



Ultrabright Turn-on Fluorescent Organic Nanoparticles for Amplified Molecular Sensing in Living Cells

Fact Sheet

Project Information

BrightSens

Grant agreement ID: 648528

[Project website](#)

DOI

[10.3030/648528](https://doi.org/10.3030/648528)

Project closed

EC signature date

28 May 2015

Start date

1 June 2015

End date

30 November 2020

Funded under

EXCELLENT SCIENCE - European Research Council (ERC)

Total cost

€ 1 999 750,00

EU contribution

€ 1 999 750,00

Coordinated by

UNIVERSITE DE STRASBOURG



France

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Project description

Fluorescent nanoprobe for amplified biosensing

Scientists explore cell functions by analysing how diverse components, including biomolecules and multiple organelles, interact with one another. Traditionally, this entails tracking and visualising individual biomolecules within living cells using fluorescent probes. However, the limited brightness of existing fluorescent probes hampers molecular detection, creating technical challenges. Funded by the European Research Council, the BrightSens project will develop ultrabright fluorescent organic nanoparticles capable of converting a single molecular recognition event into an optical response of hundreds of encapsulated dyes. Thus, a concept of signal amplification based on fluorescent nanoparticles is proposed to boost sensitivity of bio-detection. These nanoparticles hold immense potential for the detection of membrane receptors and intracellular RNA in cancer cells, thus opening new opportunities in biomedical research.

Fields of science (EuroSciVoc)

[natural sciences](#) > [biological sciences](#) > [biochemistry](#) > [biomolecules](#) > [nucleic acids](#)

[natural sciences](#) > [chemical sciences](#) > [physical chemistry](#) > [photochemistry](#)

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Programme(s)

Topic(s)

[ERC-CoG-2014 - ERC Consolidator Grant](#)

Call for proposal

[ERC-2014-CoG](#) 

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Funding Scheme

[ERC-COG - Consolidator Grant](#)

Host institution



UNIVERSITE DE STRASBOURG

Net EU contribution

€ 1 496 725,00

Total cost

€ 1 999 750,00

Address

RUE BLAISE PASCAL 4

67081 Strasbourg

 **France** 

Region

Grand Est > Alsace > Bas-Rhin

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

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Beneficiaries (2)



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Total cost

€ 1 999 750,00

THIRD-PARTY

CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

 France

Net EU contribution

€ 503 025,00

Address

RUE MICHEL ANGE 3
75794 Paris 

Region

Ile-de-France > Ile-de-France > Hauts-de-Seine

Activity type

Research Organisations

Links

- [Contact the organisation](#)  [Website](#) 
- [Participation in EU R&I programmes](#) 

Total cost

€ 503 025,00

Last update: 7 December 2023

Permalink: <https://cordis.europa.eu/project/id/648528>

European Union, 2025