

HORIZON
2020

REgeneration of inner ear hair cells with GAMMA-secretase INhibitors to regain hearing in patients with sensorineural hearing loss

Fact Sheet

Project Information

REGAIN

Grant agreement ID: 634893

[Project website](#)

DOI

[10.3030/634893](https://doi.org/10.3030/634893)

Project closed

EC signature date

7 April 2015

Start date

1 May 2015

End date

31 October 2019

Funded under

SOCIETAL CHALLENGES - Health, demographic change and well-being

Total cost

€ 5 834 340,25

EU contribution

€ 5 834 340,00

Coordinated by

AUDION THERAPEUTICS BV

 Netherlands

Objective

Hearing loss is a chronic non-communicable disease disabling over 328 million adults, and 32 million children worldwide. Sensorineural hearing loss due to loss of auditory hair cells was long thought to be irreversible. However, recent animal studies have demonstrated that pharmacological inhibition of cell signalling via Notch

receptors using gamma-secretase inhibitors (GSIs) can regenerate hair cells and partially restore hearing capacity. This novel therapeutic concept provides the first promising lead for actual treatment of hearing loss. Clinical validation of these findings is the next crucial stepping stone in the development of a regenerative therapy for hearing loss. The ambition of REGAIN is to repurpose a GSI molecule for this indication by shifting from systemic to local treatment.

The objective of the REGAIN project is to demonstrate and exploit the efficacy of locally administered GSIs to improve hearing through regeneration of inner ear hair cells with a lasting effect. The project will involve 1) the upscaling of GMP production of the clinical GSI candidate, 2) the generation of preclinical data on GSI dosing and local safety, 3) medical ethical clinical trial approval and 4) the demonstration of proof of concept for GSI for treatment of patients with recent onset sensorineural hearing loss.

Small molecule drugs targeting the underlying biological causes of hearing loss in a safe way are expected to meet a real medical need for millions of patients, who currently rely on the limited benefits provided by hearing aids or cochlear implants. The partners involved in REGAIN represent the current state of the art in regenerative hearing loss research in the EU. REGAIN will break through that current state of the art, and will advance the first highly promising pharmaceutical treatment of hearing loss through clinical testing.

Fields of science (EuroSciVoc)

[medical and health sciences](#) > [basic medicine](#) > [pharmacology and pharmacy](#) > [drug discovery](#)

[natural sciences](#) > [biological sciences](#) > [cell biology](#) > [cell signaling](#)

[medical and health sciences](#) > [basic medicine](#) > [pharmacology and pharmacy](#) > [pharmaceutical drugs](#)

[medical and health sciences](#) > [health sciences](#) > [infectious diseases](#) > [RNA viruses](#) > [HIV](#)

[medical and health sciences](#) > [medical biotechnology](#) > [implants](#)



Programme(s)

[H2020-EU.3.1. - SOCIETAL CHALLENGES - Health, demographic change and well-being](#)

MAIN PROGRAMME

[H2020-EU.3.1.3. - Treating and managing disease](#)

Topic(s)

Call for proposal

[H2020-PHC-2014-2015](#)

[See other projects for this call](#)

Sub call

H2020-PHC-2014-two-stage

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



AUDION THERAPEUTICS BV

Net EU contribution

€ 1 821 330,81

Total cost

€ 1 821 331,06

Address

LINNAEUSPARKWEG 10-2

1098 EA AMSTERDAM

 **Netherlands** 

SME 

Yes

Region

West-Nederland > Noord-Holland > Groot-Amsterdam

Activity type

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

Links

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

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

[HORIZON collaboration network](#) 

Participants (8)



UNIVERSITY COLLEGE LONDON

United Kingdom

Net EU contribution

€ 1 051 188,58

Address

GOWER STREET
WC1E 6BT London

Region

London > Inner London — West > Camden and City of London

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#)

Total cost

€ 1 051 188,58



EBERHARD KARLS UNIVERSITAET TUEBINGEN

Germany

Net EU contribution

€ 331 250,00

Address

GESCHWISTER-SCHOLL-PLATZ
72074 Tuebingen

Region

Baden-Württemberg > Tübingen > Tübingen, Landkreis

Activity type

Higher or Secondary Education Establishments

Links

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

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

Total cost

€ 331 250,00



ΕΘΝΙΚΟ ΚΑΙ ΚΑΠΟΔΙΣΤΡΙΑΚΟ ΠΑΝΕΠΙΣΤΙΜΙΟ ΑΘΗΝΩΝ

 Greece

Net EU contribution

€ 287 466,68

Address

6 CHRISTOU LADA STR
10561 Athina 

Region

Αττική > Αττική > Κεντρικός Τομέας Αθηνών

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 287 466,68



ELI LILLY AND COMPANY LTD

 United Kingdom

Net EU contribution

€ 1 347 362,50

Address

LILLY HOUSE BASINGVIEW
RG21 4FA Basingstoke 

Region

South East (England) > Hampshire and Isle of Wight > North Hampshire

Activity type

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

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 1 347 362,50



LINICAL NETHERLANDS B.V. 

 Netherlands

Net EU contribution

€ 1 771,25

Address

VICTORIALAAN 15

5213 JG 'S-HERTOGENBOSCH 

SME 

Yes

Region

Zuid-Nederland > Noord-Brabant > Noordoost-Noord-Brabant

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 1 771,25



TTOPSTART BV

 Netherlands

Net EU contribution

€ 125 000,00

Address

LAAN VAN ZUID HOORN 15

2289 DC Rijswijk 

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 125 000,00



NORDIC BIOSCIENCE CLINICAL DEVELOPMENT A/S

 Denmark

Net EU contribution

€ 715 818,50

Address

HERLEV HOVEDGADE 207

2730 HERLEV 

SME 

Yes

Region

Danmark > Hovedstaden > Københavns omegn

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 715 818,50



UNIVERSITY COLLEGE LONDON HOSPITALSNHS FOUNDATION TRUST

 United Kingdom

Net EU contribution

€ 153 151,68

Address

EUSTON ROAD 250

NW1 2PG London 

Activity type

Research Organisations

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 153 151,68

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Permalink: <https://cordis.europa.eu/project/id/634893>

European Union, 2025