

# **Guide for Applicants**

## **FP-RESOMUS**

**Resolving Solvation with Molecular Ultrafast Science and Technology**

## **Fellowship Program of the**

### **NCCR MUST**

National Competence Center for Research in  
Molecular Ultrafast Science and Technology

**&**

### **Cluster of Excellence RESOLV**

### **MARIE Skłodowska-CURIE ACTIONS:**

**Co-funding of regional, national and international programmes (COFUND)**

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## 1. Introduction

**FP-RESOMUS** (Resolving Solvation with Molecular Ultrafast Science and Technology) is a joint effort of the Swiss National Center of Competence in Research Molecular Ultrafast Science and Technology (NCCR MUST) and the German Cluster of Excellence RESOLV (Ruhr Explores Solvation) for the training of experienced researchers.

It will fund a total of **50 fellowships**: each a fixed contribution of € 2'625 per month for a maximum of 2 years towards the salary of postdoctoral students employed in the NCCR MUST and RESOLV networks. The remaining part of the salary, and all other costs are provided by the hosting Principal Investigator or by the respective research network. It is essential that the research plan is developed in cooperation with the hosting Principal Investigator. Up to 25 fellowships will be granted in each of the two calls with deadlines on February 28, 2019 and September 30, 2020.

The fellowship program is embedded into the two national networks, and will **connect around 50 research groups** across the fields of chemistry, physics, material sciences, engineering, and biology, whose joint goal is to solve interdisciplinary questions in **Solvation and Molecular Ultrafast Science** using the latest available technology and theoretical insights. The structured bi-national program is set up to provide high-level, **comprehensive postdoctoral training**, giving experienced researchers ample opportunity to expand their professional knowledge, skills, and experience. The prime focus is on individual research training with supervision. Formal courses may be selected within all participating institutions. Secondment of fellows within the FP-RESOMUS networks is encouraged. Fellows are offered training in transferable skills, complemented by concrete opportunities to immediately apply evolving transferable skills.

FP-RESOMUS receives funding from the European Union's Horizon 2020 Marie Skłodowska-Curie action: "Co-funding of regional, national and international programmes" under Grant Agreement No 801459, signed November 6, 2018. The Beneficiary of the MSCA-action is the ETH Zürich. All conditions and rules for MSCA fellowships apply.

## 2. Submission

Potential candidates have three months to check their eligibility, prepare, and submit their application after the call opening date.

The first step is an eligibility check based on the general MSCA eligibility criteria. By submitting the eligibility check form on the website - not later than three weeks before the application deadline - potential applicants request a password for the submission page. Non-eligible applicants will receive an email listing the reason for rejection. If requested by the candidate (with reasons), the Management Team (MT) will re-evaluate the candidate's eligibility.

The eligibility criteria are:

- Ph.D. degree at the time of recruitment, which must have been awarded no more than 4 years prior to the application. Exceptions to the four-year rule: up to a maximum of 3 additional years can be added (i.e. start up to 7 years after doctorate degree award) for
  - parents: one additional year per child
  - other documented career breaks, such as diseases or disabilities.
- Publication record at the time of application, which shows at least one original accepted publication in press or published in a peer-reviewed journal. If the applicant is not first author of that publication a confirmation of the first author or supervisor needs to be provided that the applicant's contribution to the scientific content of the publication was highly relevant.

- Submission of a complete application package (CV, Proposal, 2 Reference Letters) before the published deadline.
- Mobility rule as defined in the MSCA Guide for Applicants (14. April 2015): Applicants must not have resided or carried out their main activity (work, studies, etc.) in Switzerland for more than 12 months in the 3 years immediately prior to the recruitment date (date when your PSI-FELLOW-II contract starts at PSI). Compulsory national service and/or short stays, such as holidays, are not taken into account.

Applications have to be made jointly by the candidate and their host, who must be a PI in the NCCR MUST or RESOLV networks, and who will act as mentor for the fellow. Applications for a fellowship can be made only through the FP-RESOMUS submission page. To apply, the following documents must be uploaded:

- The completed Personal data form (Form 1), your EuroPass CV, and two Reference Letters (Form 2), as one single PDF document.
- Research proposal: please upload your Research Proposal (Form 3) and the completed Ethical Issues Form (4) as one single PDF document.
- Additional documents: other documents such as certificates and diplomas. Please upload your PhD certificate here.

### 3. Evaluation

For each application, a referee is chosen from the Selection Committee (SeC). In addition, two external reviewers, the PI of the intended host laboratory, and – if necessary – the RESOMUS Ethics Committee will be contacted. All will be asked to provide a half-page written review, scored according to the evaluation guidelines. The external reviewers and host PI will convey their reports to the SeC referee, who determines the average score.

A ranking list for candidates based on their average scores will be discussed in a SeC meeting. Top-ranking applicants will be contacted to schedule an appointment for an interview. In addition, some candidates will be placed on a reserve list to compensate for candidate withdrawals or rejections at this stage. All other applicants will receive an evaluation report after the end of the selection process, summarizing the comments of the experts and stating the reason for rejection by e-mail. The candidates will be informed of the results of the first evaluation round no later than week 6 after call closure.

Selected candidates will be interviewed for 30 minutes by the host PI and an independent expert from one of the MUST or RESOLV partner organisations whose research is closely related to the candidate's proposal. Because of the geographical spread of the networks and the time constraints of the selection committee members and PIs, the interviews will be carried out in the intended host institution. Candidates will be interviewed using Skype whenever a face-to-face meeting within the 2-week time frame is impossible (i.e. due to long distances, visa requirements etc.). The interview will be evaluated and graded by the interviewers according to the criteria set out in section 4. They will write a half-page report with their grades and convey the reports to the SeC. The SeC ranks the candidates and decides on the applications. Up to 25 of the highest ranked candidates will be informed by the MT of the outcome by email and regular mail, no later than week 10 after the call deadline.

For both calls up to 25 successful applicants will be invited to sign an acceptance letter (approx. 3 months after the application deadline). They will have a maximum of 6 months from the signature date to relocate to the host laboratory, taking the eligibility conditions into account. Unsuccessful applicants will be informed about the strengths and weaknesses of their applications once the selection process is complete.

## 4. Selection process

The criteria by which the evaluation committee will judge the applications are listed below. The experts will be instructed accordingly ahead of the evaluation process.

**Evaluation of the online application.** The SeC referee, two external reviewers, and the host PI will assess the candidate's online application broken down into the following aspects:

- Competence based on previous training and publication records,
- Scientific quality, innovativeness and impact,
- Suitability of the methods,
- Feasibility, risks, expected difficulties,
- Synergies with the host lab, and
- Compatibility with the career goals of the applicant

All proposals will be screened for potential ethics issues that may arise, in addition to the issues identified by the applicants themselves using the "Ethics Issues Table" (see Section 5, below).

**Evaluation of the interview:** The interview will consist of a brief project presentation by the candidate, followed by questions addressing each aspect outlined above. It will be evaluated using the following criteria:

- Presentation of the project (didactic and communication skills)
- Defence of the project (answers to questions)
- Motivation for the project
- Interest in a research/teaching career
- English fluency

Within 12 weeks after application deadline, a final ranking list will be published by the candidates ID numbers on the webpage and the applicants will be informed by personal mail. Successful applicants will be invited to sign an acceptance letter and have a maximum of 6 months from the signature date to relocate to the host laboratory.

## 5. Ethical Issues

All proposals will be screened for potential ethics issues that may arise, in addition to the issues identified by the applicants themselves using Form 4\_Ethical Issues. The applicant has to state on Form 4\_Ethical Issues, whether the intended research requires authorization or notification. With this filled out form and his or her signature on the cover sheet, the applicant confirms that he or she is aware of the legal regulations at federal and regional level relevant to the research project. Once a fellowship has been accepted for funding, copies of the authorization or notification must be sent to the Offices of Research of the respective host institutions.

This form also lists the research areas excluded under Horizon 2020, which therefore, are also excluded in this program. Instructions as to how to proceed if the intended research needs authorization or notification can be obtained from the FP-RESOMUS management. This applies in particular for research on humans, research on human embryonic stem cells, research on animals, research on GMO or pathogens and research in developing countries.

## 6. Appointment conditions of selected fellows

The FP-RESOMUS fellows will be employed with a contract in accordance to the European Charter for Researchers and to the Code of Conduct for the Recruitment of Researchers.

- *Employment conditions:* The employment conditions will be according to Swiss and German national rules, in line with the universities' regulations for employment of postdoctoral researchers. This guarantees that researchers enjoy fair and attractive conditions of funding and salaries with adequate and equitable social security provisions (accident insurance, continuation of salary in case of accident or illness, maternity leave, contribution to the pension plan and family allowance, pension rights and unemployment benefits) in accordance with existing Swiss and German national laws. Swiss employment contracts further include a general accident insurance.
- *Stability and permanence of employment:* Swiss and German national law ensures that employment contracts are binding. The fellowship is granted for a restricted period of two years. The full costs of employment after the end of the Fellowship must be financed from other sources.
- *Working conditions:* Appropriate working conditions including access to supervision, infrastructure (offices, lab space), equipment, general support, and all other requirements of a postdoctoral fellow are guaranteed. All network partners ensure that the fellows have the same working conditions, standards of safety and occupational health as local employees holding similar positions.
- *Compatibility of family and work:* RESOMUS partners will ensure that both female and male researchers are able to combine family and work. In this context, particular attention will be paid, inter alia, to flexible working hours.
- *Support and infrastructure:* Most participating institutions have Welcome Centres or International Offices to support international researchers. Services offered include help in finding housing, collecting all required documentation for the research stay, and providing counselling in relevant issues (i.e. health insurance), a service centre for parents, and childcare on campus, such as a new model Campus day care centre at RUB with flexible opening times adjusted to the needs of scientists. The FP-RESOMUS management team and the project offices are also available for hands-on support. Besides administrative services, all Swiss and German Universities offer a broad range of sports and leisure activities at the campuses, which are either free of charge for FP-RESOMUS fellows, or available at low cost.
- The fellows will be free to move temporarily to other institutions within the FP-RESOMUS network for performing parts of his project. A main advantage of the NCCR MUST and RESOLV networks for a postdoctoral program is the well-established partnership between the participating institutes. Research activities can be supported by inter-group platforms providing assistance for planning and realization of experiments. All facilities and technical support (for example computer science services for simulation and modeling) will be established during the initial phase of the program.
- In Switzerland, health insurance has to be paid by the fellows, and having a health assurance is obligatory. Administrative support in addressing this and similar questions will be provided by the different institutions. Conditions are subject to each University and Swiss Cantonal regulations. Further, social insurance costs vary between Cantons leading to negligible discrepancies in the overall cost of fellowships across Switzerland. Germany has a statutory health system. Half of the health insurance is paid by the employer and the other half by the employee. The health insurance contribution is a percentage share of the salary (ca. 15%).

## 7. Gender aspects

FP-RESOMUS will strive to increase the proportion of women, which is still low in the relevant scientific disciplines by using the MUST and RESOLV networks to advertise these positions widely to women scientists. Both RESOLV and the NCCR MUST are led by female directors committed to increasing women researchers' participation in science. Accordingly, they have initiated equal opportunities programmes within their networks, organising biennial international women scientist meetings to provide role models and encourage and coach young, female scientists in networking. The postdoc period is the transition phase when

scientists, and especially women, are most likely to leave the academic career. Once recruited, the scientists will be embedded in established support structures for women scientists at both universities.

## 8. Career guidance and training

### *Supervision arrangements*

Fellows will be integrated into the host research group and – based on a **mentorship model** – assigned a supervisor (typically the PI or a senior scientist) responsible for providing support and guidance for personal and professional development of each fellow. All of the Principal Investigators in RESOLV and the NCCR MUST are highly experienced group leaders. The well-established networks provide extensive opportunities for feedback and advice from other PIs, or for collaborative projects requiring the expertise from more than one field. A Personal Career Development Plan (PCDP), drafted at the beginning of the fellowship by the fellow and host PI, will include the fellow's career goals, a description of the aims and outline of the individual research project, and a list and schedule of envisioned training courses and other scientific activities. The plan will allow specifying more general objectives for professional and personal development. It will be adapted and refined jointly by the fellow and host PI on a yearly basis (at least in fellowship months 0, 12, and 24).

### *Training in professional and transferable skills*

Suitable professional and complementary skills training will be provided by the FP-RESOMUS network as part of the Career Development Plan for researchers (Figure 6). The training consists of five key elements:

1. Formal training through local and network-wide courses, seminars, and graduate schools. All host institutions offer excellent local **training opportunities** for young researchers. These include special lectures such as the RESOLV colloquia, MUST and FAST seminars, the MUST and RESOLV annual meetings, the Paul Scherrer Institute (PSI) and Graduate School of Solvation Science (GSS) summer schools, training events organised by the fellows themselves, and workshops to strengthen skills in the field of scientific writing, presentation, communication, proposal writing, reviewing, self- or time management
2. Individual research training with supervision. In their individual research projects, postdoctoral fellows will be encouraged to develop a clear scientific profile, managing their research from the initial proposal to the final publications.
3. Training through interfaculty mobility and secondment. Fellows are encouraged to spend part of their two-year fellowship at another host institution (**secondment**), whenever there is a specific benefit to the project or training goals. Funded exchanges may last up to six months.
4. Training in transferable skills. A central objective of the FP-RESOMUS postdoctoral programme is to offer local and network-wide opportunities for fellows to obtain training in complementary skills. These comprise courses in languages, management of research projects, supervision and leadership skills, commercial exploitation of results, intellectual property rights, communication to non-expert audiences, participation in outreach events, development of teaching skills and training techniques, and specific MUST and RESOLV courses for women in research. Suitable courses can be selected from the programme of network universities. In addition, the FP-RESOMUS fellows will have a budget allocated to organising individual and joint training activities within the framework of the RESOMUS fellows' board (see under 5. below).
5. Immediate application of new transferable skills. Special care will be taken to provide fellows with a range of opportunities to put into practice the teaching, communication and management skills delineated above. Fellows will be encouraged to participate in international conferences and scientific workshops in order to further enhance their presentation and communication skills and to expand the scope of their scientific interactions. Fellows are expected to take charge of the organisation of seminars, workshops, and summer schools via the RESOMUS fellows' board.

**RESOMUS fellows' board** (RFB). The fellows will self-organise, initially as a LinkedIn group. During a “kick-off” meeting to take place in autumn 2019 after all fellows in Call 1 have started their projects, the general assembly of RESOMUS fellows will elect their own board to represent their interests and needs. By developing participative structures within flat hierarchies from the very beginning of the socialisation of researchers into the scientific community, FP-RESOMUS will train and consolidate leadership skills and foster independence, e.g. with respect to supervising graduate students, at an early career stage. The RFB will consist of four members, and will elect a speaker as their representative. The RFB will have its own budget, and be responsible for organising training activities according to individual needs, including e.g. career guidance in academia or industry, leadership, time and financial management, or other soft skills. RFB meetings and the self-organised workshops/seminars will usually be satellite meetings of the annual MUST/RESOLV meetings.