

EVALUATION REPORT OF THE UNIT  
SVQV - Santé de la Vigne et Qualité du Vin

UNDER THE SUPERVISION OF THE  
FOLLOWING ESTABLISHMENTS AND  
ORGANISMS:

Institut national de recherche pour l'agriculture,  
l'alimentation et l'environnement – INRAE

Université de Strasbourg

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**EVALUATION CAMPAIGN 2022-2023**  
GROUP C

Report published on April, 17 2023



In the name of the expert committee<sup>1</sup> :

Pedro Puigdomenech Rosell, Chairman of the committee

For the Hcéres<sup>2</sup> :

Thierry Coulhon, President

Under the decree n° 2021-1536 of 29th November 2021:

<sup>1</sup> The evaluation reports "are signed by the chairperson of the expert committee". (Article 11, paragraph 2);

<sup>2</sup> The president of the Hcéres "countersigns the evaluation reports established by the expert committee and signed by their chairperson." (Article 8, paragraph 5).

This report is the result of the unit's evaluation by the expert committee, the composition of which is specified below. The appreciations it contains are the expression of the independent and collegial deliberation of this committee. The numbers in this report are the certified exact data extracted from the deposited files by the supervising body on behalf of the unit.

## MEMBERS OF THE EXPERT COMMITTEE

**Chairperson:**

Mr Pedro Puigdomenech Rosell, Professor Emeritus, Spain

**Experts:**

Mr Stéphane Bernillon, INRAE, Villenave-d'Ornon (supporting personnel)

Mr Jean-Luc Gallois, INRAE, Avignon

Mr Philippe Gallusci, Université de Bordeaux (representative of CNU)

Mr Michele Morgante, University of Udine, Italy

## HCÉRES REPRESENTATIVE

Mr Serge Delrot

## CHARACTERISATION OF THE UNIT

- Name: Santé de la Vigne et Qualité du Vin
- Acronym: SVQV
- Label and number: UMR 1131
- Number of teams: 3
- Composition of the executive team: Ms Véronique Brault

## SCIENTIFIC PANELS OF THE UNIT

SVE2 Productions végétales et animales (agronomie), biologie végétale et animale, biotechnologie et ingénierie des biosystèmes.

## THEMES OF THE UNIT

The unit studies the interactions between grapevines and their fungal and viral pathogens and also investigates the virus-vector interactions. SVQV uses genetic tools to develop new grapevine varieties resistant to fungal diseases, analyse metabolic compounds related to wine quality and viral infection in grapevine and study the mechanisms of infection of viruses, including the involvement of aphids. The general objectives of the unit aim to provide farmers of the wine sector with materials and information helping them to deal with the environmental regulations approved in Europe and the effects of climate change. The unit also works on crops other than grapevine, in particular sugar beet, to respond to agronomic and societal issues related to the neonicotinoids ban since 2018. The SVQV Unit is structured in three teams that study genetics and breeding of grapevine (team GAV), the mechanisms of viral infection in grapevine and sugar beet (team Vive) and secondary metabolism of grapevine (team MSV).

## HISTORIC AND GEOGRAPHICAL LOCATION OF THE UNIT

The Joint Research Unit on Vine Health and Wine Quality, UMR1131-SVQV, was created in 2005 in a collaboration between INRA and the University of Strasbourg and it is located in the INRAE Centre Grand Est Colmar. Although a merge of the SVQV Unit with the LVBE (Laboratory Vine, Biotechnology and Environment) of the University of Upper Alsace (UHA) was envisaged in 2008, this idea was abandoned in 2011. The SVQV unit currently depends on two INRAE divisions (Plant Biology and Breeding, and Plant Health and Environment), and on the University of Strasbourg (Unistra). The unit also hosts a few staff belonging to the University of Haute- Alsace (UHA).

## RESEARCH ENVIRONMENT OF THE UNIT

The main local interactions occur with the UEAV unit (experimental unit on agronomy and viticulture) that provide most of the plant material used by SVQV, thanks to 2 000 m<sup>2</sup> of greenhouses, and 12 ha experimental vineyards. SVQV also has a long standing collaboration with the CNRS-IBMP in Strasbourg, because of the common pathosystems studied (nepoviruses and poleroviruses) and of the complementarity of metabolomic equipments present on both sites. The unit has also created a joint laboratory with a national entity, the Institut Français de la Vigne et du Vin (IFV). This facility is dedicated to the high throughput characterization of grapevine viruses for the purpose of research and improvement of grapevine health certification.

## UNIT WORKFORCE: in physical persons at 31/12/2021

<b>Permanent personnel in active employment</b>	
Professors and associate professors	1
Lecturer and associate lecturer	3
Senior scientist (Directeur de recherche, DR) and associate	6
Scientist (Chargé de recherche, CR) and associate	5
Other scientists (Chercheurs des EPIC et autres organismes, fondations ou entreprises privées)	0
Research supporting personnel (PAR)	40
<b>Subtotal permanent personnel in active employment</b>	<b>55</b>

Non-permanent teacher-researchers, researchers and associates	0
Non-permanent research supporting personnel (PAR)	7
Post-docs	2
PhD Students	7
<b>Subtotal non-permanent personnel</b>	<b>16</b>
<b>Total</b>	<b>71</b>

DISTRIBUTION OF THE UNIT'S PERMANENTS BY EMPLOYER: NON-TUTORSHIP EMPLOYERS ARE GROUPED UNDER THE HEADING "OTHERS".

Employer	EC	C	PAR
Inrae	0	12	47
Université de Strasbourg	2	0	0
Université de Haute-Alsace	2	0	0
<b>Total</b>	<b>4</b>	<b>12</b>	<b>47</b>

## UNIT BUDGET

Recurrent budget excluding wage bill allocated by parent institutions (total over 6 years)	1 550
Own resources obtained from regional calls for projects (total over 6 years of sums obtained from AAP idex, i-site, CPER, territorial authorities, etc.)	1 490
Own resources obtained from national calls for projects (total over 6 years of sums obtained on AAP ONR, PIA, ANR, FRM, INCa, etc.)	3 487
Own resources obtained from international call for projects (total over 6 years of sums obtained)	127
Own resources issued from the valorisation, transfer and industrial collaboration (total over 6 years of sums obtained through contracts, patents, service activities, services, etc.)	0
<b>Total in euros (k€)</b>	<b>6 654</b>

## GLOBAL ASSESSMENT

The SVQV Unit is run by two organisations, INRAE and University of Strasbourg that provide salaries for its permanent staff of scientists, technicians and managers. The total number of 55 permanent employees is important and it is in contrast with the low number of postdocs. The staff has been renewed in recent years but it is presently ageing and it will need the support of the funding organisations to maintain its present level. The equipment of the unit is excellent. It has been continuously upgraded in particular in informatics and it is structured in platforms that essentially provide service to internal groups with some service to external users, essentially industries of the wine sector.

The scientific production of the unit is good and the publications of the highest reputation journals are provided through external collaborations. One of the important traits of the unit is its excellent relations to the private sector. The teams have clearly identified the need of the sector in providing new varieties resistant to fungal diseases that are expected to be increasingly planted in the near future. The expertise of the unit in viral infections and secondary metabolism is also valued by the wine industry. However, the unit will gain in increasing the internationalisation of its activities that it is presently at a fair level. It will also gain in trying to attract students and postdocs. In this way increasing the staff having HDRs will be advisable. At the same time the scientific life of the unit is mainly run at team level and it will gain in organising more general seminars as well as inviting international speakers.

## DETAILED EVALUATION OF THE UNIT

### A - CONSIDERATION OF THE RECOMMENDATIONS IN THE PREVIOUS REPORT

According to the self-evaluation document prepared by the unit some of the recommendations have been followed: (a) the renewal of the staff by the funding organisations: in fact the number of staff has increased during the period. (b) Investment has been made in a visioconference equipment and in informatics. However, other recommendations have been only partially followed. This is the case of the internationalisation of the unit that remains limited, the low level of scientific animation at the level of the unit and a better identification of the main scientific objectives of the MSV team that continue to evolve.

### B – EVALUATION AREAS

#### EVALUATION AREA 1: PROFILE, RESOURCES AND ORGANISATION OF THE UNIT

##### Assessment on the unit's resources

The overall assessment on this criterion is very good. The staff is numerous, competent and ensures a good functionality of the common tools. The number of scientists is increasing significantly (CR, Pr, MCF). The financial resources, coming mainly from competitive projects, are adapted to the scientific objectives. The unit has set up common technical resources based on cutting edge equipment. However, the age distribution of the technical staff and scientists indicates that several noteworthy retirements are coming, which may lead to a loss of skills in the next years. There are heterogeneities in the way the technical staff operate, depending on the team to which they belong. The level of European funding is low.

##### Assessment on the scientific objectives of the unit

The overall assessment on this criterion is very good. Overall, the unit's objectives are in line with the objectives of the Plant Biology and Breeding, and Plant Health and Environment Divisions of INRAE that are the main supervising bodies of the unit. They aim at contributing to the agroecological transition and at reducing pesticides use in agriculture. However, the unit objectives result from the addition of the scientific objectives of the teams that sometimes overlap, more specifically between GAV and MSV. There is no specific strategy defined at the unit level, which would allow creating synergy between the teams. In addition, a unit project could also include ambitious objectives to develop gene editing technology as a complementary approach to grape breeding, which is so far not considered in the unit.

##### Assessment on the functioning of the unit

The functioning of the unit is good. It is based on the monthly meeting of a steering committee and a scientific seminar twice a month. However, both scientific coordination and animation remain insufficient at the unit level. The level of collaboration, more particularly international collaborations, and the attractiveness of the unit to foreign researchers are not optimal.

*1/ The unit has resources that are suited to its activity profile and research environment.*

#### Strengths and possibilities linked to the context

The unit has important human resources composed of 18 INRAE researchers (6 IR/6 CR/6 DR) and 5 teacher-researchers (1 PR/4 MCF) belonging to the University of Strasbourg and the University of Haute Alsace. Scientists

are supported by 39 technical staff (4 AJT/16 T/7 AI/12 IE) that contribute to the general functioning of the laboratory in addition to their involvement in research projects. The unit's working force has increased over the last contract (+7) demonstrating its attractiveness. Although limited, there is also an increasing number of teacher-researchers (+ 1 Pr, + 1 MCF) which has resulted in an increase in teaching activities.

Financial resources vary between 800 and 1 400 k€ between years (mean = 1 110 k€) and are essentially provided by contract resources which represent 77% of the total budget (not including permanent staff salaries costs). The number of contracts obtained is very important (85 over the period at the European (5), national (11 from ANR) and regional (13) levels. Many contracts (43) with the wine industry and funding partners (France Agrimer, International Wine Councils of different regions, Martell), have also been obtained. Noteworthy, 85% of these projects (ANR, industrial contracts) are coordinated by a researcher of the unit. Financial management is performed at the team level. The unit recently benefited from a PPR PIA project (Cultiver et Protéger Autrement) as participant.

15% of contractual and 20% of INRAE support are pooled to ensure the maintenance of common equipment and for common services.

The 39 technical staff provide a strong support to the unit functioning. They participate in numerous collective tasks, and some of them are associated with scientists and research engineers to manage the functioning of platforms and technical core facilities, which essentially serves for internal projects except for VEGOIA. VEGOIA has been recognized as a platform by UniSTRA and is also open to external collaboration (20% of total time).

The 5 technical plateau/platforms (Phenotyping of grapevine disease, metabolomics, genome analysis, microscopy, breeding of aphids), managed at the team level, provide all the technical support needed to perform the scientific activities of the unit. SVQV has also developed efficient bioinformatics tools for sequencing analyses, and has several unique collections in France (grapevine genotypes, rearing of nematodes and of aphids). Altogether, the unit has set up a wide range of high quality tools to reach its scientific objectives. The interaction with the agronomy experimental unit (UEAV) is an important added value to implement experiments including the fine phenotyping of plants.

## Weaknesses and risks linked to the context

The different technical plateau/platforms are managed by a limited number of technical staff and scientists. Depending on the plateau, the management team either performs the experiments or trains people who need to use it. There is no general functional model at the unit level to manage these plateaux. Their financial model is not explained, nor the way people are trained to be able to use them. There is also no global strategy at the unit level for the training of people, and it is unclear how the staff increases and develops its competency.

The numerous resources require a lot of manpower that could impact on the ability of the unit to achieve its scientific objectives.

The distribution of the working load for common tasks between staff is not clear and the way tasks are attributed to people (voluntary basis uniquely) can be risky and lead to overload of some staff.

The unit does not coordinate a project funded by a European competitive call.

*2/ The unit has set itself scientific objectives, including the forward-looking aspect of its policy.*

## Strengths and possibilities linked to the context

The unit missions are related to the general objective of pesticides reduction and the development of alternatives to chemicals. The unit's scientific objectives are defined by its supervising bodies, essentially INRAE, and concern main societal issues: (1) Agro ecological transition taking into account economical and societal issues; (2) progress toward pesticide free agriculture.

These global objectives, are developed using two main models, mainly grapevine, and sugar beet as a secondary system, due to the demand of the agricultural sector.

The objectives are split between the three teams of the units (1) GAV teams aims at developing disease resistant varieties and understanding molecular interactions grapevine and fungi pathogens, (2) MSV is focusing on secondary metabolism and berry and wine quality, (3) ViVe studies interactions between the plant (grapevine and sugar beet) with viruses and their vectors.

The unit has developed several collaborations with different other INRAE units (Bordeaux Montpellier, Nice) working on complementary projects, some of them being long standing.

## Weaknesses and risks linked to the context

There is no specific project defined at the level of the unit. The projects are team-centred and the links between the different teams, which should be defined in the frame of the scientific policy of the unit, are not detailed. Links between teams are established through specific projects only.

There is a very important number of financed projects (85), which may lead to thematic dispersion, as the general objectives are very large and can be reached in many different ways. A strategic view of how these objectives are reached at the unit level, and organised between teams is missing.

*3/ The functioning of the unit complies with the regulations on human resources management, safety, the environment and the protection of scientific assets.*

Strengths and possibilities linked to the context

The unit complies to the general rules established at the INRAE level for eventual discrimination. There are more men than women for researcher and teacher/researcher (60% men/40% women), and also a majority of men in the unit's board assisting the director for decisions. On the contrary at the unit level there is a large excess of women, because women are by far the majority for technicians, and engineers, and non-permanent staff

The functioning of the unit is inclusive with scientific seminars organised every other week for all the staff.

In the area of health and safety, the unit has 6 prevention officers with tasks set out in a mission statement. An effort is made to raise the awareness of permanent or fixed-term staff to good laboratory practices and sustainable development, which has led to the implementation of numerous actions (individual paper recycling bins, rules for limiting heat loss, encouragement to use bicycles, etc.).

The unit takes advantage of the centre's infrastructure for data management, with in particular a storage space dedicated to each agent and team. An engineer is in charge of the data management plan and the implementation of data backup procedures. The unit is involved in an European programme (Integrape) that is involved in the implementation of FAIR data. The unit coordinates the Vitis Explorer project at the national level for the implementation of FAIR data in relation to vine phenotyping. Genomic and transcriptomic data are submitted to ENA (European Nucleotide Archive) or SRA (Sequence Read Archive) as indicated in the COST Integrape Action.

Weaknesses and risks linked to the context

The scientific strategy of the unit is discussed by the scientific committee which is composed of the director, deputy director, representative of the University of Strasbourg and team leaders. There is no meeting organised on a regular basis with all scientists to discuss the scientific choices at the unit level.

The unit has no training strategy to improve the skills of the technical staff. It is not clear whether it encourages the development of its staff or whether this is a matter of individual initiative, possibly based on the needs of the team in which the staff is involved.

EVALUATION AREA 2: ATTRACTIVENESS

Assessment on the attractiveness of the unit

The attractiveness of the unit is good. SVQV is a well-recognized research unit in Europe for the studies on grapevine and its diseases and for the impact of metabolism on wine quality. This is especially true for the French wine sector but at a lesser extent for other scientific groups working in plant biology. The unit has a quite substantial budget and an excellent infrastructure. It is a small unit whose scientific and technical staff is ageing. Staff recruitment in recent years has been continued by INRAE, but the unit trains a low number of doctoral students. The participation of the University of Strasbourg and the University of Haute Alsace is limited.

*1/ The unit has an attractive scientific reputation and contributes to the construction of the European research area.*

Strengths and possibilities linked to the context

The unit is well recognised in the field of grapevine biology in Europe as shown by the invitations to conferences (14), and participations as board members in expertise activities. It has a number of grants essentially from French agencies (11 grants from ANR). It also has a continued link with the French wine sector (over 40 contracts) that funds some of its activities.

The unit collaborates in European activities (participation to a KBBE programme, participation and representative of France in the board of COST action Integrape)/ It has organised a meeting in the framework of an Interreg programme.



## Weaknesses and risks linked to the context

Grapevine biology is a very specialised field of research. That has rarely an impact outside this specific scientific domain. The unit has a relatively low relation with other French and European groups working in the same field. Only one to three researchers from the same team account for a significant portion of the unit scientific reputation.

*2/ The unit is attractive for the quality of its staff hosting policy.*

## Strengths and possibilities linked to the context

The reputation and the infrastructure of the units makes it attractive. It has succeeded in filling the positions provided by INRAE for scientific staff. As for everyone, the Covid context makes it difficult to judge on the hosting of foreign researchers in the last 5 years.

## Weaknesses and risks linked to the context

SVQV currently hosts a low number of predoctoral students (7) and postdocs (0 when the self-evaluation document was prepared). The relations of the unit with other research units working in the field or in related subjects is limited.

*3/ The unit is attractive because of the recognition gained through its success in competitive calls for projects.*

## Strengths and possibilities linked to the context

The unit has an excellent success in gaining French grants (11 ANR contracts, 8 of them coordinated by the unit) and it has a very good contact with the French wine sector (over 40 contracts, almost all of them coordinated by the unit). Its consolidated budget and its technical staff is substantial, allowing it to fund positions and heavy equipment.

## Weaknesses and risks linked to the context

The unit lacks significant European funding. It has a limited collaboration with other units working in grapevine and wine in France such as those in Montpellier or Bordeaux.

*4/ The unit is attractive for the quality of its major equipment and technological skills.*

## Strengths and possibilities linked to the context

The unit has invested in cutting-edge equipment related to phenotyping and metabolic analysis. It has a well-recognised expertise in grapevine pathology. SVQV has made an important effort in acquiring the necessary knowledge in bioinformatics. The unit has a high technical staff/ scientists ratio.

## Weaknesses and risks linked to the context

The unit has an ageing human resource structure.

## EVALUATION AREA 3: SCIENTIFIC PRODUCTION

### Assessment on the scientific production of the unit

The publication output of the unit is considered on average from good to very good both in terms of quantity as well as in terms of quality. Some publications are of excellent level but they often do not involve unit members as leading authors. More attention should be given to the publication policy in terms of choice of journals, particularly in relation to open access journals that have come under increased scrutiny by the research community for their aggressive publication policies and lack of attention to proper peer review processes. The number of publications is relatively well distributed between the 3 teams based on the number of publications per researcher.

## *1/ The scientific production of the team meets quality criteria.*

### Strengths and possibilities linked to the context

The unit is formed by three teams that have a solid publication rate having a good to very good average quality. During the evaluated period, the unit produced 106 scientific publications. 57% of these are rated excellent or outstanding in the NORIA 2020 ranking. The unit members were first, last or corresponding author in 60 out of the 106 publications (56.6%). Specific research topics that are distinctive are present within each of the teams: disease resistance mechanisms and breeding for resistance in GAV team; tripartite virus-plant-aphid interactions, multi-infections and study of viromes in VIVE team; non-targeted metabolomics strategies for a better knowledge of pathogenic organisms and integration of transcriptomic and metabolomic data for MSV team. Some (at least 10) publications in high profile journals are present even though unit members are not the leading authors especially for the MSV and GAV teams (e.g. *Molecular Ecology*, *Current Biology*, *New Phytologist*, *Plant Journal*, *Plant Biotechnology Journal*, *Plant Physiology*, *Journal of Experimental Botany*, *Nature Plants*, *Trends in Plant Sciences*).

### Weaknesses and risks linked to the context

All 3 teams somehow miss publications based on high risk/high gain frontier science that could be published in high profile journals, provide additional visibility to the unit and help to attract outstanding young researchers. It seems that the priority was given to the quantity rather than to the quality, even though numerically the production of approximately 1 publication per scientist per year is not in the high range especially for full time scientists with strong technical support. The choice of products that were picked for the portfolio is somehow surprising. For example, one of the 2 products listed in the portfolio as illustrative of the main activities of the MSV team is dealing with a very interesting biological problem, i.e. sex control and the switch from dioecy to hermaphroditism in grapevine, and has produced a very high quality publication. However, it is not clear how this type of research fits within the secondary metabolism topic that should be central to the team activities.

## *2/ Scientific production is proportionate to the research potential of the unit and shared out between its personnel.*

### Strengths and possibilities linked to the context

The publication production output is quite similar among the three teams that compose the unit when the number of researchers present in each team is taken into account: 5 publications/researcher/6 years in the GAV team, 6.9 for VIVE, and 5 for MSV. The involvement of all the researchers of the unit in the publications is definitely a strength. The involvement of the technical staff as co-authors in 56% of the publications as well as the involvement of PhD students and Postdocs in numerous publications means that the unit is fully capable to involve a large fraction of its components in the research activities.

### Weaknesses and risks linked to the context

The committee does not see any specific weakness at this point except the uncertainties related to the fact that a considerable number of researchers is going to retire in the next few years and the quality of the new recruits will determine the future proportion between the research output in terms of publications and the research potential.

While the quality of the articles is very good, the publication rate (about 1 article/full time scientist/year is relatively low with regard to the technical support.

## *3/ The scientific production of the unit complies with the principles of research integrity, ethics and open science.*

### Strengths and possibilities linked to the context

The committee, based on the information provided, considers the unit fully compliant with the principles of research integrity and ethics as well as fully committed to the open science model.

## Weaknesses and risks linked to the context

The frequent use of open access journals that employ aggressive strategies to promote their publications at the expense of the quality of the peer review process may make some of the publications less attractive for the broader research community.

A clear strategy is lacking to make the large data sets produced by the unit accessible to the scientific community.

## EVALUATION AREA 4: CONTRIBUTION OF RESEARCH ACTIVITIES TO SOCIETY

### Assessment on the inclusion of the unit's research in society

The impact of the unit on the field of contribution to the society is excellent, and in line with the strong importance of grapevine (and wine) in the French society and economy. The connection with non-academics is a driving force for helping the industry, while the unit is communicating very well with the general public. The unit has an important impact for introducing new varieties in the French Appellation system (AOC). The work initiated on sugar beet has industrial importance. Involvement in participatory research is adequate and relevant.

*1/ The unit stands out by the quality of its non-academic interactions.*

### Strengths and possibilities linked to the context

The unit has developed a very strong link with actors from the French wine industry at a national level, with a strong impact on the development of new varieties (9 during the period). Private funding represents 1/3 in value of its total contract funding. The unit hosts (and trains) both professional and PhD funded by non-academic partners. It also created a joint lab with IFV and hosts an IFV engineer. The unit is strongly engaged in participatory science activities, with 5 persons engaged in these activities.

### Weaknesses and risks linked to the context

No weakness identified

*2/ The unit develops products for the socio-economic world.*

### Strengths and possibilities linked to the context

There is also a very robust involvement in the development of products towards the socio-economic world. This includes new varieties (such as the first registered French varieties with polygenic resistance to downy and powdery mildew), and new methods (genomic selection, decision making tools, digital acquisition of experimental data through ADONIS). It has a strong focus on dissemination to technical journals (57 articles in professional journals; 59 conferences directed to professionals; 13 technical reports) as well as for procedures. It recorded 2 patents and 3 invention disclosures.

### Weaknesses and risks linked to the context

No weakness identified for this criterion.

*3/ The unit shares its knowledge with the general public and takes part in debates in society.*

### Strengths and possibilities linked to the context

There is a good involvement in the interactions with the general public (more than 40 interventions) and some debates as well. The share of the involvement is well adjusted between different members of the unit, and the whole unit in some cases (SIAL). The unit has organised meet-ups with young people to promote research and research careers.

## Weaknesses and risks linked to the context

None identified by the committee.

## C – RECOMMENDATIONS TO THE UNIT

### *Recommendations regarding the Evaluation Area 1: Profile, Resources and Organisation of the Unit*

The unit is composed of scientists funded by INRAE and University of Strasbourg and it has strong infrastructure and a good number of technical staff. The profile of the unit is based on its strong interaction with the grapevine and wine sectors that has to be maintained. This relation is balanced by a not so strong scientific activity that the members of the unit should consider to increase. One of the means is to interact more strongly with other units of INRAE working in related subjects especially in Bordeaux and Montpellier and by increasing its international activities. The internal organisation is centred in the teams. A reflexion should be conducted in order to find a balance between scientific activities at the unit level and at the team level.

### *Recommendations regarding the Evaluation Area 2: Attractiveness*

One of the problems of the unit is the structure of its staff. It will need to be renewed in the coming years. To attract candidates that will continue or increase the activity of the unit its members should increase the international relations of the unit, the collaborations with other related units and to increase the number of PhD students and postdocs that at this moment is very low. The scientists could increase their HDR certification and start a series of international seminars.

### *Recommendations regarding Evaluation Area 3: Scientific Production*

More attention should be given to the publication policy in terms of choice of journals, in particular in relation to open access journals that have come under increased scrutiny by the research community for their aggressive publication policies and lack of attention to proper peer review processes. The unit should define a clear policy in relation to this type of journals and especially in relation to the publishing of special issues of these journals which do not undergo scrutiny from the journal editorial boards. A strong encouragement to all personnel to favour quality over quantity when it comes to scientific publications should be provided as well as a stimulus not to pay excessive attention to journal impact factors when it comes to choosing which journal to publish. In most cases traditional journals, even though they may have lower impact factors (usually as a consequence of not using specific strategies to inflate them) than many open access journals, provide a much more careful review process that improves the publications and is useful to the researchers for their own professional growth. A clearer definition of the strategy of the unit to make the large data sets it produces accessible to the scientific community, to make them reusable and interoperable would be desirable.

### *Recommendations regarding Evaluation Area 4: Contribution of Research Activities to Society*

The contribution to society is very strong, and it is visible that there is a very strong request from the society, at different levels, to SVQV. This could drive a risk of dispersion for the teams. It will be of importance to have a clear idea of the research activities planned for the next years and keep a balance between services and the research objectives. The unit has an excellent set of services that are essentially open to the private sector. A good balance between the research activity and services would be advisable.

## TEAM-BY-TEAM ASSESSMENT

**Team 1:** Génétique et Amélioration de la Vigne (GAV)  
 Name of the supervisor: Mr Didier Merdinoglu

### THEMES OF THE TEAM

The GAV team addresses three main topics: (1) identification of genetic mechanisms of disease resistance, including the interactions with pathogen factors, (2) breeding activities carried out to transfer these genetic disease resistances into new wine making varieties that meet the market requests in terms of enological quality and (3) analysis of different factors and mechanisms which are relevant for the success of the traditional breeding activities (factors affecting recombination in interspecific hybrids, genetic determinants of berry acidity).

### CONSIDERATION OF THE RECOMMENDATIONS OF THE PREVIOUS REPORT

The recommendations made in the previous evaluation were properly addressed. The main point that remains perhaps only partly addressed is the presence of a sufficient number of international collaborations: for example the participation in EU funded collaborative projects remains rather low.

### WORKFORCE OF THE TEAM

<b>Permanent personnel in active employment</b>	
Professors and associate professors	1
Lecturer and associate lecturer	0
Senior scientist (Directeur de recherche, DR) and associate	1
Scientist (Chargé de recherche, CR) and associate	2
Other scientists (Chercheurs des EPIC et autres organismes, fondations ou entreprises privées)	0
Research supporting personnel (PAR)	16
<b>Subtotal permanent personnel in active employment</b>	<b>20</b>
Non-permanent teacher-researchers, researchers and associates	0
Non-permanent research supporting personnel (PAR)	0
Post-docs	0
PhD Students	2
<b>Subtotal non-permanent personnel</b>	<b>2</b>
<b>Total</b>	<b>22</b>

## EVALUATION

### Overall assessment of the team

**The team output is considered very good in terms of publications and excellent to outstanding in terms of contributions to the society. The team has gained a considerable visibility and reputation at the national and international level in the area of grapevine breeding and in the dissection of genetic mechanisms of disease resistance to fungal and viral pathogens. The team has attracted considerable funding from national agencies and from the private sector but not from international funding bodies. The team has hosted 5 PhD students and has developed an impressive distributed breeding program involving different wine making areas in France. The team has not developed strong enough links with the profession to define priorities for the breeding program. The team has not exploited sufficiently the interaction with the MSV team to exploit their competences and capabilities in metabolomics in order to make the breeding for enological quality more efficient. The team has not made sufficient efforts so far to exploit the potential of new genomic techniques such as cisgenesis and genome editing through CRISPR/Cas9 to introduce genetic resistances into elite varieties.**

### Strengths and possibilities linked to the context

The team has clearly established itself as a leader at the national and international level in the area of grapevine breeding and in the dissection of genetic mechanisms of disease resistance to fungal and viral pathogens. The team is actively disseminating its results and outputs not only in the scientific community through publications but also to the professional community through interactions with winemakers and to the general public. The team has produced a total of 34 publications of which 21 are published in journals considered excellent or outstanding based on the NORIA classification. The team has developed 12 agreements that govern the partnership with most of the major players in the French wine industry for the development of new disease resistant varieties suited to the different wine growing areas in France. The team has hosted 5 PhD students whose research is financed in whole or in part by non-academic partners, confirming its strong interactions with the wine producing community.

### Weaknesses and risks linked to the context

A very important element of the research activity of the unit is clearly the breeding program for disease resistant varieties. Interactions with the profession to define specific phenotypes that can be acceptable to the consumer are not sufficiently developed.

From the self-evaluation document provided, a plan is lacking to integrate the activities of the GAV team and of the MSV team to develop new marker-based selection schemes to improve enological quality.

The committee sees an insufficient focus on the development of new genomic techniques to create resistant varieties meeting the request for resistant traditional varieties, as well as the request for high wine quality, and specifically an insufficient focus on the development of cisgenesis or genome editing in elite grapevine varieties. Training activity may be improved as only 4 Ph.D were defended (for 4 HDR).

## RECOMMENDATIONS TO THE TEAM

The committee recommends stronger interactions with the professional winemaking community to define priorities for the breeding program. Stronger interactions with the MSV team are also recommended to fully exploit the respective distinctive competences in order to make the selection of new resistant varieties through traditional breeding more efficient. This would be a very important element given that the major obstacle to widespread adoption of new disease resistant varieties is the perceived wine quality and that phenotypic selection for wine quality is currently extremely difficult and expensive. A greater focus should be put on new genomic techniques such as cisgenesis and genome editing to respond to the market demand for making traditional elite varieties resistant to disease.

**Team 2:** Virologie et Vection (ViVe)

Name of the supervisor: Mr Olivier Lemaire

## THEMES OF THE TEAM

The themes of the VIVE team concern the interactions between virus-plant-vector, with a focus on the grapevine and sugar beet crops. This involves a lot of different approaches (biotechnology, HTS, virology...). The team can be split between a grapevine virology team (20 people) and an Aphid Virus transmission team (10 people). A third part of the team is involved in participatory research in interaction with the wine industry to promote vine health in accordance with a limited impact on the environment (5 people).

## CONSIDERATION OF THE RECOMMENDATIONS OF THE PREVIOUS REPORT

The previous committee recommended a reduction of biological models and reorganisation of the team. The response of the team is that the comments were due to the presentation of the team not being synthetic enough. The team carried out functioning as 3 groups with interaction between two of those groups on sugarbeet. A considerable heterogeneity of the research topics addressed in the team is still evident from the current presentation.

## WORKFORCE OF THE TEAM

<b>Permanent personnel in active employment</b>	
Professors and associate professors	0
Lecturer and associate lecturer	2
Senior scientist (Directeur de recherche, DR) and associate	4
Scientist (Chargé de recherche, CR) and associate	2
Other scientists (Chercheurs des EPIC et autres organismes, fondations ou entreprises privées)	0
Research supporting personnel (PAR)	20
<b>Subtotal permanent personnel in active employment</b>	<b>28</b>
Non-permanent teacher-researchers, researchers and associates	0
Non-permanent research supporting personnel (PAR)	0
Post-docs	2
PhD Students	4
<b>Subtotal non-permanent personnel</b>	<b>6</b>
<b>Total</b>	<b>34</b>

## EVALUATION

### Overall assessment of the team

The ViVe team output is very good in the three topics it covers (virology, aphid transmission and participatory research). While its scientific production can be considered as very good, its funding is excellent with more than 30 grants obtained, and so is its interaction with the society, with very strong links with the private sectors and the stakeholders. Its hosting and training policy is good, but could be improved.

## Strengths and possibilities linked to the context

The VIVE team is the largest of the UMR SVQV, with 28 permanent people including 8 scientists, senior scientists and lecturers. It also includes 5 IE and 2 IR. The team is very active and very successful in grant applications. Significantly, the team targets very complementary funding (European such as INTERREG, French/ANR such as VIRAPHIPLANT, ROME, COMBINING and VINOBOODIES all coordinated by the VIVE team, regional, professional such as CASDAR Indicateur santé Vigne...). Notably, the VIVE team coordinates most of the projects in which it is involved in (30 out of 34).

In the last 5 years, it has benefited from the appointment of three new research scientists (one Lecturer, one confirmed DR and one young CR) who bring new expertises and new projects to the team.

During the evaluated period, the VIVE team has published 64 articles in peer reviewed journals. 2/3 of the articles that can be classified as excellent or exceptional are first or last co-authored (2 out of 7 for the ones rated "exceptional"). The publications are split between the 3 different subgroups of the VIVE team and each paper is described by a one-line summary in the report. Although it is interesting, and it shows a very broad covering of topics, it could have been interesting to highlight more the links between the different articles and how these works fit together to contribute collectively to their respective field of research).

The VIVE team presents a large part of the unit publications (52%) shared between the 8 project leaders). The PhD students are well involved in publications.

The interactions with the society are excellent on all aspects with very strong links with the private sectors and the stakeholders. It includes 9 PhD students at least partially funded by the private sector (5 already defended), a very strong participation to calls and two agreements with two private companies involving hosting one engineer for each agreement. Among those, the collaboration with the IFV (Institut du Vin Français) form the basis of the Vitiviribiome laboratory, allowing HTS analysis of viral diseases, as well as allowing to analyse quarantined material.

## Weaknesses and risks linked to the context

Given the very broad range of subjects tackled by the team, it would be appropriate to present how they are carried out in the team. It is difficult to understand fully who does what and how the different researchers interact together.

As mentioned, the age pyramid is a problem, with all research managers but one being over 57.

Difficult validation is mentioned for CRISPR/Cas9. But it is not mentioned if there any research underway, at SVQV and/or in relation with other labs working on the same topics (including French/INRAE labs working on grapevine transformation)?

## RECOMMENDATIONS TO THE TEAM

As said above, the VIVE team would benefit from better structuring its research policy in order to make it more "readable" to the outside world. This could probably be helped by engaging the team (and newly-recruited scientists) in writing position papers encompassing previous and current work with future prospects.

It might be interesting to consider the large number of external solicitations by the private sector in line with the global project and scientific perspectives of the team and see how they fit in.

The number of HDR in the team should be increased in the coming years.



**Team 3:** Métabolisme Secondaire de la Vigne (MSV)

Name of the supervisor: Mr Philippe Huguency

## THEMES OF THE TEAM

The overall objective of the MSV team is to study the secondary metabolism of grapevine for maintaining wine quality and improve pest resistance. Involved approaches are genome assembly and annotation, omics integration for understanding vine/pathogen relationships and functional genomics of secondary plant metabolism. MSV team occasionally addresses other species regarding its expertise in secondary metabolism and metabolomics of pathosystems. To support its activities, it has developed two metabolomics and bioinformatics platforms.

## CONSIDERATION OF THE RECOMMENDATIONS OF THE PREVIOUS REPORT

The recommendation of an internal training plan regarding bioinformatics has been addressed: a training session has been proposed in 2017 and renewed in 2021, allowing the autonomy of each team. For metabolomics, due to the high technicity needed, equipment is still operated by MSV team's members).

## WORKFORCE OF THE TEAM

<b>Permanent personnel in active employment</b>	
Professors and associate professors	0
Lecturer and associate lecturer	1
Senior scientist (Directeur de recherche, DR) and associate	1
Scientist (Chargé de recherche, CR) and associate	1
Other scientists (Chercheurs des EPIC et autres organismes, fondations ou entreprises privées)	0
Research supporting personnel (PAR)	11
<b>Subtotal permanent personnel in active employment</b>	<b>14</b>
Non-permanent teacher-researchers, researchers and associates	0
Non-permanent research supporting personnel (PAR)	0
Post-docs	0
PhD Students	1
<b>Subtotal non-permanent personnel</b>	<b>1</b>
<b>Total</b>	<b>15</b>

## EVALUATION

### Overall assessment of the team

The overall MSV team output is good. It has a good output in terms of publications despite its small size. It is recognized at an international level for its expertise in secondary metabolism functional genomics. Its funding was good as it was able to gather funding from local to European sources. However, the team should consolidate its research contracts with industry to broaden its sources of funding. Its hosting and training activity was good but could be improved regarding post-doc positions.

## Strengths and possibilities linked to the context

The MSV team's scientific output is good. The team published 27 articles (0.9 publication/year/full time scientist) of which 11 were as first/last/corresponding authors., 75% of the journals were ranked as exceptional/excellent. Two articles have been cited more than 100 times. A team member was guest editor of a special issue. The team published a data paper and more than 90% of published papers were available in open access. Each PhD was associated with at least 2 articles during their PhD period. The team was also involved in tools and methodology development and produced 3 software and 1 database. One software (GREAT) has an international aura. The team leads 2 platforms. The bioinformatics one has only been dedicated to unit's data analysis regardless of the team involved while the metabolomics one has also welcomed projects from other labs (30%).

During the period, adequate resources were raised by the team with 10 funded projects, namely 4 local, 5 national and 1 European (FEDER/Interreg) funding. The MSV team coordinated 4 of them. The team is involved in teaching and sharing its knowledge to the general public at a level proportionate to its size.

## Weaknesses and risks linked to the context

During the period, the MSV team was involved in projects which were not always in agreement with the team's name.

The team hosted 3 PhD students for 2 HDR scientists. One HDR will retire soon. It also hosted one apprentice. No post-doc was hosted.

The interaction of MSV team with industry seems to be limited to services.

Due to its small size, the team could easily be destabilised by the leave of members (retirement or mobility), especially regarding scientific topics which are led by one scientist only.

## RECOMMENDATIONS TO THE TEAM

The team should think about a team's name better describing its activities.

The team should encourage HDR defences of its scientists.

The team should diversify its funding sources. European collaborations should be continued for the next period. Research contracts involving private companies should be consolidated to include MSV's own research, e.g. by developing Cifre funding.

The team should try to recruit more post-docs, autonomous in their research that could help the team to develop its research topics.

## CONDUCT OF THE INTERVIEWS

### Date

**Start:** 29 septembre 2022 à 08h30

**End:** 29 septembre 2022 à 18h30

**Interview conducted: online**

### INTERVIEW SCHEDULE

#### PARTICULAR POINT TO BE MENTIONED

8h30-9h00: Closed meeting of the committee + Hcéres Scientific Advisor

Open session: 9h00 -11h50

9h00-9h15: Introducing the committee and the Hcéres evaluation process

9h15 -9h50 General presentation of the unit 15 min + 20 min discussion

9h50-10h25 Team 1 presentation: Genetics and adaptation of grapevine: 15 min + 20 min discussion

10h40-11h15 Team 2 presentation: Virology: 15 min + 20 min discussion

11h15-11h50 Team 3 presentation: Secondary metabolism of grapevine: 15 min + 20 min discussion

11h50-12h20 Meeting with the scientists (DR, CR, Pr, MCF, IR)

12h20 -13h45 Debriefing and lunch break

13h45-14h15 Meeting with the support staff (in French) (IE, AI, T)

14h15-14h45 Meeting with non-permanent staff (Ph.D students, post-doc, personnel with short-term contracts)

14h45-15h15 Meeting with the supervising bodies

15h15-15h45 Meeting with the unit's direction

15h45-18h00 Closed meeting of the committee

## GENERAL OBSERVATIONS OF THE SUPERVISORS

## Véronique Brault

Directrice de l'Unité Santé de la Vigne et Qualité du Vin

UMR1131 INRAE Unistra

Colmar, France

**Object :** General Observations on the HCERES report for the SVQV Unit

Colmar, 17th March 2023

We first want to thoroughly thank the experts for their evaluation of our research Unit. Their comments were highly relevant and will be taken into consideration to improve the Unit's life, the scientific activity and the Unit management.

We truly appreciate that the Unit's resources, the scientific objectives, the Unit functioning and the scientific production were considered by the experts as good or very good. We are happy to see that the experts observed our excellent capacity to interact with society including non-academic partners, professionals and general public. This high activity, as mentioned by the experts, also encompasses the release of new resistant grapevines varieties.

Concerning our weaknesses, we agree with the experts who mentioned our relatively low international attractiveness and we will try to improve our international recognition by hiring foreign post-docs or establishing more international projects. We apologize for errors in the human resources file that led to misleading conclusions. This concerns in particular the number of post-docs at the 31<sup>st</sup> of December 2021 that has been mislabeled (0 instead of 2). Even though this number of post-docs may seem low, it is compensated by the presence at that time of 7 non-permanent engineers which were not indicated in the original document. Regarding one comment on FAIR data sets, we want to mention that the Unit is already in the process of releasing these data and will pursue this policy in the future. Finally, we want to indicate that the name of the Grapevine Secondary Metabolism team has now been changed to Grapevine Genomics and Metabolism to better reflect the team's scientific activity.

Since some comments were specifically addressed to each team, the answers are listed below:

### Team GAV:

We appreciate the time and effort devoted by the members of the expert committee to the evaluation of our team. We find most of their comments relevant and following their recommendations will undoubtedly improve the quality of the team output. We would like to add some complementary information that will help to clarify some of the points raised by the expert committee and justify some of the choices made by the team.

## la science pour la vie, l'humain, la terre

RECOMMENDATION: *Stronger interactions with the MSV team are also recommended to fully exploit the respective distinctive competences in order to make the selection of new resistant varieties through traditional breeding more efficient.*

We agree with the sentence: *From the self-evaluation document provided, a plan is lacking to integrate the activities of the GAV team and of the MSV team to develop new marker-based selection schemes to improve enological quality.* Unfortunately, the level of interaction between both teams on this subject was not well presented in the self-assessment document. GAV and MSV have been working together for several years on the specialized (or secondary) metabolism of grapes determining aroma, color or astringency of wines, to include this knowledge in the breeding program. This collaboration led to several publications and a patent. During the 2016-2021 period, several projects were conducted jointly by the two teams aiming at deciphering the genetic determinism of variations of aromas and aroma precursors in berries and wines (two examples are ANR INTEGRAPPE and FranceAgrimer Typic'Al). Finally, Philippe Huguency (MSV) and Eric Duchêne (GAV) co-supervised a PhD thesis entitled, "Genetic and functional analysis of the biosynthesis of grape aromas", which was defended in 2020 and whose results will be soon submitted to publication (the requirement for additional vinification experiments delayed the publication of the thesis results).

RECOMMENDATION: *The committee recommends stronger interactions with the professional winemaking community to define priorities for the breeding program.*

Following the observation by the committee that *Interactions with the profession to define specific phenotypes that can be acceptable to the consumer are not sufficiently developed*, we realize that this information was included in the section concerning participatory sciences, which may be confusing. In the framework of the INRAE-Resdur program, the final selection of the ResDur varieties took place with the support and collaboration of the professional partners, both in terms of experimentation and wine tasting. This is what we meant in the Self-Assessment document, page 23, Section C7 *As part of its breeding program, the team regularly organizes participatory tastings where our local partners (IFV, CIVA, Chamber of Agriculture) and winegrowers from our collaboration network help us to better judge the quality of the wines produced. This contribution is crucial to facilitate the choice of the most interesting genotypes to be included in VCUE experimentations and then to be proposed for registration in the French catalog.* Furthermore, in the framework of the new breeding programs in partnership with the IFV and each of 12 winegrowing regional interprofessional committees, all steps are carried out in close partnership between the three partners, including the various experimental stages, from the definition of the objectives to the choice of candidate varieties. Priorities and strategic choices are discussed at least once a year in steering committees where two members of the GAV team participate on a statutory basis. Some elements about this point were provided in the Self-Assessment document, page 22, Section C7 *In addition, through tripartite agreements between INRAE, IFV, and the wine sector, the team actively participates in the management of new programs for the creation of new disease-resistant and regionally typical grapevine varieties in the various French production areas. In partnership with the IFV, the team organizes and participates in the optimization of relationships between sector actors via the harmonization of field experimentation and observation methods.*

RECOMMENDATION: *A greater focus should be put on new genomic techniques such as cisgenesis and genome editing to respond to the market demand for making traditional elite varieties resistant to disease*

We share the committee's opinion that our team has *an insufficient focus on the development of new genomic techniques to create resistant varieties meeting the request for resistant traditional varieties, as well as the request for high wine quality, and specifically an insufficient focus on the development of cisgenesis or genome editing in elite grapevine varieties*. There are several reasons to explain why we have concentrated our efforts on classical breeding using MAS. First, traditional breeding allows taking into account other characters, like adaptation to climate change, which cannot be currently addressed by transgenesis or gene editing. Second, in a perspective of durability, we produce varieties combining several genes for resistance to downy and powdery mildew (3 genes for each in the ResDur3 varieties). This could be achieved by transgenesis via gene stacking but it will be a big challenge. Third, currently, the aptitude for genetic transformation is very heterogeneous among varieties, and some of them appear to be quite recalcitrant. Finally, the phenotype of many emblematic target varieties is determined by a chimeric tissue structure that will be lost following transformation, unless the transformation is made on meristematic tissues.

We agree with the committee's recommendation to focus on biotechnology techniques for grapevine breeding. We believe that cisgenesis and gene editing (see below in the ViVe team report the proof of concept already achieved) could be very useful to improve new varieties by adding characteristics that cannot be obtained through conventional breeding (in particular, if the required genetic variability is not found in nature). By construction, new varieties are not chimeric because they are very recent.

We are open to consider the committee recommendation. However, taking into account the effort in time and human resources necessary to develop this approach, it will require additional permanent staff.

#### **Team ViVe:**

We have greatly appreciated the overall assessment of the ViVe team by the members of the committee and the highly relevant comments, reflecting our efforts to improve the quality of our research, to develop strong links with stakeholders, private companies and the society and to publish scientific papers in high-ranking journals. The experts pointed out a heterogeneity within the team. We agree with this comment, and we think that this "heterogeneity" is mainly due to the architecture of the ViVe team in 3 groups, that work more or less independently. This main issue has already been taken into consideration in our new projects. We have thus started to reinforce the interactions between the groups working on "grapevine" and "sugarbeet" virology through the development of projects addressing similar questions on cross-protection, multi-infection and plant and vector manipulation on these 2 model crops. The structuration effort of our research is supported by the recruitment of 2 permanent junior scientists (CR-CN) in 2021 and 2023, developing research projects around "virus manipulation" and "cross-protection mechanisms". To illustrate more this tendency, an Opinion Paper on cross-protection mechanisms, gathering scientists from both groups will be submitted next spring.

In the weaknesses and risks linked to the context, the Committee argues that *"it is not mentioned if there is any research underway for CRISPR/Cas9 in relation with other labs working on the same topics..."*. We had already answered to this comment in the "responses to the questions addressed to the Unit" before the venue of the Committee. Our answer was as follows: "genome editing is developed in our unit in collaboration with the GAV Team. The proof of concept has been recently made by targeting the downy mildew resistance gene (VvDMR6-1). Several edited lines were regenerated and assessed for their resistance to *Plasmopara viticola*. Few edited lines showed lower levels of sporulation compared to control line. A manuscript is currently under review in Plant Biotechnology Journal (by S. Djennane, S. Gersch, F. Le-

*Bohec, M-C. Piron, R. Baltenweck, O. Lemaire, D. Merdinoglu, P. Hugueney, F. Nogué and P. Mestre. Reduced susceptibility to downy mildew in grapevine plants edited for VvDMR6-1). CRISPR/Cas9 will also be used as a tool for functional validation of candidate genes identified within the framework of our research projects. Functional biology in grapevine is thus expected to be a structuring theme at the Unit scale in the forthcoming years.*

### **Team MSV:**

The team wishes to thank the committee for their advices and recommendations, that will undoubtedly help us to develop our scientific project in the coming years. In particular, we agree with the committee that, "due to its small size, the team could easily be destabilized by the leave of members (retirement or mobility), especially regarding scientific topics which are led by one scientist only." In order to anticipate the retirement of one scientist and to maintain the team's expertise in functional genomics, the team has proposed a profile for the recruitment of a scientist to the BAP INRAE department, in order to investigate the determinism of grape composition in relation to wine quality.

#### **RECOMMENDATIONS:**

*The team should think about a team's name better describing its activities.*

We agree that the team's name, which reflected its activities when the team was established in 2009, is no longer appropriate regarding the evolution of its scientific project over the last years. Therefore, the team has decided for a new name: "Génomique et Métabolisme de la Vigne" (GMV) (Grapevine Genomics and Metabolism).

*The team should encourage HDR defenses of its scientists.*

We agree with the committee that the team should maintain its capability to recruit PhD students despite the near retirement of a scientist holding an HDR. That's why the Assistant Lecturer of the team applied at the beginning of March for the authorization to defend her HDR. She should then be able to defend her HDR by the end of 2023 or 2024 at the latest.

*The team should diversify its funding sources. European collaborations should be continued for the next period. Research contracts involving private companies should be consolidated to include MSV's own research, e.g. by developing Cifre funding.*

The GMV team is currently building a project together with German and Swiss teams, that will be submitted to the INTERREG VI program in the coming month. In parallel, the GMV team is currently setting up a research contract with the Comité Interprofessionnel du Vin de Champagne (CIVC), in order to strengthen collaborations with private partners.

*The team should try to recruit more post-docs, autonomous in their research that could help the team to develop its research topics.*

Although quite successful with gathering fundings at the national and European levels, the team did not have the opportunity to host post-docs in the last years. This point will be improved in the coming years. As a first step, the team will host a post-doc for 2 years from April 2023, in the frame of the ANR-funded project FUNDUR, which the team coordinates.



**Université**

**de Strasbourg**

Monsieur Éric Saint-Aman  
Directeur du Département d'évaluation de la recherche  
HCERES - Haut conseil de l'évaluation de la recherche et  
de l'enseignement supérieur  
2 rue Albert Einstein  
75013 PARIS

Strasbourg, le 30 mars 2023

Objet : Rapport d'évaluation DER-PUR230023361 - SVQV - Santé de la vigne et qualité du vin

Réf. : RB/FF/ 2023-203

**Rémi Barillon**

Vice-Président Recherche,  
Formation doctorale et Science  
ouverte

Cher Collègue,

**Affaire suivie par :**

Florian Fritsch  
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L'université de Strasbourg vous remercie ainsi que tous les membres du comité HCERES pour le travail d'expertise réalisé sur l'unité de recherche « Santé de la vigne et qualité du vin » (SVQV - UMR\_A 1131).

Vous trouverez ci-joint les observations de portée générale formulées dans le cadre de ce rapport.

Je vous prie d'agréer, Cher Collègue, l'expression de mes cordiales salutations.



Rémi Barillon

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## Observations

### Rapport d'évaluation DER-PUR230023361 - SVQV

#### EVALUATION AREA 2: ATTRACTIVENESS (Page 8)

Assessment on the attractiveness of the unit

*"Staff recruitment in recent years has been continued by INRAE, but the unit trains a low number of doctoral students. **The participation of the University of Strasbourg and the University of Haute Alsace is limited...**"*

The meaning of this last sentence is not clear. We ask that the University of Strasbourg is removed from the last sentence or that the sentence is reformulated. The participation of the University of Strasbourg *per se* is effective since it is one of the 2 governing bodies of the research unit, thus allocating recurrent funding, access to the Idex calls, teaching position and PhD contracts according to the same rules that apply to other research units.

Considering the attractiveness criteria in this section, maybe the Hceres committee wanted to say that "**SVQV should attract more PhD students from the University of Strasbourg**"?

Alternatively maybe the committee wanted to say: "**The participation to the University of Strasbourg and the University of Haute Alsace is limited**" ?

The Hcéres' evaluation reports are available online:  
[www.hceres.fr](http://www.hceres.fr)

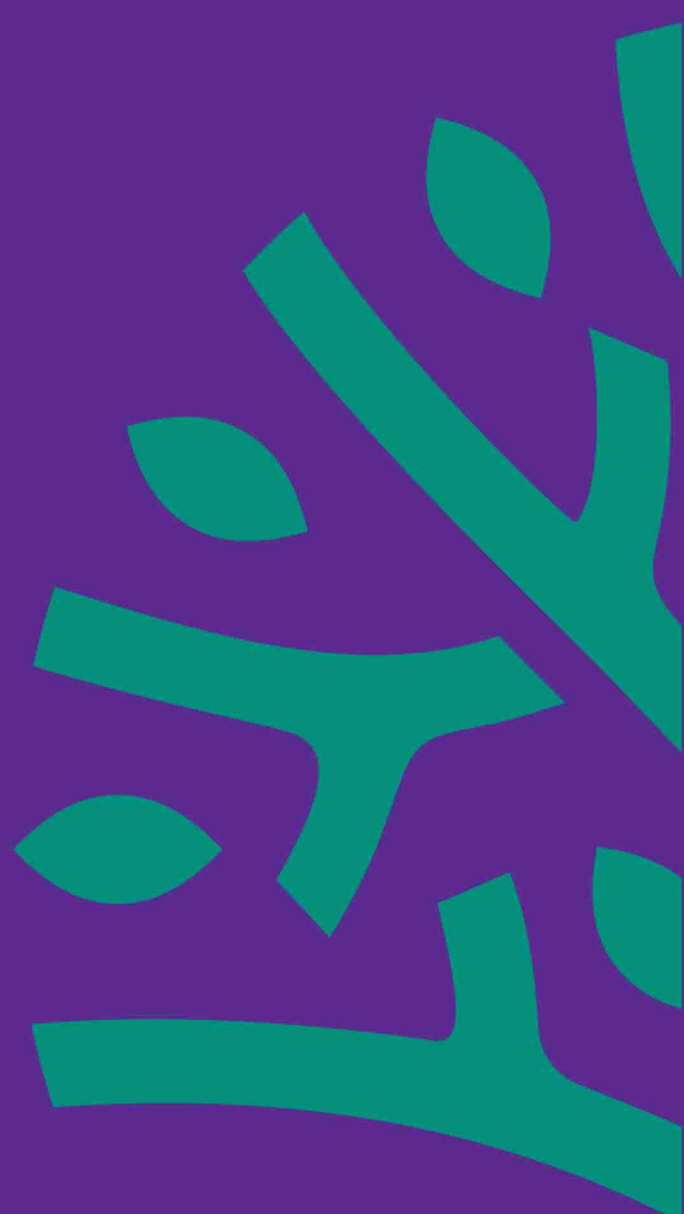
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