Nanostructured molecular decoders for the quantitative, multiplexed, layer-by-layer detection of disease-associated proteins

Résultats

Informations projet

Immuno-NanoDecoder

N° de convention de subvention: 645684

DOI
10.3030/645684

Projet clôturé

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10 Novembre 2014

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1 Avril 2015

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31 Mars 2019

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€ 441 000,00

Contribution de l'UE
€ 441 000,00

Coordonné par
UNIVERSITA DEGLI STUDI DI ROMA TOR VERGATA
Italy

CORDIS fournit des liens vers les livrables publics et les publications des projets HORIZON.

Les liens vers les livrables et les publications des projets du 7e PC, ainsi que les liens vers certains types de résultats spécifiques tels que les jeux de données et les logiciels, sont récupérés dynamiquement sur OpenAIRE.

Livrables

Documents, reports (10)

D6.1.3
Minute conference calls for coordination of visiting periods

D2.7
The deliverable lead is the partner Temple University. Lecture notes on computational docking.

D1.7
Lecture notes on high performance computing.

D6.1.4
Minute conference calls for coordination of visiting periods

D6.1.1
Minute conference calls for coordination of visiting periods

D6.1.7
Minute conference calls for coordination of visiting periods

D6.1.6
Minute conference calls for coordination of visiting periods

D6.3.1
Submitted grant proposals to European Community, NSF and NIH (USA), etc.

D6.1.5
Minute conference calls for coordination of visiting periods

D6.1.2
Minute conference calls for coordination of visiting periods

Other (11)

D3.3
Enabling technique for the decoration of DNA nanostructures with proteins.

D2.8

The deliverable lead is the partner Temple University. Computational codes to analyse long MD trajectories.

D5.3
Standardized protocols for the use of the immune-device for the study of GAA and autophagy associated proteins in cultured cells.

D4.2
The deliverable lead is the partner CONICET. Feedback on the functions of large nanodecoders (5-30 fluorescent dyes) for detecting MAGE proteins in cells and histological tissue samples.

D5.2
Feedback on the functions of large nanodecoders (5-30 fluorescent dyes) for detecting glycogenosis type II-related proteins in cells.

D1.8
Computational codes to setup coarse-grain simulations.

D4.1
The deliverable lead is the partner CONICET. Feedback on the functions of small nanodecoders (1-5 fluorescent dyes) for detecting MAGE proteins in cells and histological tissues samples.

D5.1
Feedback on the functions of small nanodecoders (1-5 fluorescent dyes) for detecting glycogenosis type II-related proteins in cells.

D5.4
Identification of possible therapeutic small molecules able to restore GAA expression and revert the pathological cellular phenotype.

D3.1
Protocols and sequences for the synthesis of a universal DNA-protein linker for nanodecoders based on DNA nanoparticles.

D3.2
Protocols and sequences for the synthesis of a universal DNA-protein linker for nanodecoders based on DNA origami.

Demonstrators, pilots, prototypes (17)

D5.5
Training of young researchers on cell culture-related techniques and advanced cells imaging.

D1.1
Immuno-nanodecoders based on a single DNA probe functioning with hybridization reactions.

D6.4.1
Seminars held at industries and SME.

D1.2
Immuno-nanodecoders based on complex DNA nanostructure, comprising several DNA probes, and functioning with hybridization reactions.

D2.6
The deliverable lead is the partner Temple University. Characterization of the molecular factors affecting catalytic efficiency of RNase H

D2.3
The deliverable lead is the partner Temple University. Training young scientist on experimental methods for studying the behaviour of DNA:RNA nanostructures in solution.

D2.5
The deliverable lead is the partner Temple University. Structure of the catalytically active complex between RNase H and the nanodecoder

D4.3
The deliverable lead is the partner CONICET. Training and exchange-I for researches not involved in biomedical issues (by M.12). The availability of the device is scheduled for month 18, so the results obtained from task 4.1 and 4.2 are expected for months 24-30.

D2.2
The deliverable lead is the partner Temple University. Immuno-nanodecoders based on complex DNA:RNA nanostructures, comprising several DNA probes, and functioning with DNA:RNA hybridization and RNase H enzymatic reactions.

D1.5
Characterization of the global structural constraints to design nanodecoders.

D3.4

Training junior researcher in sequence selective conjugation of protein-DNA nanostructures.

D1.6
Characterization of the molecular factors affecting accessibility of the stem-loop to on- and off-code.

D2.4
The deliverable lead is the partner Temple University. Training young scientist on experimental methods for studying the behaviour of DNA:RNA nanostructures on surfaces.

D1.4
Training young scientist on experimental methods for studying the behaviour of DNA nanostructures on surfaces.

D2.1
The deliverable lead is the partner Temple University. Immuno-nanodecoders based on a single DNA probe, and functioning with DNA:RNA hybridization and enzymatic reactions.

D4.4
The deliverable lead is the partner CONICET. Training and exchange-II for researches involved in WP5.

D1.3
Training young scientist on experimental methods for studying the behaviour of DNA nanostructures in solution.

Publications

Peer reviewed articles (3)

Modular assembly of proteins on nanoparticles
Auteurs: Wenwei Ma, Angela Saccardo, Danilo Roccatano, Dorothy Aboagye-Mensah, Mohammad Alkaseem, Matthew Jewkes, Francesca Di Nezza, Mark Baron, Mikhail Soloviev, Enrico Ferrari
Publié dans: Nature Communications, Numéro 9/1, 2018, ISSN 2041-1723
Éditeur: Nature Publishing Group
DOI: 10.1038/s41467-018-03931-4

Protein Conjugation to Nanoparticles by Designer Affinity Tags

Auteurs: W. Ma, D. Aboagye-Mensah, M. Soloviev, B. Davletov, E. Ferrari
Publié dans: Materials Today: Proceedings, Numéro 4/7, 2017, Page(s) 6923-6929, ISSN 2214-7853
Éditeur: Elsevier
DOI: 10.1016/j.matpr.2017.07.021

Teixobactin analogues reveal enduracididine to be non-essential for highly potent antibacterial activity and lipid II binding

Auteurs: Anish Parmar, Abhishek Iyer, Stephen H. Prior, Daniel G. Lloyd, Eunice Tze Leng Goh, Charlotte S. Vincent, Timea Palmai-Pallag, Csanad Z. Bachrati, Eefjan Breukink, Annemieke Madder, Rajamani Lakshminarayanan, Edward J. Taylor, Ishwar Singh
Publié dans: Chemical Science, Numéro 8/12, 2017, Page(s) 8183-8192, ISSN 2041-6520
Éditeur: Royal Society of Chemistry
DOI: 10.1039/c7sc03241b

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Permalink: https://cordis.europa.eu/project/id/645684/results/fr