

**REDDSTAR**

**Project ID:** 305736  
**Funded under:** FP7-HEALTH

---

**Repair of Diabetic Damage by Stromal Cell Administration**

From **2012-11-01** to **2016-10-31**, closed project | REDDSTAR Website

---

### Project details

| **Total cost:** | EUR 8 190 280,80 |
| **EU contribution:** | EUR 5 894 387 |
| **Coordinated in:** | Ireland |

| **Topic(s):** | HEALTH.2012.2.4.3-1 - Innovative approach to manage diabetes |
| **Call for proposal:** | FP7-HEALTH-2012-INNOVATION-1 |

| **Related information** |

**Result In Brief**  
Stromal cell hope for diabetes treatment

**Report Summaries**  
Final Report Summary - REDDSTAR (Repair of Diabetic Damage by Stromal Cell Administration)

---

**Objective**

50 million diabetic EU citizens are using approved anti-diabetic agents to control their glycaemia. However, suboptimal glycemic control leads to 6 progressive diabetic complications, namely: nephropathy, retinopathy, cardiomyopathy, neuropathy and foot ulceration. In 2010, 11% of EU adult deaths (634,000) were caused by diabetic complications. These distinct disorders have few effective medicines and present challenging management issues for clinicians. Stromal Stem Cells (SSC) are a mixed population of plastic-adherent (PA) cells isolated from adult bone marrow. PA-SSC secrete potent immunosuppressive and angiogenic proteins and over 100 clinical trials are testing PA-SSC in 40 distinct autoimmune and ischemic diseases. Notably, preclinical studies show a single intravenous administration of un-modified PA-SSC can control rodent hyperglycaemia, prompting 10 recent clinical safety studies in diabetic patients. REDDSTAR will comprehensively examine if SSC can safely repair all 6 damaged tissues and control glycaemia in three different species. To facilitate this we identified an antibody (S2) that prospectively isolates comparable, equivalent S2+ SSC from human, rat, mouse and rabbit marrow, enabling testing of pure S2+/+ SSC and mixed PA-SSC from each species for the first time. Furthermore, separation of PA-SSC into S2+ and S2- fractions reveal functionally distinct populations. REDDSTAR partners have collectively developed five distinct clinically-relevant in vivo models of the 6 key diabetic complications. We will assess if S2+, S2- and PA-SSC exert differing control of glycaemia and tissue repair in each model. Finally, REDDSTAR partners are developing the first benchtop GMP-grade nanosorter, enabling clinical purification of S2+ and S2- SSC for human safety trials. We will dissect how S2+ and S2- SSC simultaneously repair tissue damage and maintain glycemic control, an effect not observed with any current therapy.

---

**Total cost:** EUR 8 190 280,80  
**EU contribution:** EUR 5 894 387  
**Coordinated in:** Ireland  
**Topic(s):** HEALTH.2012.2.4.3-1 - Innovative approach to manage diabetes  
**Call for proposal:** FP7-HEALTH-2012-INNOVATION-1  
**Funding scheme:** CP-FP - Small or medium-scale focused research project

---

**Result In Brief**

Stromal cell hope for diabetes treatment

**Report Summaries**

Final Report Summary - REDDSTAR (Repair of Diabetic Damage by Stromal Cell Administration)
Coordinator
NATIONAL UNIVERSITY OF IRELAND GALWAY
UNIVERSITY ROAD
H91 GALWAY
Ireland
Eu contribution: EUR 1 073 192
See on map

Activity type: Higher or Secondary Education Establishments

Administrative contact: Mari Vahey
Tel.: +353 91 495939
Contact the organisation

Participants
THE QUEEN'S UNIVERSITY OF BELFAST
UNIVERSITY ROAD LANYON BUILDING
BT7 1NN BELFAST
United Kingdom
Eu contribution: EUR 550 523
See on map

Activity type: Higher or Secondary Education Establishments

Administrative contact: Colleen Spence
Tel.: +44 28 9097 5183
Fax: +44 28 9097 5182
Contact the organisation

UNIVERSIDADE DO PORTO
PRACA GOMES TEIXEIRA
4099 002 PORTO
Portugal
Eu contribution: EUR 301 747
See on map

Activity type: Higher or Secondary Education Establishments

Administrative contact: Manuela Mota
Tel.: +351 225 513 608
Fax: +351 225 513 601
Contact the organisation
CHARITE - UNIVERSITAETSMEDECIN BERLIN
Chariteplatz 1
10117 BERLIN
Germany
See on map
Activity type: Higher or Secondary Education Establishments
Administrative contact: Eveline Fräßdorf
Tel.: +49 30 450576024
Contact the organisation

EU contribution: EUR 575 700

LUDWIG-MAXIMILIANS-UNIVERSITAET MUNCHEN
GESCHWISTER SCHOLL PLATZ 1
80539 MUNCHEN
Germany
See on map
Activity type: Higher or Secondary Education Establishments
Administrative contact: Hans-Joachim Anders
Tel.: +498951603583
Fax: +498951603379
Contact the organisation

EU contribution: EUR 536 680

ORBSEN THERAPEUTICS LIMITED
ORBSEN BUILDING NATIONAL UNIVERSITY OF IRELAND
H91 GALWAY
Ireland
See on map
Activity type: Other
Administrative contact: Stephen Joseph Elliman
Tel.: +353876545486
Contact the organisation

EU contribution: EUR 1 061 896

OWL BIOMEDICAL INC
ROBIN HILL ROAD 75
93117 GOLETA
United States
Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
Administrative contact: John Foster
Tel.: +18054520181
Contact the organisation

EU contribution: EUR 552 909
PINTAIL LTD
SPRINGHILL AVENUE 77
A94 K542 BLACKROCK
Ireland
EU contribution: EUR 230 500

Activity type: Other
Administrative contact: Kay Clissmann
Tel.: +353 1 2899529
Contact the organisation

Steno Diabetes Center A/S
NOVO ALLE 1
2880 BAGSVAERD
Denmark
EU contribution: EUR 459 040

Activity type: Other
Administrative contact: Michelle Ellefson
Tel.: +45 4442 8296
Contact the organisation

ACADEMISCH ZIEKENHUIS LEIDEN
ALBINUSDREEF 2
2333 ZA LEIDEN
Netherlands
EU contribution: EUR 552 200

Activity type: Higher or Secondary Education Establishments
Administrative contact: Brigitte Wieles
Tel.: +31715263413
Contact the organisation

Subjects
Scientific Research

Last updated on 2016-10-10
Retrieved on 2019-06-29

© European Union, 2019