



# ESR 12 Information Sheet

**Project title:** Development of advanced online dosimetry algorithms for photodynamic therapy of tumours.

**Host institution/company:** SpectraCure AB (Sweden).

## Supervisors

- *Academic:* Dr. Nina Reistad, Division of Atomic Physics, Department of Physics, Lund University.
- *Industrial:* Dr. Johannes Swartling, Spectracure AB.

**Type of contract:** 36-months full-time research grant within the PHAST-ETN project.

**Brief description of the project:** SpectraCure is a world-leader in research and development of dosimetry algorithms for photodynamic therapy (PDT) of internal cancer tumours. The work is conducted in collaboration with academic groups and hospitals in Europe and North America. The objective of the ESR project is to further develop the dosimetry algorithms that are now used in clinical trials, by retrospective analysis of the treatment outcome and improvement of the models and numerical methods in the algorithms. The activity will include analysis of medical data, optimization, model development and software implementation, tissue optical measurements, and field work in clinics.

Planned secondments at **Lund University** (Sweden), **Politecnico di Milano** (Italy), and **Tyndall Institute** (Ireland).

## Qualifications

### *Essential*

- Applicants should hold or expect to attain, as a minimum an MSc in Electronics, Optical Engineering or Photonics, Physics, Computer Science, or related area.

## Knowledge and Experience

### *Essential*

- A demonstrated knowledge of at least two of the following: photonics, spectroscopy, lasers, data analysis, computational methods or computer science.

### *Desirable*

- Research project carried out in at least one of the above disciplines.

## Skills and Competencies

### *Essential*

- Applicants whose first language is not English must submit evidence of competency in English.
- Evidence of interest, aptitude and research experience in the above disciplines.

## Further information

For any informal queries, please contact Dr. Johannes Swartling by email at [jsw@spectracure.com](mailto:jsw@spectracure.com).

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For queries relating to the application and admission process please contact [phast-etn@unipr.it](mailto:phast-etn@unipr.it). Website: <http://www.phast-etn.unipr.it>