于多重感官餐饮体验的探

索，让Juan Mari Arzak和电子品牌飞利浦研发出“光盘”。过程中，Arzak设计出互动式餐具，如Lunar Eclipse碗、长碟Fama、盘子Bocado de Luz及大盘子Eye of the Beholder。在倒入菜肴时，这些餐具会产生反应并发出光芒，刺激感官。

Elena说，Arzak的烹饪哲学牢牢根植在前卫的思想中，借助尖端科技实现完美的烹饪理念。

Aduriz则表示，Mugaritz客人是来自世界各地的美食家，寻求的是非比寻常的餐饮体验，这推动他不断深入探索，让餐馆和“深具创意的竞争对手”有所不同。

他有一道Eatable Stones总是为人津津乐道。这道陶瓷马铃薯（ceramic potato）端给客人时，温度保持在45-50摄氏度，为客人制造一口咬下的快感。

“石子”做法极有趣，熬煮过的马铃薯加入乳糖、黑玉米汤及食用高岭土进行汤浴，之后用脱水器处理，令马铃薯外皮干、香而脆，里头则奶油般软滑。

Arzak实验室不但收集各式先进器材，也重视和餐饮有关的各种研究，Juan Mari Arzak设计的光碟就是一例。



2am:Lab

(Fusionpolis Place)投资实验室。

黄慧娴曾在世界顶级烹饪学校巴黎Le Cordon Bleu学厨，后加入顶尖的餐馆学艺，包括美国的Room4dessert、欧洲著名糕点屋Pierre Herme、Oriol Balaguer等。她与世界级名厨切磋，深谙实验的方法和重要性。

她在2007年创办2am:dessertbar，去年面临再开一家糕点屋或投资实验室的抉择。她最终决定走上实验之路，因为她需要“创意的空间”。

2000平方英尺的实验室极可能是亚洲创举。除了厨房占据大部分空间，巧克力房是一块宝地，这里的温度较低，适于储藏珍贵的食材。实验室造出一面“味之墙”，收集500多种食材，让前来实验室的人透过触摸、嗅觉等感官，得到启发。

创意如果没得分享，那整个过程不算完整，这些食材的基本资料都上载到2amlab.org，任人随意取用。

“味之墙”后头，宛如“山洞”的有机空

“很多时候，工作坊都是单向的输出，在2am:lab，我们强调的是经验的交流。不只是大师的教授，我们在合作之余也交换实验经验。”

——黄慧娴

在这之前，未有厨师在烹饪中使用高岭土，因此Aduriz无法从他处学习，成功都是自己实验出来的。事实上，他对实验的执著也是他最为人称颂的地方。为做好完美的水煮蛋，他投入超过两年研究食物凝结科学（The chemistry of coagulation）；为做好鹅肝，再用两年研究肝脏脱氧核糖核酸（即DNA）。

实验的路上，Mugaritz的另一项研究，测出天然胶质的潜力。原来鳕鱼皮萃取出来的胶质，可为酱料甚至果汁增添自然光泽和美妙的脂肪感，这实验结果或将改变牛油或脂肪在高级料理中的用量。

Aduriz明白个人能力有限，为拓展创意，他与著名的西班牙非盈利研究中心Azti-Tecnalia合作。这家营养学研究中心是创意研究领域的先锋，中心有8到10间实验室，每一间有专属研究团队。Aduriz看中中心拥有的创新技术，更重视与该中心的合作。

本地篇

在本地，厨师设立实验室几乎闻所未闻。倒是杰出的2am:dessertbar创办人黄慧娴（Janice Wong）走在其他厨师之前，在启汇坊

间，是她的工作室，这里是所有糕点、菜肴、技巧、想法滋长的温床。其余空间拟作餐饮用途，或主办烹饪课及私人晚宴。

10月初，黄慧娴在这里办了几场“熊本晚宴”，晚宴食材都是黄慧娴从日本熊本新鲜运回来的，她说：“我们受邀到熊本进行为期4天的食材之旅，有机会出海捕金枪鱼、参观味噌及清酒厂、番茄园、姜园等，在那里深入了解食材的种植和培育，与当地农人交换心得，所获得的一切灵感，转化成桌上美食，让有兴趣的人进一步发掘。”

她也将4天的熊本体验结集成一本书《熊本》，分享当地所见所闻，以及依据当地食材发展出来的食谱。这本书印制500本，由日本熊本县发行。

她的实验室每年的目标是邀请7名名厨，为餐饮业内人士开办针对性烹饪工作坊。2am:lab邀请到的第一名客席厨师是糕点界的金童，也是美国10大糕点师傅之一的Will Goldfarb。

Goldfarb在2am:lab举办的工作坊为期3天，每天长达9小时，最多只能有6人参加。“很多时候，工作坊都是单向的输出，在2am:lab，我们强调的是经验的交流。不只是大师的教授，我们在合作之余也交换实验经验。”

去年12月，2am:lab邀来西班牙的巧克力大师Mauricio Montiel主讲。配合上述客席厨师工作坊，2am:lab主办精致私人晚宴，献上工作坊研究出来的菜。私人晚宴仅接受订位，每次20人，每人收费约140元。

黄慧娴说：“我喜欢实验室带来的一切可能，包括我们举办的工作坊、出的书。这一般来说不能带来经济效益，但是有意义的事。借着分享，让每一位厨师或公众品味美丽成果，进而被启发，这给我莫大满足感。”



Mugaritz 实验室

First, it was the farm-to-table trend in the food scene, where chefs grow their own ingredients or buy them from friends, not faceless suppliers. Now, say hello to the lab-to-table phenomenon.

The trend sounds as cold as the farm trend sounds warm and fuzzy. But the people behind this movement say they have our palates at heart when they bring science into the kitchen.

At Arzak in Spain, things are brewing in the restaurant's 19th century farmhouse that could well be Frankenstein's lab.

Sitting above the restaurant is an area of 70 sq m where the most unlikely of kitchen equipment are laid out: carbon dioxide, liquid nitrogen, distilling equipment, high-precision thermometers, Gastrovac sous vide equipment, and Rowzer professional frozen processor and emulsifier.

This clinical lab was set up in 2000, when Juan Mari Arzak, the third-generation owner of the first restaurant in San Sebastian to earn three Michelin stars, decided he needed more advanced equipment to further the nueva cocina vasca (new Basque cuisine) movement which he helped pioneer.

His daughter Elena Arzak, who has been named Veuve Clicquot World's Best Female Chef this year, says: "It was necessary to start the lab because there were a lot of ideas in the kitchen but we had no systematic way to document them."

The lab changes with the seasons and its objective is to create 60 new dishes each year to be incorporated into the restaurant's menu. And like any respectable lab, all the experiments, ideas, and results are documented and archived.

Put On The Lab Coat

Science is playing an increasing role in the kitchen as chefs swap their aprons for lab coats.

Arzak's philosophy of food is firmly rooted in the avant garde, which extends naturally to using cutting-edge technology in cooking, says Elena Arzak. For instance, she studied how the colour of food can affect the mood of diners and worked the findings into the restaurant's recipes.

Two years ago, in another study involving multi-sensorial gastronomy, Juan Mari Arzak worked with the electronics brand Philips to develop "light plates". These interactive tableware, such as the Lunar Eclipse bowl, emit light according to the temperature of the food placed on them and movements to stimulate the senses.

Following in Arzak's footsteps, another Spanish restaurant, the two-starred Mugaritz, started up its lab with both high-tech and conventional equipment in 2003. Andoni Audriz, the restaurant founder, has been called "the future of Spanish gastronomy".

One of his lab's better-known results is what he calls "ceramic potatoes". When the dish is served, the potato - crispy on the outside - retains a temperature of 45 to 50 deg C so that when the diner bites into it, it crackles.

The dish is prepared by first boiling the potatoes, which are then put in lactose, black corn syrup and edible kaolin clay, then bathed in hot water before



Elena Arzak (Photo: Mikel Alonso)



Janice Wong (Photo: 唐家鸿)



Andoni Audriz

being put into a dryer. No one else has used kaolin clay in cooking, so Audriz had to figure it out through trial and error. From all these steps comes a potato that is crispy on the outside and buttery soft on the inside.

His ambition and persistence are also admirable: To produce the perfect poached egg, he spent more than two years researching the chemistry of coagulation; to prepare the perfect foie gras, he spent

another two years on DNA research.

He also collaborates with a non-profit research centre in Spain, AZTI-Tecnalia, which is a leader in nutritional food science. One of his current projects involves creating diets for patients suffering from different phases of cancer as well as products that could prevent the illness. Together, they produce a magazine, IJGFS (International Journal of Gastronomy and Food Science).

In all these pursuits, the chefs are mindful of their original intent - "to cook better and better every day", says Audriz. Elena Arzak agrees. "We are chefs even in the lab and, even if we follow the most technical stuff, we still rely on our sense of taste, so that the food is not cold."

Lab SG

In Singapore, Janice Wong, the founder of 2am:dessertbar, has set up a laboratory at Fusionpolis Place.

From working at top restaurants such as Arzak, Room4dessert in the United States, European patisseries Pierre Herme and Oriol Balaguer, the Cordon Bleu alumni gained a fine appreciation for the importance of experimentation and laboratories.

"The two weeks I spent at Arzak were the most unforgettable and the idea to set up a lab came about at the time," Wong recalls.

She set up 2am:dessertbar in 2007 and was faced with the choice of opening a confectionery or investing in a lab last year. She chose the road less travelled because she needed a "creative space".

The 2,000 sq ft laboratory, called 2am:lab, could be the first of its kind in Asia. Aside from the kitchen, the chocolate room is a treasure trove with temperatures set suitably low to preserve the fine ingredients within. A flavour wall in the lab features some 500 ingredients that visitors can touch and smell. Sharing is a vital component of creativity, she feels, and basic information on all the ingredients featured on the wall can be found on 2amlab.org.

Behind the flavour wall, a cave-like space houses Wong's workshop - this also her hotbed of innovations for desserts, dishes, techniques, and ideas.

To Wong, the lab is less of a greenhouse for science than a genial host of ideas.

In early October, she hosted a series of Kumamoto dinners there, so named because all the ingredients for dinner were from the Japanese region.

She has collated her experiences over those four days into a book titled Kumamoto, which includes recipes formulated with the ingredients found there. It will be launched by the Kumamoto Prefecture.

The laboratory also aims to bring in seven chefs each year to hold workshops for professionals in the dining industry. The first guest chef is the current darling of desserts, Will Goldfarb, who has been named one of the top 10 dessert chefs in the US.

"I like all the possibilities the lab brings, including organising workshops, publishing a book - activities that usually don't generate profits, but are meaningful."