COLLÈGE DES ÉCOLES DOCTORALES

PhD Degree

Doctoral College

The situation of our doctors, and more specifically, their professional integration, was observed on December 1st 2017, one year after the date of their defense, and on December 1st 2019, three years after their defense. This study was carried out using a questionnaire designed by the Ministry of Higher Education, Research and Innovation (MESRI), which oversees all French universities.

Number of PhD holders surveyed: **182**

Number of respondents: **129**

Response rate: **71%**

Contents

1 - Profile of respondents

▶ **All PhD holders**

Sex

	N	%
Female	73	40%
Male	109	60%
Total	**182**	**100%**

Nationality

	N	%
French	104	57%
Foreign	78	43%
Total	**182**	**100%**

Age

Average = **30** years   Standard deviation = **6**

	N	%
Under 24 years	0	0%
24 to 29 years	112	62%
30 to 34 years	39	21%
35 to 39 years	15	8%
40 to 44 years	10	5%
45 years and over	6	3%
Total	**182**	**100%**

▶ **Responding PhD holders**

Sex

	N	%
Female	55	43%
Male	74	57%
Total	**129**	**100%**

Nationality

	N	%
French	86	67%
Foreign	43	33%
Total	**129**	**100%**

Age

Average = **30** years Standard deviation = **6**

	N	%.
Under 24 years	0	0%
24 to 29 years	89	69%
30 to 34 years	25	19%
35 to 39 years	8	6%
40 to 44 years	5	4%
45 years and over	2	2%
Total	**129**	**100%**

NOTE: The profile of respondents is similar to that of the PhD holders surveyed, with the exception of foreign doctors, who are under-represented among the respondents.

2 - Studies before PhD program

▶ **Last degree(s) awarded before PhD program**

	N	
A Master's degree or equivalent	**116**	90%
An Engineering degree	**23**	18%
A PhD degree other than the last one awarded	**3**	2%
A Medical, Pharmacy, or Veterinary degree	**3**	2%
A degree in Management or Commerce	**2**	2%
A Validation of Professional Accomplishments (VAP)	**0**	0%

*Response rate: **100%***

▶ **Location of last degree received**

39% of doctors received their last degree from another institution than UCA.

Numbers

| >= 15 |
| 10 - 15 |
| 5 - 10 |
| < 5 |
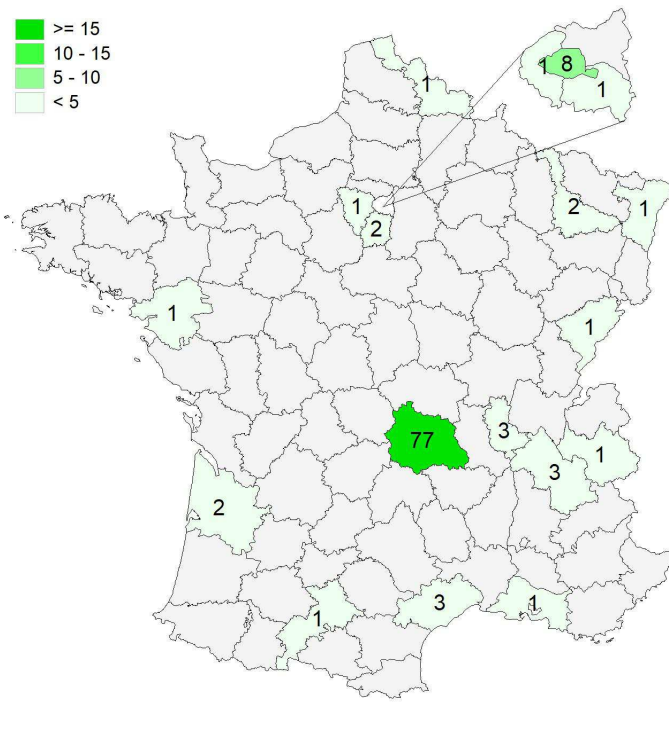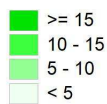
Geographical distribution

Auvergne-Rhône-Alpes	84	66%
Ile-de-France	13	10%
Other department in mainland France	13	10%
Abroad:	17	13%
Algeria	1	6%
Germany	1	6%
China	1	6%
Ivory Coast	1	6%
Spain	2	13%
Guinea	1	6%
India	1	6%
Iraa	1	6%
Lebanon	2	13%
Netherlands	1	6%
Portugal	1	6%
Serbia	1	6%
Tunisia	1	6%
Turkey	1	6%

*Response rate: **98%***

▶ **Professional status before receiving PhD**

45 of the doctors were employed before the PhD program.

At enrollment, **19** doctors had a job unrelated to their PhD project, **12** of whom held on to the job during the program.

3 - PhD program

▶ **PhD Specialization**

|	Female	Male	Total
Molecular and Cellular Biology	11	7	18
Automation, Signal Processing	–	1	1
Environment, Population, and Ecology Biology	3	–	3
Biomolecules, Pharmacology, Therapeutics	4	1	5
Materials Chemistry	2	2	4
Organic, Mineral and Industrial Chemistry	1	3	4
Theoretical, Physical, Analytical Chemistry	1	1	2
Elementary Particles, Theoretical Physics, Hot Plasmas	1	–	1
Private Law and Crime Science	2	1	3
Public Law	–	2	2
Electrical Engineering, Power Engineering	1	3	4
Physical, Human, Economic and Regional Geography	2	1	3
History and Civilizations: History and Archeology of Ancient and Medieval Worlds and of Art	–	2	2
Information Technology and Applications	1	8	9
Information Technology, Automation	–	1	1
French Language and Literature	1	–	1
Comparative Literature	–	1	1
Mathematics and Interactions	–	2	2
Mechanics of Solids, Materials, and Surfaces	1	4	5
Mechanics, Energetics, Process Engineering, Civil Engineering	3	5	8
Dense Environments, Materials and Components	–	3	3
Diluted Environments and Fundamental Optics	–	1	1
Philosophy	–	1	1
Physiology, Biology of Organisms, Populations, Interactions	3	1	4
Physics and Materials Science	1	1	2
Psychology, Clinical Psychology, Social Psychology	2	3	5
Clinical Research, Technological Innovation, Public Health	1	2	3
Management Sciences	–	3	3
Economics	3	3	6
Agronomic Sciences	–	1	1
Earth and Universe Sciences	2	–	2
Life and Health Sciences	7	5	12
Anthropology and Ethnology	–	1	1
Science and Techniques of Physical and Sports Activities	2	2	4
Solid Earth and Deep Strata	–	1	1
Solid Earth and Superficial Envelopes	–	1	1

*Response rate: **100%***

▶ Dual-Degree Thesis Program

7% of PhDs were awarded as part of a dual-degree program.

All of the doctors in this group were foreign nationals. **56%** of them carried out their PhD program in collaboration with a research laboratory in their home country.

▶ Duration of PhD program*

Average = **3.7**   Median = **3.3**
Min = **1.7**   Max = **12.0**

[0-3 years]	11%
[3-4 years]	67%
> 4 years	22%
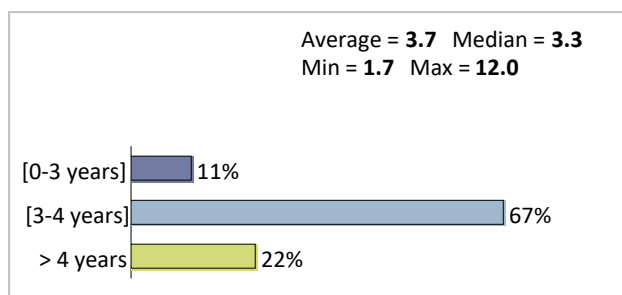
Response rate: 100%

*Deviation between the defense date and the registration date in number of years

▶ PhD Funding

	N	
Specific funding	**106**	85%
Personal resources	**20**	16%
Job unrelated to PhD project	**10**	8%
ATER position	**8**	6%
No funding	**3**	2%
Total	**125**	

Response rate: 97%

PhD funding contract types

	N	
Doctoral	**63**	61%
Temporary job	**30**	29%
Scholarship	**22**	21%
Permanent job	**3**	3%

Includes concurrent contracts
(e.g. temp. + schol.)

Response rate: 80%

Sources of specific funding

	N	
State funding	**53**	54%
Regional government	**23**	23%
Foreign funding	**10**	10%
CIFRE	**9**	9%
Private funding from French-based organization	**7**	7%
Both private and public funding (excluding CIFRE)	**4**	4%
European Commission Funding	**3**	3%
French public research funding agencies	**3**	3%

Response rate: 76%

▶ Career Plan

	N	
Teaching or research in a public or private institution of higher education	53	42%
Working in public research	24	19%
Working in R&D at a company	21	17%
Pursuing or progressing in job held before PhD	11	9%
Creating a company	5	4%
None	4	3%
Working in the public sector excluding research and higher education	3	2%
Working in a company excluding R&D	3	2%
Other	2	2%
Career change	1	0,8%
Total	**127**	

Response rate: 98%

▶ CNU Qualification (National Council of Universities)

30% of doctors applied for a CNU qualification, of whom **50%** received the qualification.

	Female	Male	Total
Received CNU qualification	4	15	19
Applied, awaiting response	4	8	12
Did not receive CNU qualification	1	6	7
Did not apply	43	44	87
Total	**52**	**73**	**125**

Response rate: 97%

▶ Continuing studies

11 doctors enrolled in a program or a civil service exam after their PhD.

Level of studies

	Male	Female	Total
Master, Engineering degree or equivalent	1	2	3
Bachelor, vocational degree or equivalent	2	–	2
PhD, Accreditation to Supervise Research (HDR)	1	1	2
BTS, DUT, DEUST or equivalent	1	–	1
Other: professional certifications (IT, TOEIC, TOEFL, etc.)	1	2	3
Total	**6**	**5**	**11**

Response rate: 100%

Situation of PhD holders on December 1st 2019
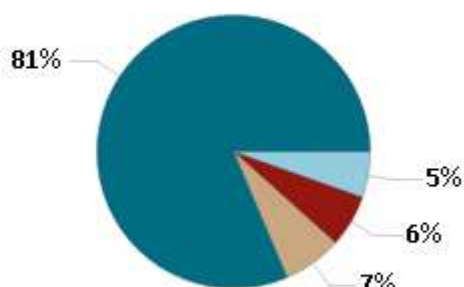
	Female	Male	Total
Employed	43	62	105
Employed after 1/12/2019	3	4	7
Job Seeker	4	4	8
Other	5	4	9
Total	55	74	129

▶ **81%** of doctors from the class of 2016 were employed on December 1st 2019.

▶ **8** PhD holders, **1** of whom had already worked, **were seeking employment,** on average for the past **12 months.**

They were seeking employment in the following fields:

Research and development	**7**
Consulting, studies, expertise	**3**
Higher education and research	**3**
Innovation, research valorization and assistance	**3**
Steering or managing projects or teams, public policy	**2**
Education (excluding higher education and research)	**1**

They were seeking employment in the following locations:

Abroad	**3**
In their region or neighboring departments	**2**
Their department of residence	**1**
Everywhere in France	**1**

▶ **9** PhD holders were in another situation on December 1st 2019.
Five of them did not give any further information, two were awaiting a residency permit, one was creating a company and one was retired.

KEY FIGURES

Employment rate (1)	Cadre rate (2)	Contract Type			Sector		Other key figures	
		Permanent (3)	Post-doctoral contracts (4)	Other contracts (5)	Research (6)	Not research (7)	Median time spent before 1st job (8)	Median gross salary (8)
93%	95%	43.8%	38.1%	18.1%	52.7%	47.3%	< 1 months	€2,706

(1) Number of employed PhD holders/ (Number of employed PhD holders + Number of job seeking PhD holders)
(2) Cadres of the following categories: civil servant, administrative, IT, company head, accredited profession, higher education teachers and scientific professions, secondary and school teachers
(3) Number of PhD holders with a stable contract: permanent, civil servant, company head, accredited profession/Number of employed PhD holders
(4) Number of PhD holders with a post-doctoral contract/Number of employed PhD holders
(5) Number of employed PhD holders with another contract: temporary, interim, adjunct position, ATER/Number of employed PhD holders
(6) Number of employed PhD holders in a company working in research/Number of employed PhD holders
(7) Number of employed PhD holders in a company not working in research/Number of employed PhD holders
(8) Median=value separating the top 50% of respondents and the 50% bottom respondents
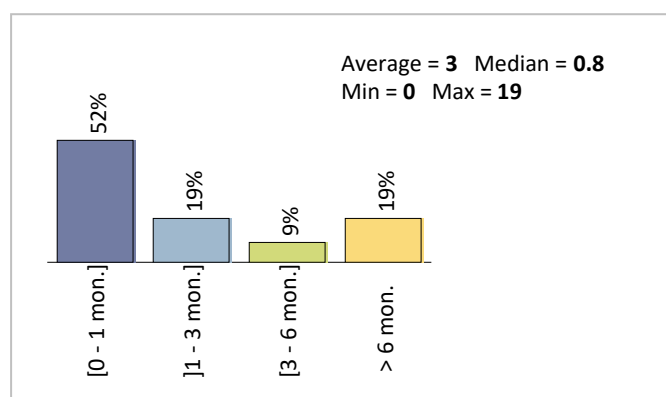
Employment held on December 1st 2019

Current employment contract type

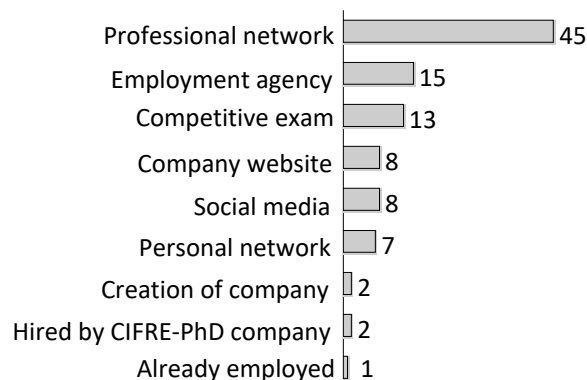|	Female	Male	Total
Permanent	14	32	46
Temporary (excl. post-doctoral)	7	10	17
Post-doctoral contract	21	19	40
ATER position	1	1	2
Adjunct position	–	–	0
Other	–	–	0
Total	**43**	**62**	**105**

Response rate: 100%

► **78%** of PhD holders were still working at the first job obtained after their PhD.

► **96.2%** of PhD holders worked full-time and **3.8%** worked part-time.

► Temporary contracts varied between **4 and 54** months, with the median duration being **18** months.

► **44%** of PhD holders had a stable job.

Time spent before 1st job

Average = 3   Median = 0.8
Min = 0   Max = 19

Response rate: 100%

Method of finding current job

Professional network	45
Employment agency	15
Competitive exam	13
Company website	8
Social media	8
Personal network	7
Creation of company	2
Hired by CIFRE-PhD company	2
Already employed	1

Response rate: 96%

Skills required for job

	N	
Staff management	56	67%
Project manager duties	51	61%
International work	48	57%
Budget management	35	42%

2 skills were cited on average

Response rate: 80%

Method of applying for current job

Response to a job offer	51
Job offer from a recruiter	28
Speculative job application	17
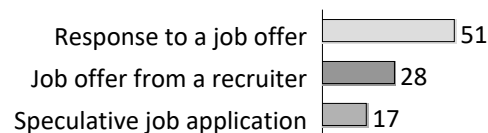
Response rate: 93%

Functions held at current job

	N	
Research and development	47	51%
Higher education and research	36	39%
Health	13	14%
Consulting, analysis, expertise	11	12%
Steering or managing projects or teams, public policy	9	10%
Research valorization and assistance, innovation	8	9%
Teaching (excluding higher education and research)	2	2%
Artistic creation	1	1%
Mediation, communication and scientific journalism	1	1%

Response rate: 89%

Employment by activity sector

Sector	Value
Teaching, research, R&D	61
Health and social affairs	12
Other	8
Industries, construction, production and distribution of energy and water	8
Specialized activities, scientific or technical, including IT, excluding R&D	8
Public administration and international organizations	4
Agriculture, forestry, fishing, aquaculture	3
Arts, entertainment and recreational activities	1

Response rate: 100%

Company categories

	N	%
Civil service	56	54%
Private company	37	36%
Public company	4	4%
A non-profit association or organization	3	3%
Your own	2	2%
Individual with an accredited or independent profession	1	1%
International organization or non-EU organization	1	1%
Other	-	0%
Total	**104**	**100%**

Response rate: 99%

Company size

	N	
0 employees	1	1%
1-9 employees	8	8%
10-249 employees	29	28%
250-4,999 employees	39	38%
Plus de 5,000 salariés	26	25%
Total	**103**	

Response rate: 98%

Employment status

	Female	Male	Total
Higher education teacher, scientific profession	20	30	50
Secondary school teacher	-	2	2
Secondary school teacher	-	-	0
Category A civil servant	-	1	1
Company head, retailer, or equivalent	-	1	1
Engineer or company technical *cadre*	14	24	38
Administrative or commercial *cadre*	2	2	4
Accredited profession, legal and technical	1	1	2
Accredited profession, medical	-	1	1
Salaried employee	1	-	1
Information, arts and entertainment profession	1	-	1
Intermediate profession, administrative and commercial	4	-	4
Total	**43**	**62**	**105**

Response rate: 100%

Salaries of PhD holders (excluding bonuses)

79% were satisfied with their salary.
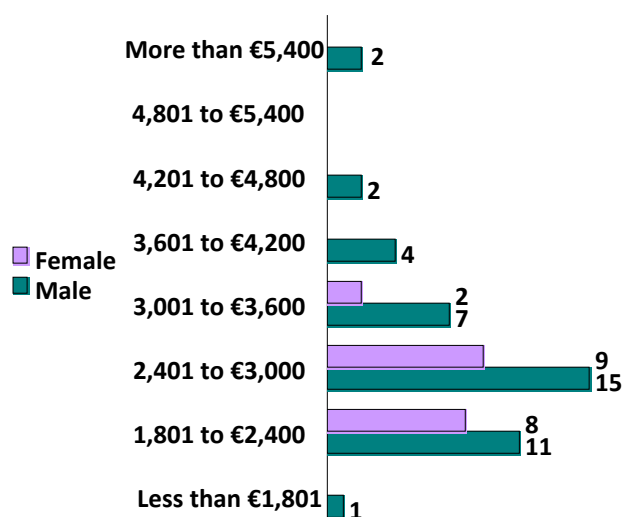
	Female	Male	**Total**
Average	**€2,525**	**€2,966**	**€2,829**
Min	**€1,845**	**€1,599**	**€1,599**
Max	**€3,444**	**€6,150**	**€6,150**
Median	**€2,583**	**€2,798**	**€2,706**

▶ The gross monthly salary of PhD holders (excluding bonuses) varied between €**1,599** and €**6,150**. The median gross salary was €**2,706***.
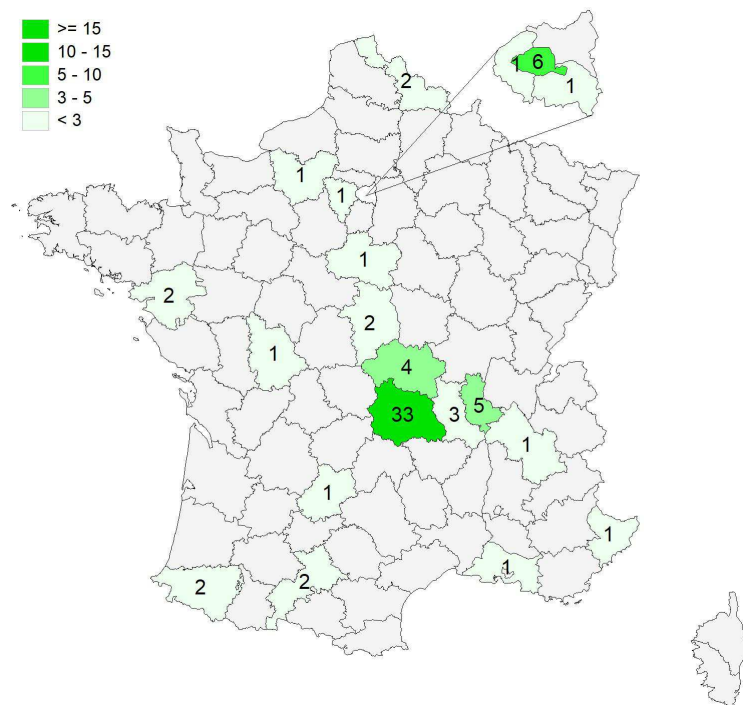
Salaries are calculated based on full-time employment. The salaries of PhD holders working abroad were not taken into account.

Bonuses

12 PhD holders specified the annual gross amount of the bonuses they received. These bonuses varied between €**600** and €**12,000**, with the median amount being **2,450 €.**

Location of employment

Numbers

Geographical distribution

Auvergne-Rhône-Alpes	**46**	**44%**
Ile-de-France	**9**	**9%**
Other departments in mainland France	**16**	**15%**
Overseas France	**0**	**0%**
Abroad:	**33**	**32%**

Belgium	**1**	**3%**
Brazil	**1**	**3%**
Burkina Faso	**1**	**3%**
Canada	**3**	**9%**
China	**1**	**3%**
Ivory Coast	**1**	**3%**
Denmark	**1**	**3%**
United States	**10**	**31%**
Gabon	**1**	**3%**
Israel	**1**	**3%**
Portugal	**1**	**3%**
United Kingdom	**2**	**6%**
Serbia	**1**	**3%**
Singapore	**1**	**3%**
Switzerland	**4**	**13%**
Czech Republic	**1**	**3%**
Tunisia	**1**	**3%**
Total	**32**	**100%**

Response rate: 99%

List of jobs occupied

		Female	Male	Total
	Researcher	16	19	35
	Research Engineer	4	8	12
	University Lecturer and Researcher	1	4	5
	Associate Professor	1	4	5
	Research and Development Engineer	3	1	4
	Research Fellow	1	2	3
	ATER	1	1	2
	Data scientist	0	2	2
	Hospital Engineer	1	1	2
	Hospital Practitioner	0	2	2
	Painter (Artist)	1	0	1
	University Hospital Assistant	1	0	1
	Medical Biologist	0	1	1
	Development Engineer	0	1	1
	Chargé de mission	1	0	1
	Incentive Measure Division Head	1	0	1
Cadre job	Reliability Project Manager	0	1	1
	Industrial Project Manager	1	0	1
	Preclinical Project Manager	0	1	1
	Psychology Consultant	1	0	1
	Software Developer	0	1	1
	Economist	1	0	1
	Ergonomist	0	1	1
	Geologist	1	0	1
	Engineer	0	1	1
	Development Engineer	0	1	1
	Civil Engineer	0	1	1
	Geotechnical Engineer	1	0	1
	Software Engineer	0	1	1
	Robotics Engineer	0	1	1
	Temporary Substitute Teacher	0	1	1
	Notary intern	0	1	1
	Teacher *agrégé*	0	1	1
	Secondary School Teacher	0	1	1
	Project Manager	0	1	1
	Research Division Manager	1	0	1
	Learning Manager	0	1	1
	Research Technician	0	1	1
	Research Manager	1	0	1
	Development Manager	1	0	1
Non *cadre* job	Chargé de mission	1	0	1
	Recruiting Commercial Consultant	1	0	1
	Project Leader	1	0	1
Total		**43**	**62**	**105**

*Response rate: **100%***

List of jobs broken down by Doctoral School

		ED LSHS	ED SVSAE	ED SEJPG	ED SF	ED SPI	Total
	Researcher	4	16	1	8	6	35
	Research Engineer	1	4	0	2	5	12
	University Lecturer and Researcher	1	0	0	0	4	5
	Associate Professor	0	2	1	1	1	5
	Research and Development Engineer	0	2	0	0	2	4
	Research Fellow	0	1	1	1	0	3
	ATER	1	0	1	0	0	2
	Data Scientist	0	0	0	0	2	2
	Hospital Engineer	0	2	0	0	0	2
	Hospital Practioner	0	2	0	0	0	2
	Painter (Artst)	0	1	0	0	0	1
	University Hospital Assistant	0	1	0	0	0	1
	Medical Biologist	0	1	0	0	0	1
	Development Manager	0	0	1	0	0	1
	Chargé de mission	0	1	0	0	0	1
	Incentive Measures Division Head	1	0	0	0	0	1
	Reliability Manager	0	0	0	0	1	1
	Industrial Project Manager	0	0	0	1	0	1
Cadre jobs	Preclinical Project Manager	0	1	0	0	0	1
	Psychology Consultant	1	0	0	0	0	1
	Software Developer	0	0	0	1	0	1
	Economist	0	0	1	0	0	1
	Ergonomist	1	0	0	0	0	1
	Geologist	0	0	0	1	0	1
	Enginer	0	1	0	0	0	1
	Design Engineer	0	1	0	0	0	1
	Civil Engineer	0	0	0	0	1	1
	Geotechnical Engineer	0	0	0	0	1	1
	Software Engineer	0	0	0	0	1	1
	Robotics Engineer	0	0	0	0	1	1
	Temporary Substitute Teacher	0	0	1	0	0	1
	Notary Intern	0	0	1	0	0	1
	Teacher agrégé	1	0	0	0	0	1
	Secondary School Teacher	1	0	0	0	0	1
	Project Manager	0	0	0	1	0	1
	Research Division Manager	1	0	0	0	0	1
	Teaching Manager	0	0	1	0	0	1
	Research Technician	0	1	0	0	0	1
	Research Assistant	0	1	0	0	0	1
	Development Manager	0	1	0	0	0	1
Non cadre jobs	Chargé de mission	0	1	0	0	0	1
	Recruiting Commercial Consultant	0	0	0	1	0	1
	Project Leader	0	0	0	1	0	1
Total		13	40	9	18	25	105

Response rate: 100%

► Job Satisfaction

87% of doctors were satisfied with their job in general.

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
General satisfaction with current professional situation	38	44	12	0
Satisfaction with prospective career development opportunities	32	36	22	4
Satisfaction with salary	27	47	15	5
Satisfaction with avenues opened by job	33	45	13	3
Satisfaction with appropriateness of job to PhD	45	36	9	4

General satisfaction with current professional situation	40%	47%	13%	
Satisfaction with prospective career development opportunities	34%	38%	23%	
Satisfaction with salary	29%	50%	16%	5%
Satisfaction with avenues opened by job	35%	48%	14%	
Satisfaction with appropriateness of job to PhD	48%	38%	10%	
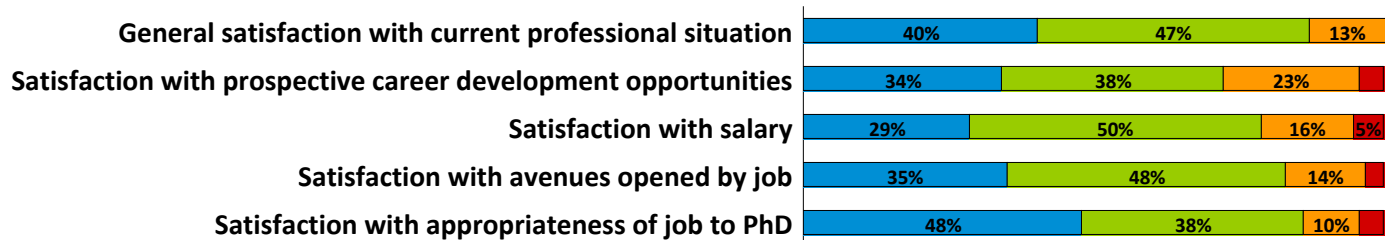
*Response rate: **90%***

69% of doctors declared that a PhD was required to perform their current job and **86%** of doctors were satisfied with the appropriateness of the job to the PhD.

GLOSSARY

ATER: Attaché Temporaire d'Enseignement et de Recherche (Temporary teaching and research assistant)

CNU: National Council of Universities to become an associate or full professor

CIFRE: Work placement agreement placing a PhD student in a company Dual-Degree Thesis Program: A dual-degree thesis is a program to promote global engagement for PhD students and to develop scientific collaboration between foreign and French research teams.

Doctoral contract: The doctoral contract is the main type of funding granted to PhD students. The doctoral contract is open to all PhD students who have been enrolled for less than six months in their first year, with no age requirement.

Post-doctoral contract: A post-doctoral contract is a temporary work contract in the public and private research sphere, in France or abroad.

PhD degree: The PhD is the highest degree in higher education, training students for research by conducting research. In this respect, it is considered a professional research experience. It leads to the creation of new knowledge

ED: Doctoral school

ED LSHS: Doctoral School of LITERATURE, HUMAN AND SOCIAL SCIENCES

ED SVSAE: Doctoral School of LIFE, HEALTH, AGRONOMY, AND ENVIRONMENTAL SCIENCES

ED SEJPG: Doctoral School of ECONOMIC, LAW, POLITICAL AND MANAGEMENT SCIENCES

ED SF: Doctoral School of FUNDAMENTAL SCIENCES

ED SPI: Doctoral School of ENGINEERING SCIENCES

MCU: Maitre de Conférence Universitaire (Associate Professor)