Proposal Evaluation Form

EUROPEAN COMMISSION

Horizon 2020 - Research and Innovation Framework Programme

Evaluation Summary Report

Call: H2020-MSCA-IF-2018
Type of action: MSCA-IF-GF
Proposal number: 840217
Proposal acronym: SAPIENTIAM
Duration (months): 24
Proposal title: Secondary organic Aerosols Production in pre and post-Industrial-like ENvironments : The Impact of biogenic and Anthropogenic emissions on cliMate
Activity: GF-ENV

N.	Proposer name	Country	Total Cost	%	Grant Requested	%
1	UNIVERSITA DEGLI STUDI GABRIELE D'ANNUNZIO DI CHIETI-PESCARA	IT	85,736.64	50.92%	85,736.64	50.92%
2	PRESIDENT AND FELLOWS OF HARVARD COLLEGE	US	82,632.96	49.08%	82,632.96	49.08%
	Total:		168,369.6		168,369.6	

Abstract:
Anthropogenic emissions (i.e. particles and trace gases) are constantly rising since the industrialization inducing wide changes on the climate of the Earth system, on local degradation of air quality and impactAnthropogenic emissions (i.e. particles and trace gases) are constantly rising since the industrialization inducing wide changes on the climate of the Earth system, on local degradation of air quality and impacting human health. The aim of the SAPIENTIAM project is to identify new mechanisms that allow to describe the preindustrial atmospheric status and its change as consequence of the human activities emission related to industrialization.
Secondary organic particles are produced in the atmosphere by the reactions of biogenic volatile organic compounds in presence of nitrogen oxides (NOx) and sulfate (SO2). One of the main uncertainties of the role of particles on the changes of climate and air quality, is related to the impact of anthropogenic emissions on their concentrations and properties.
In order to define new mechanisms of atmospheric particle formation in pre-industrial and post-industrial conditions, a laboratory experiment will be carried out at the Harvard Environmental Chamber (outgoing phase). In detail, the pristine pre-industrial-like environment's atmosphere will be simulated in the chamber considering first only the biogenic emissions and, then, adding the contribution of anthropogenic emissions such as NOx and SO2. Recent studies highlighted the important role played by the ocean as potential source of atmospheric particle, but field observations to confirm this hypothesis are quite rare. Another aim of this project is to verify the results obtained by the laboratory experiments in a field campaign in marine environment representing an innovative post-industrial-like site, where the interaction between biogenic and anthropogenic emissions are poorly explored (return phase at the University of Chieti-Pescara, Ud'A)

Evaluation Summary Report

Evaluation Result

Total score: 98.40% (Threshold: 70/100.00)

Form information

SCORING

Scores must be in the range 0-5.

Interpretation of the score:

***0– The proposal fails to address the criterion** or cannot be assessed due to missing or incomplete information.*

***1– Poor.** The criterion is inadequately addressed, or there are serious inherent weaknesses.*

***2– Fair.** The proposal broadly addresses the criterion, but there are significant weaknesses.*

***3– Good.** The proposal addresses the criterion well, but a number of shortcomings are present.*

***4– Very good.** The proposal addresses the criterion very well, but a small number of shortcomings are present.*

***5– Excellent.** The proposal successfully addresses all relevant aspects of the criterion.Any shortcomings are minor.*

* - mandatory fields

Criterion 1 - Excellence

Score: **4.90** (Threshold: 0/5.00 , Weight: 50.00%)

• Quality and credibility of the research/innovation project; level of novelty, appropriate consideration of inter/multidisciplinary and gender aspects
• Quality and appropriateness of the training and of the two way transfer of knowledge between the researcher and the host
• Quality of the supervision and of the integration in the team/institution
• Potential of the researcher to reach or re-enforce professional maturity/independence during the fellowship

Strengths:

- The proposal demonstrates a good state-of-the-art analysis of studies on secondary organic aerosol formation and evaluation of the global atmospheric particles budget.
- The research methodology is very well described and is in line with the goals of the project.
- Interdisciplinary aspects are appropriately addressed.
- Innovative aspects are ambitious, excellent and fully convincing.
- The two-way transfer of knowledge at the third country host is of exceptional quality, carefully planned and highly convincing.
- The proposal provides a detailed description of how knowledge acquired in the third country will be transferred back to the European host institution.
- Good complementarity between the researcher and the participating organisation is clearly demonstrated.
- Both supervisors have strong expertise documented by a very good publication record, teaching and mentoring activities, capability to obtain funds and manage international projects.
- The researcher has a good publication record and possesses appropriate skills and expertise in the field of the proposed research. The researcher also has good experience in international collaborations and shows initiative towards research and teaching activities.

Weaknesses:
- Measures taken to integrate the researcher in the different areas of expertise and disciplines are not sufficiently described for both the outgoing and the return phase.

Criterion 2 - Impact

Score: **4.90** (Threshold: 0/5.00 , Weight: 30.00%)

• Enhancing the future career prospects of the researcher after the fellowship
• Quality of the proposed measures to exploit and disseminate the project results
• Quality of the proposed measures to communicate the project activities to different target audiences

Strengths:
- The proposal appropriately emphasises the potential impact of the project on the researcher's career, highlighting the researcher's potential to become an attractive candidate for scientific positions in the field of atmospheric research.
- A longer term career path for the researcher is adequately addressed.
- The dissemination and exploitation of scientific results in interdisciplinary high impact journals and at relevant conferences is fully appropriate.
- The communication strategy is adequately detailed and focuses on activities and measures to interact with different target audiences. Public engagement through various channels (e.g. interactive web site, media, etc.) is clearly presented.
- The planning for the dissemination and communication activities is detailed in the Gantt chart.

Weaknesses:
- Additional future opportunities for the researcher are not described in sufficient detail.

Criterion 3 - implementation

Score: **5.00** (Threshold: 0/5.00 , Weight: 20.00%)

• Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources
• Appropriateness of the management structure and procedures, including risk management
• Appropriateness of the institutional environment (infrastructure)

Strengths:
- The work plan is well structured and coherent with the objectives of the proposal. It includes an appropriate number of work packages, milestones and deliverables.
- The timeline described in the proposal is reasonable and credible. Work planning and mobilised resources are fully appropriate to assure the attainment of the research and training objectives.
- A credible management approach is proposed for the project, including targeted meetings involving relevant parties.
- The risk management plan and associated contingency plan is appropriately developed, contributing to a successful implementation of the project.
- The European host organisation and the partner institution in the third country offer complementary research experience and expertise relevant to the project implementation.

Weaknesses:
No significant weaknesses.

Scope of the proposal

Status: **Yes**

Comments (in case the proposal is out of scope)

Not provided

Operational Capacity

Status: **Operational Capacity: Yes**

If No, please list the concerned partner(s), the reasons for the rejection, and the requested amount.

Not provided

Use of human embryonic stem cells (hESC)

Status: **No**

If yes, please state whether the use of hESC is, or is not, in your opinion, necessary to achieve the scientific objectives of the

proposal and the reasons why. Alternatively, please state if it cannot be assessed whether the use of hESC is necessary or not because of a lack of information.

Not provided

Overall comments

Not provided

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