

Promoting Flavor Research amongst PhD Students in Europe Academic Year 2015/16

PROJECT ROAD MAP

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Project sponsored by

BIORIGIN

DSM FOOD SPECIALTIES

GIVAUDAN

INTERNATIONAL FLAVORS & FRAGRANCES

KERRY INGREDIENTS & FLAVOURS

LESAFFRE INTERNATIONAL

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1. BACKGROUND

This document provides the planned programme of the industry-sponsored project to promote flavor research amongst PhD students across European universities and institutes.

Many of the major, global players in flavor and flavor ingredient production are located in Europe where they make a significant contribution to national economies through their production and R&D activities. Flavor and flavor ingredient production, and flavor R&D, also involve many smaller companies which contribute specific expertise and products to the larger companies. There are also many large and small European companies that use flavor technology to develop their own unique food and beverage products. The economic value of these activities to Europe is difficult to estimate accurately but there is a very strong socio-economic case for retaining and supporting these activities within Europe.

Given the global nature of businesses, there is always pressure to consider relocating to alternative sites in the USA or the Far East for marketing or for financial advantage. In addition, fast-developing economies such as China and India are investing huge sums in basic R&D activities in order to gain economic advantage over the West. Given their low cost-base, these economies are currently trying to woo basic research away from the West. One factor keeping the companies in Europe is the availability of well-trained personnel and a wide variety of Universities and Research Institutes that can supply research facilities and specialist advice and consultancy to the flavor companies. These Universities and Institutes are already well-connected through various informal mechanisms (e.g. COST actions, triennial scientific meetings such as the Weurman and Wartburg). In order to compete effectively in flavor R&D against established countries such as the US and Japan, together with fast-rising giants such as China and India, it is felt that Europe should show a strong, unified and synergistic face in the future.

Following five highly successful programmes, a unique and focused industry consortium of 8 companies are renewing their support to encourage PhD students in order to help expand flavor research competence in Europe. The project is organized by Giract (www.giract.com) and is co-ordinated by Prof. Andy Taylor from the University of Nottingham.

2. PURPOSE AND SCOPE

To promote innovative flavor research amongst PhD candidates across European universities and research institutes. The project aims at two different groups of PhD students:

- **Group 1:** those who are about to complete and hence will soon be examining opportunities for employment
- **Group 2:** those who are about to commence their PhD studies

This is translated into the following sub-objectives:

- **Publicise the attractions of flavor research** so as to pull high calibre students into appropriate PhD courses and then into industry
- For **Group 1**:
 - Solicit and evaluate innovative flavor research projects amongst these students
 - Provide the Annual Savory Flavor Conference, organised each spring in Geneva, as a platform for the winning student to present his/her work to 'potential employers'
- For **Group 2**:
 - Award bursaries to a selected number of students who are planning to commence their PhD studies in flavors

3. PROJECT DETAILS

Group 1: Publicising career opportunities in the flavor industry

The plan is to contact a number of (more than 100) European universities and institutes with strong flavor science faculties and encourage PhD students to participate in an annual competition for 'best thesis' in the flavor area. Innovation will be the key criterion used in order to judge the theses submitted for evaluation. **An award of EUR 5000 will be given to the author of the best thesis.**

Selection of best theses

The view from industry is that there is an ongoing need for well-trained people. One of the ways of attaining this objective is to encourage the students to work towards high-quality and innovative theses.

A Steering Committee, led by Prof. Andy Taylor, will evaluate the theses received and select the best one. Giract will invite the winning candidate to the Savory Flavor Conference of the following year where the student will receive his/her award.

Group 2: Encouraging students to study flavor research

There is a wider need to attract chemists, biochemists and other scientists to undertake PhDs in flavor, not just those already studying for a food science/chemistry/technology degree who know something about flavor through their BSc/Masters studies.

One way of carrying out the above is to give bursaries to students who are starting flavor PhDs to encourage them into the flavor area and to show them there is industrial interest in them (as future employees) as industry is sponsoring these awards. **A bursary of EUR 3000 will be awarded to 6 selected students**, which is expected to attract students to study flavor at PhD level. PhD projects and students will be assessed to ensure both meet some basic criteria.

The rules and regulations of these two sub-programmes are detailed on a special web page for this project (www.giract.com/flavor-research-programme.php).

Universities/institutes are being encouraged to announce the programme on their websites to attract students to flavor studies. Similarly, sponsoring companies are also requested to announce the programme on their respective websites. Selected trade press, including internet-based, will be approached for news coverage of this programme.

Administration

It has been decided that Giract, an organisation already involved in training and information for the flavor industry (see www.giract.com), will handle all the administrative aspects of this project. The aim is to make it easy for these activities to take place and provide a strong supporting administrative system. Specific duties of Giract would include handling the communication to the universities/institutes, contacting companies for financial contributions, submitting proposals to the EU for funding and organising visits to publicise flavor research, setting up and co-ordinating with Prof. Andy Taylor, announcing results, reimbursing the bursary amounts to the 6 selected first year PhD students based on research-related invoices counter-signed by the respective professors, inviting the best thesis winner to the following Savory Flavor Conference, informing sponsoring companies, holding an evaluation meeting for the sponsoring companies on the day of the Savory Flavor Conference, etc. Prof. Andy Taylor of the University of Nottingham will be responsible for the evaluation of the theses and will help to finalise contacts with the universities/institutes, while aspects such as copies of the presentations, agenda, etc. would be the responsibility of Giract. Any unspent bursary amount for selected Group 2 students within the project deadline will be handed over to the department of the respective university/institute.

The 8 sponsoring companies are:

- BIORIGIN
- DSM FOOD SPECIALTIES
- GIVAUDAN
- INTERNATIONAL FLAVORS & FRAGRANCES INC.
- KERRY INGREDIENTS & FLAVOURS
- LESAFFRE INTERNATIONAL
- MARS
- NESTLE

4. TIME-LINE

The dead-lines for the various activities are listed below:

Group 1 (best thesis award):

- October 31, 2015 – Application by candidates
- December 15, 2015 – Submission of relevant documents for evaluation
- End January 2016 – Selection to be announced by Steering Committee
- March 17/18, 2016 – Project evaluation meeting with all sponsoring companies in Geneva, Switzerland and presentation of winning candidate

Group 2 (6 bursaries to first year PhD students):

- October 31, 2015 – Application and submission of relevant documents
- Beginning December 2015 – complete evaluation of first year candidates to select the 6 candidates for the bursary awards
- December 20, 2015 – announce results
- January–December 2016: period during which the 6 successful first year PhD students will be reimbursed research-related expenses against counter-signed invoices. Any unspent bursary amount within this project deadline will be handed over to the department of the respective university/institute

5. CRITERIA FOR SELECTION

5.1. GROUP 1: BEST THESIS

Criteria for Best Thesis

Criteria	Description
Eligibility	Any flavor related project that has led to the submission of a PhD in 2015
Thesis	<p>The thesis should clearly explain the starting hypotheses or the goals and aims of the work</p> <p>Clarity of expression and effective communication of results is a key aspect in assessing the thesis</p> <p>Appropriate data analysis should be evident</p> <p>Clear abstracts and summaries are expected</p> <p>Clear Figures and Tables are expected</p>
Novelty	All PhD studies should contain a degree of novelty and this will be part of the judging criteria. Novelty may be a new method for studying flavor or new findings or some other aspect of the PhD study
Results	The results should show good experimental design and robust methodology e.g. adequate replication and sampling to support the conclusions
Publications	Some theses are composed of published papers, others are more narrative in style. Thus, the judging criteria will take these different styles into consideration and publication of the thesis results will <u>not</u> be an essential criterion for judging
Language	English
Application and Submission	Evidence of enrolment and thesis submission in 2015 at the university/ institute should be provided by the student. All documents should be countersigned by the Professor concerned

5.2. GROUP 2: FIRST YEAR STUDENTS

Criteria for First year PhD Applicants

Criteria	Description
Eligibility	Projects must be designed for the award of PhD or equivalent Projects must have started or will start in academic year 2015/2016
Student	Can be from any scientific background but one aim of the bursaries is to attract people who have not studied Food Chemistry, Food Science or Food Technology to study food flavors
Novelty	A brief summary of the work should clearly state the background to the project, the hypotheses to be tested and explain the novelty of the work and its potential to further our understanding of flavor science
Interdisciplinary	Projects that involve training the student in more than one scientific discipline will be favoured.
Experimental design and data analysis	All projects should describe appropriate methodology for experimental design and data analysis.
Language	English
Application	All documents should be countersigned by the Professor concerned. Evidence of enrolment in the academic year 2015/2016 at the university/institute should accompany the documents
Bursary	The bursary will be used to give the student an extra incentive and make projects attractive to high calibre students. The bursary of EUR 3000 will be awarded to the 6 selected first year PhD students during 2016, based on research-related invoices counter-signed by the respective professors. Invoices can relate to expenses such as purchases of equipment, databases, participation in conferences, visits to laboratories, etc. Any unused part of the bursary will be handed over to the respective department of the university/institute.