Target binders

Fact Sheet

Project Information

TARGETBINDER
Grant agreement ID: 278403
Status
Closed project
Start date
1 January 2012
End date
31 December 2014

Funded under
FP7-HEALTH
Overall budget
€ 5 553 931
EU contribution
€ 3 988 730

Coordinated by
KARLSRUHER INSTITUT FUER TECHNOLOGIE

Germany

Objective

We want to further develop our tools and technologies for high-throughput research, with the final goals being (I.) the particle-based combinatorial synthesis of 1 Mio different peptides on a glass slide for chemical costs of ~50€ (KIT, CBL, MS, TUV), and (II.) the labelling-free parallel readout of binding affinities by a variant reflectometric interference spectroscopy method for ~10.000 peptide spots per cm(+2) when staining the array with an unlabeled protein (BIA, KIT). These tools provide the basis (III.) for a standardized, fast, and reliable high-throughput procedure that we want to develop in order to find high-affinity peptide binders against any pharmaceutically interesting target protein. Such a procedure might have an important impact in medicine and in the biotechnology industry. In order to achieve this goal, we will use display techniques that in combination with high-throughput sequencing typically will identify ~100.000 putative peptide binders per target protein (ISO). These will be synthesized in array format to validate binding to the target protein by an independent method (PPP, DKFZ). Next, based on binders
from initial screens, many variant peptides are synthesized in high-density array format for iterative screens (PPP, DKFZ, KIT), whereby massive parallel labelling-free detection of binders pinpoints higher-affinity binders (BIA). In order to validate our novel high-throughput procedure, (IV.) we want to find high-affinity peptide binders against relevant target proteins (delivered by APO and OXF), and test these binders in biological assays (OXF, APO).

Field of science

/natural sciences/chemical sciences/analytical chemistry/spectroscopy
/natural sciences/biological sciences/biochemistry/biomolecules/proteins

Programme(s)

Topic(s)

Call for proposal

FP7-HEALTH-2011-two-stage

Funding Scheme

CP-FP - Small or medium-scale focused research project

Coordinator

KARLSRUHER INSTITUT FUER TECHNOLOGIE

Address

Kaiserstrasse 12
76131 Karlsruhe
Germany

Activity type

Higher or Secondary Education Establishments

EU contribution

€ 609 050

Website

Contact the organisation

Administrative Contact

Natascha Wallburg (Ms.)

Participants (9)

ISOGENICA LTD
<table>
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<tr>
<td>Center for Advanced Bioanalysis GmbH</td>
<td>Austria</td>
<td>€ 549 000</td>
<td>Scharitzerstrasse 6-8, 4020 Linz</td>
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<td>PEPperPRINT GmbH</td>
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<td>Guenther Proll (Dr.)</td>
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**THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD**

- **United Kingdom**
- **EU contribution**: € 499 980

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<td>Stephen Conway (Dr.)</td>
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**Apogenix**

- **Germany**
- **EU contribution**: € 400 000

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<td>Jürgen Gamer (Dr.)</td>
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**DEUTSCHES KREBSFORSCHUNGSZENTRUM HEIDELBERG**

- **Germany**
- **EU contribution**: € 130 000
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**Website** [Link](#)  
**Administrative Contact**  
Bettina Crispin (Ms.)  

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**MICROSYSTEMS LTD**  
**Bulgaria**  
**EU contribution**  
€ 100 000  

**Address**  
Kv. Chaika 15-D-21 9010 Varna  

**Activity type**  
Private for-profit entities (excluding Higher or Secondary Education Establishments)  

**Website** [Link](#)  
**Administrative Contact**  
Nikolay Nikolov (Mr.)  

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**TECHNICAL UNIVERSITY OF VARNA**  
**Bulgaria**  
**EU contribution**  
€ 70 200  

**Address**  
Studentska 1 9010 Varna  

**Activity type**  
Higher or Secondary Education Establishments  

**Website** [Link](#)  
**Administrative Contact**  
Jordan Kolev (Prof.)  

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**Last update:** 3 January 2018  
**Record number:** 101793  

**Permalink:** [https://cordis.europa.eu/project/id/278403/](https://cordis.europa.eu/project/id/278403/)  
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