PARKINSON'S UK
CHANGE ATTITUDES. FIND A CURE. JOIN US.

CURE PARKINSON'S

Bile, Bluerock, Bayer, & Bial

Simon Stott
Cure Parkinson's

EAST MIDLANDS PARKINSON'S RESEARCH SUPPORT NETWORK

THE SCIENCE OF PARKINSON'S

CURE PARKINSON'S

A UK-registered charity

Funds international research projects focused on disease modification in Parkinson's

The international Linked Clinical Trial initiative is a collaborative clinical trial program led by Cure Parkinson's and the Van Andel Institute.

A committee of 21 PD experts meet each year to evaluate 20+ molecules which have exhibited evidence for potential for disease modification in Parkinson's.

Garvan Institute of Medical Research

P.R.A.G. Parkinson's Research Advocacy Group www.prag.site

THE MICHAEL J. FOX FOUNDATION FOR PARKINSON'S RESEARCH

SHAKE IT UP AUSTRALIA FOUNDATION

Parkinson's Foundation

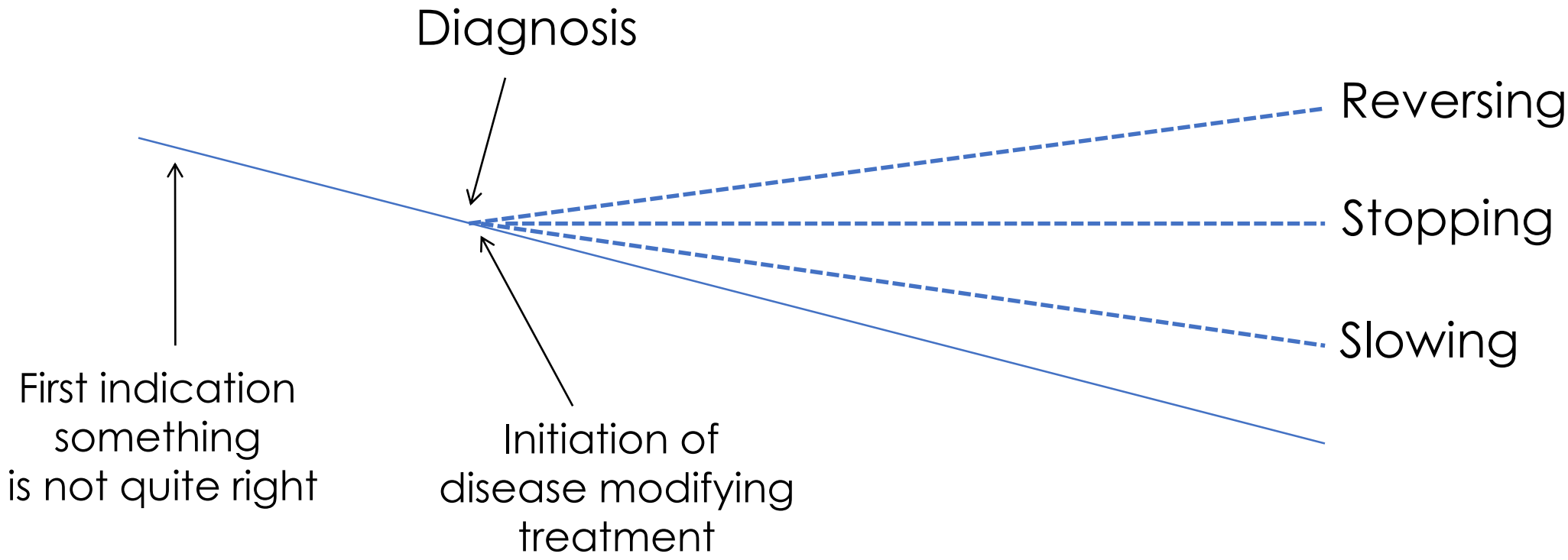
NIH National Institutes of Health

National Institute of Neurological Disorders and Stroke

THE SILVERSTEIN FOUNDATION FOR PARKINSON'S WITH GBA

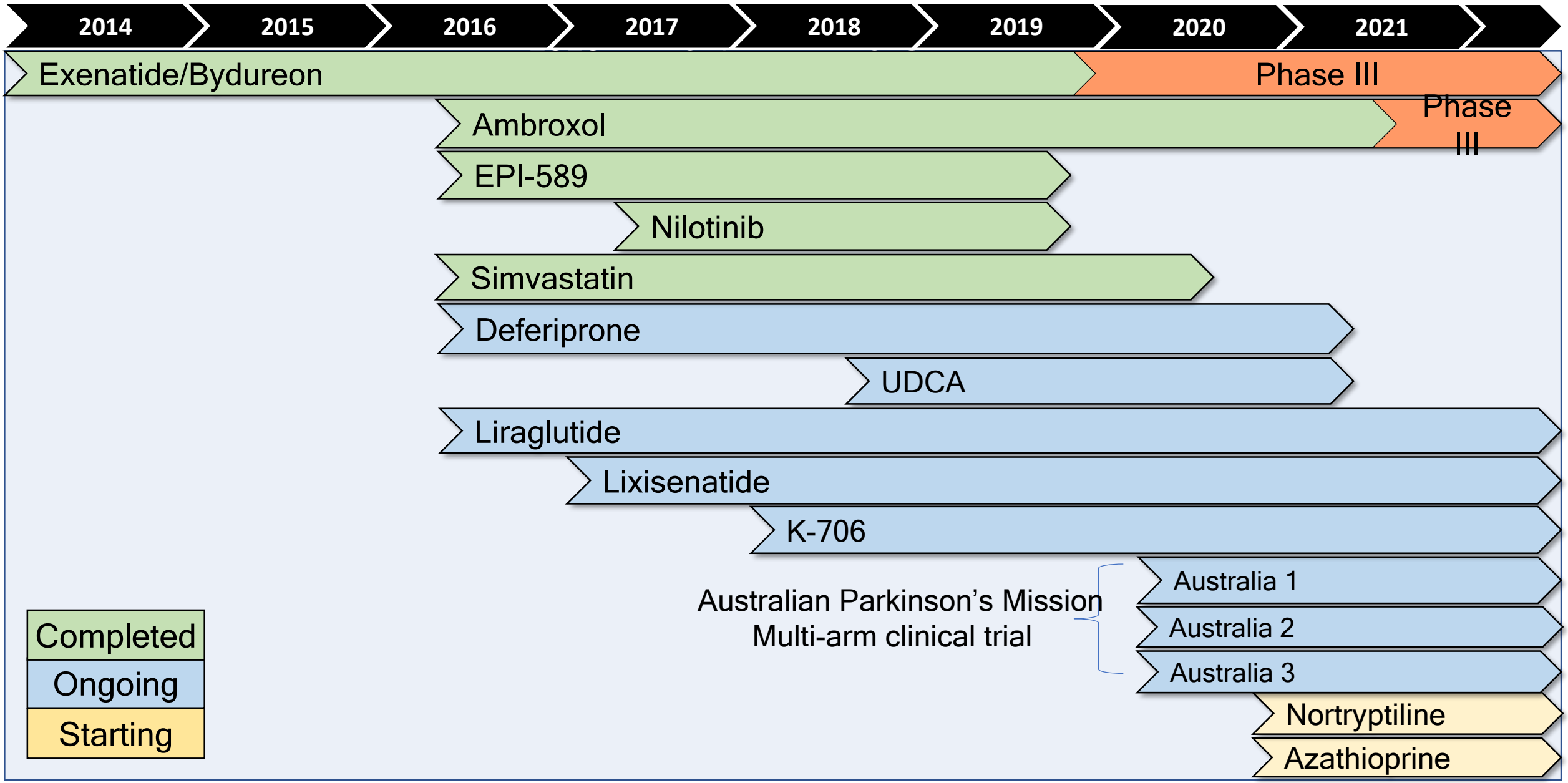
PARKINSON'S UK

The goal of the meeting is to prioritise which of the drugs should be clinically evaluated for disease modifying properties in Parkinson's.

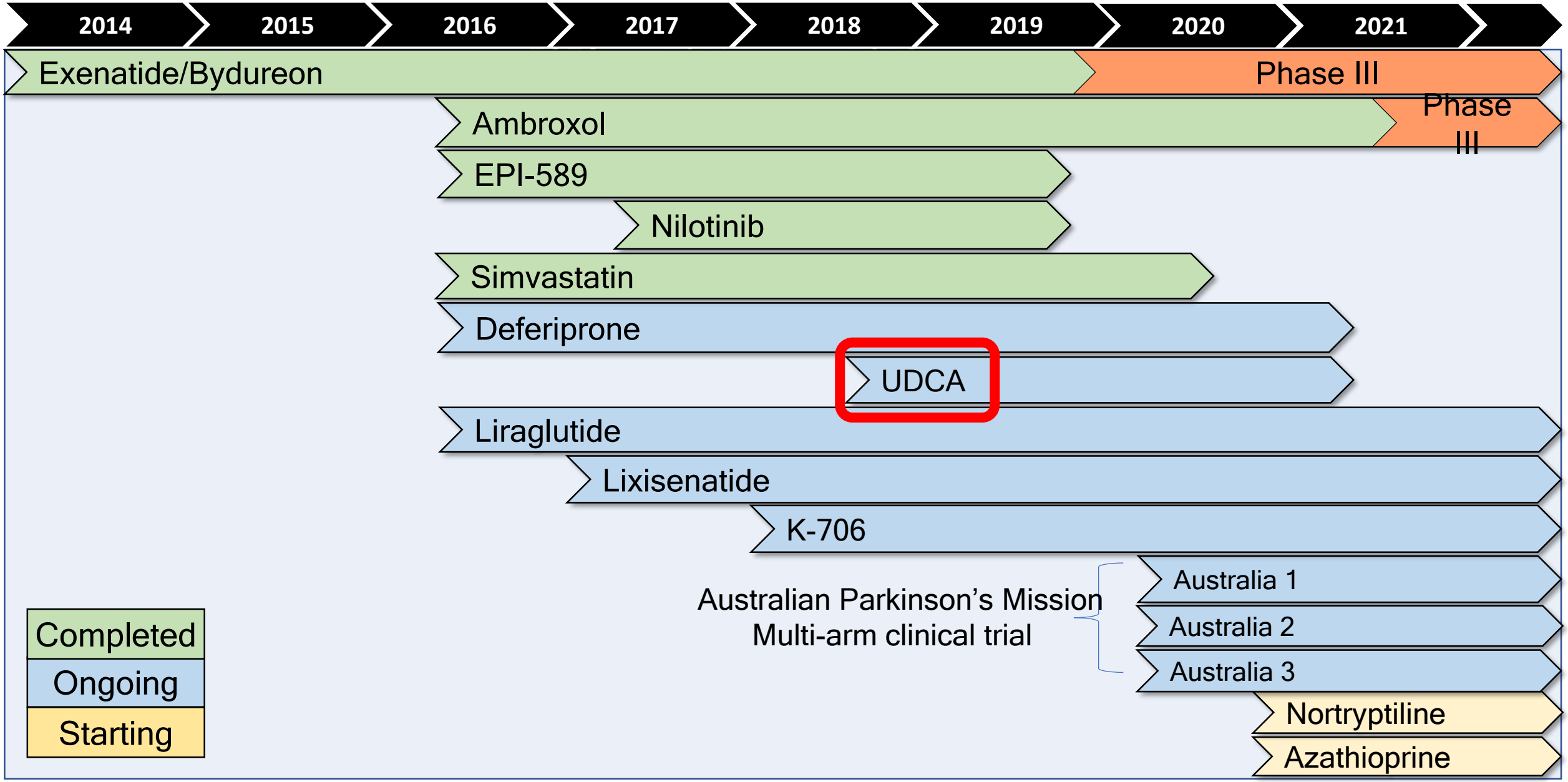


Once prioritised, Cure Parkinson's is mandated to get the treatment into a clinical trial.

Cure Parkinson's / Van Andel Institute: Linked Clinical Trials Initiative



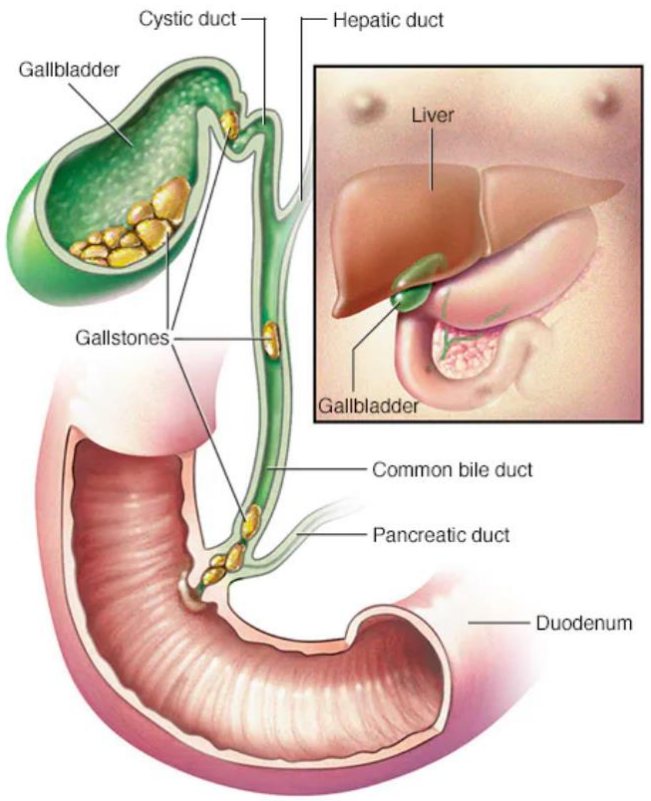
Cure Parkinson's / Van Andel Institute: Linked Clinical Trials Initiative

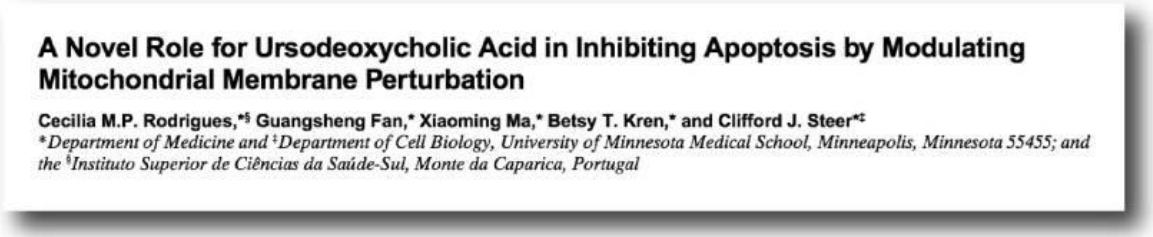


Bile

Ursodeoxycholic acid (UDCA)

UDCA is a bile acid which occurs naturally in the body and is used to dissolve gallstones.





A Novel Role for Ursodeoxycholic Acid in Inhibiting Apoptosis by Modulating Mitochondrial Membrane Perturbation

Cecilia M.P. Rodrigues,*§ Guangsheng Fan,* Xiaoming Ma,* Betsy T. Kren,* and Clifford J. Steer*‡

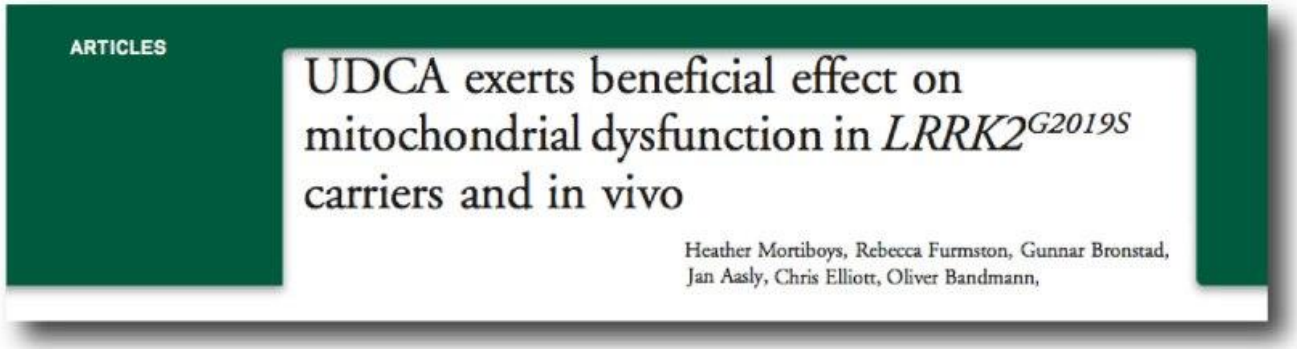
*Department of Medicine and ‡Department of Cell Biology, University of Minnesota Medical School, Minneapolis, Minnesota 55455; and the §Instituto Superior de Ciências da Saúde-Sul, Monte da Caparica, Portugal

doi:10.1093/brain/awt224 Brain 2013: 136; 3038–3050 | 3038

BRAIN
A JOURNAL OF NEUROLOGY

Ursocholanic acid rescues mitochondrial function in common forms of familial Parkinson's disease

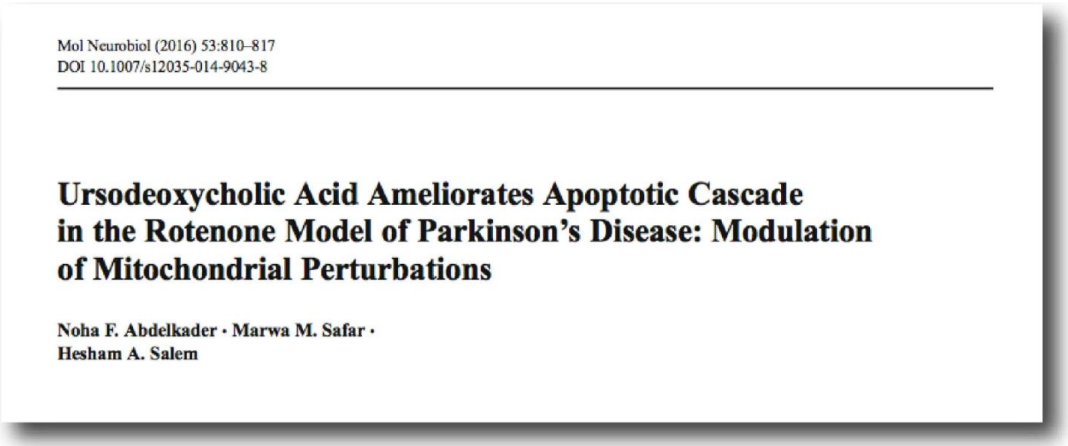
Heather Mortiboys,[1] Jan Aasly[2] and Oliver Bandmann[1]



ARTICLES

UDCA exerts beneficial effect on mitochondrial dysfunction in *LRRK2*^{G2019S} carriers and in vivo

Heather Mortiboys, Rebecca Furmston, Gunnar Bronstad, Jan Aasly, Chris Elliott, Oliver Bandmann,



Mol Neurobiol (2016) 53:810–817
DOI 10.1007/s12035-014-9043-8

Ursodeoxycholic Acid Ameliorates Apoptotic Cascade in the Rotenone Model of Parkinson's Disease: Modulation of Mitochondrial Perturbations

Noha F. Abdelkader · Marwa M. Safar · Hesham A. Salem

UDCA has been reported to have beneficial effects on mitochondria in models of Parkinson's.

It has also been shown to rescue genetic models of Parkinson's.

The University Of Sheffield. Neuroscience Institute.

SITraN
Sheffield Institute for Translational Neuroscience

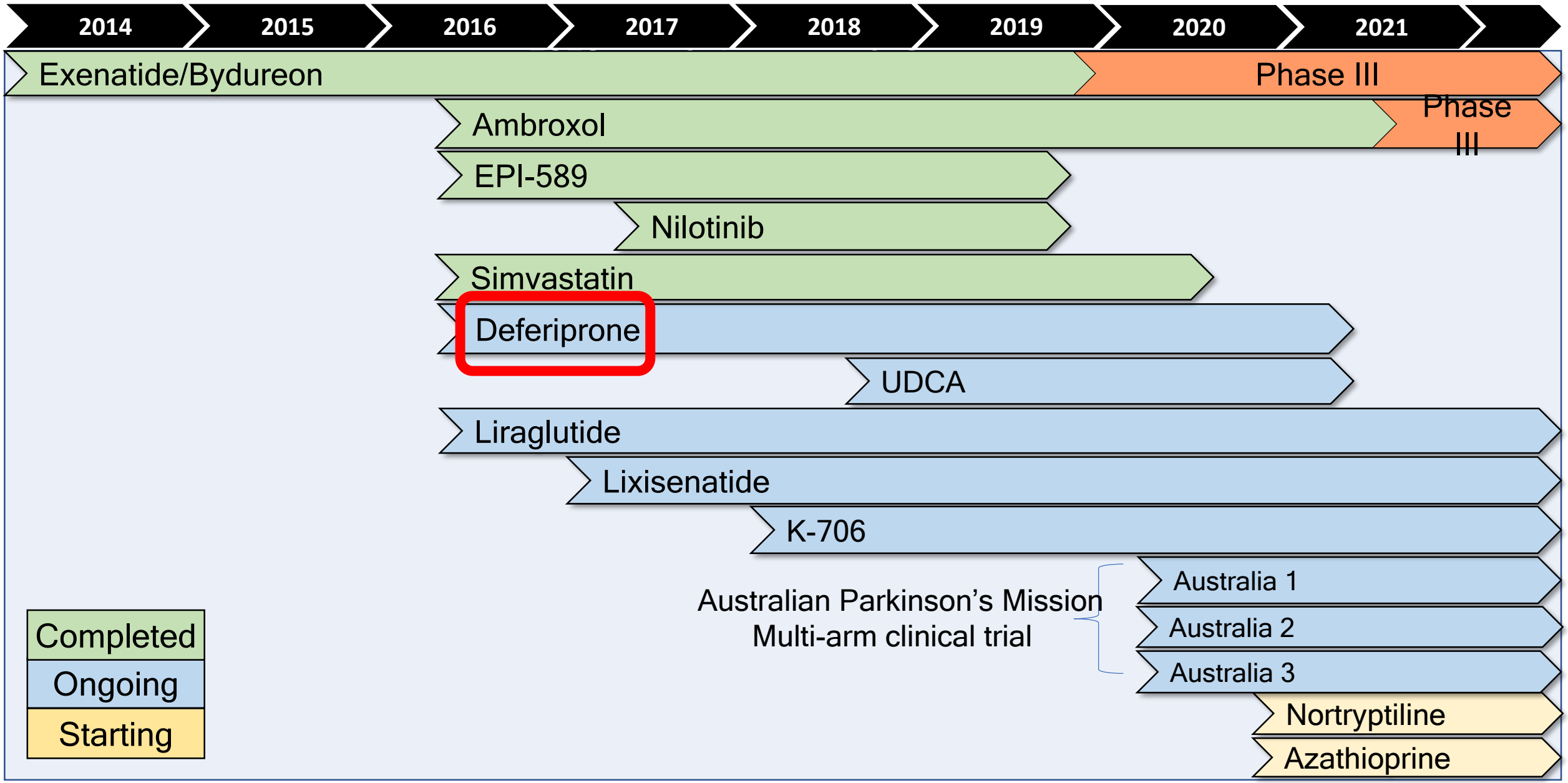
The results of this study will hopefully be available in late 2020.

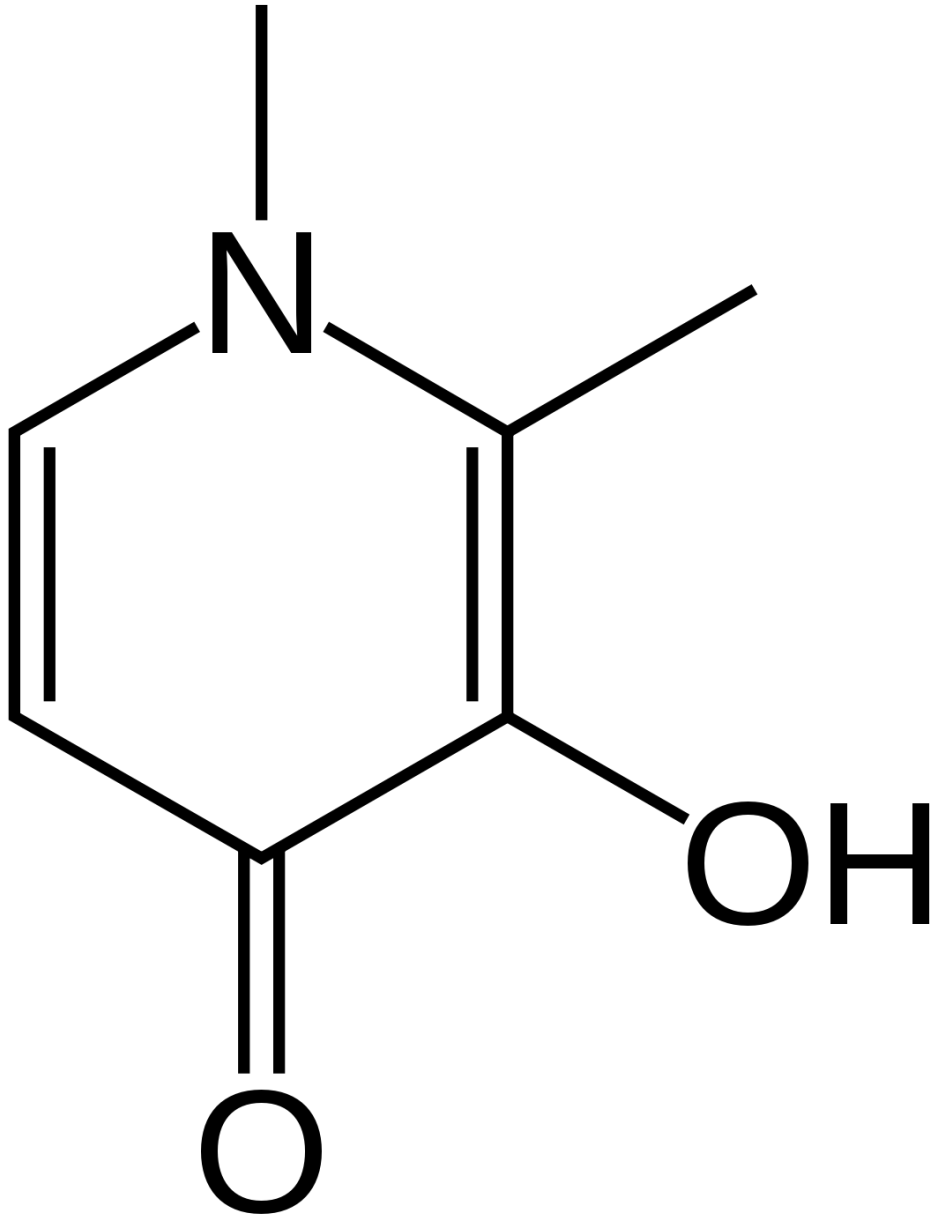
The 48-week UP Study ("UDCA in Parkinson's") was a Phase 2 clinical trial of UCDA in recently diagnosed Parkinson's involving 30 participants.

20 people were blindly given UDCA and 10 were administered with a placebo.

The results will be announced shortly.

Cure Parkinson's / Van Andel Institute: Linked Clinical Trials Initiative



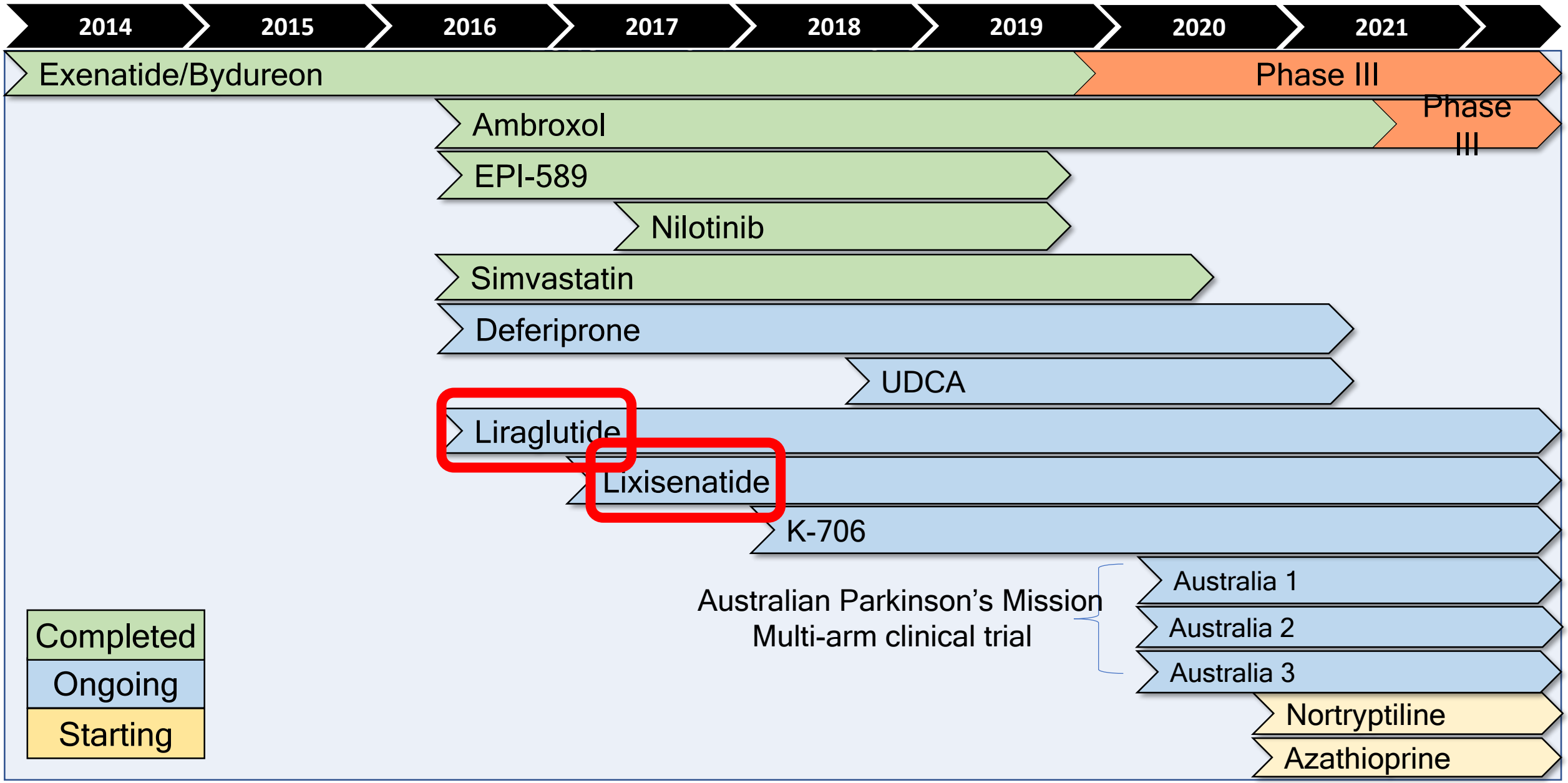


Deferiprone

An iron chelator that was tested in a pan-European Phase II clinical trial of 372 people with Parkinson's in Treatment involved twice-daily dosing for nine months.

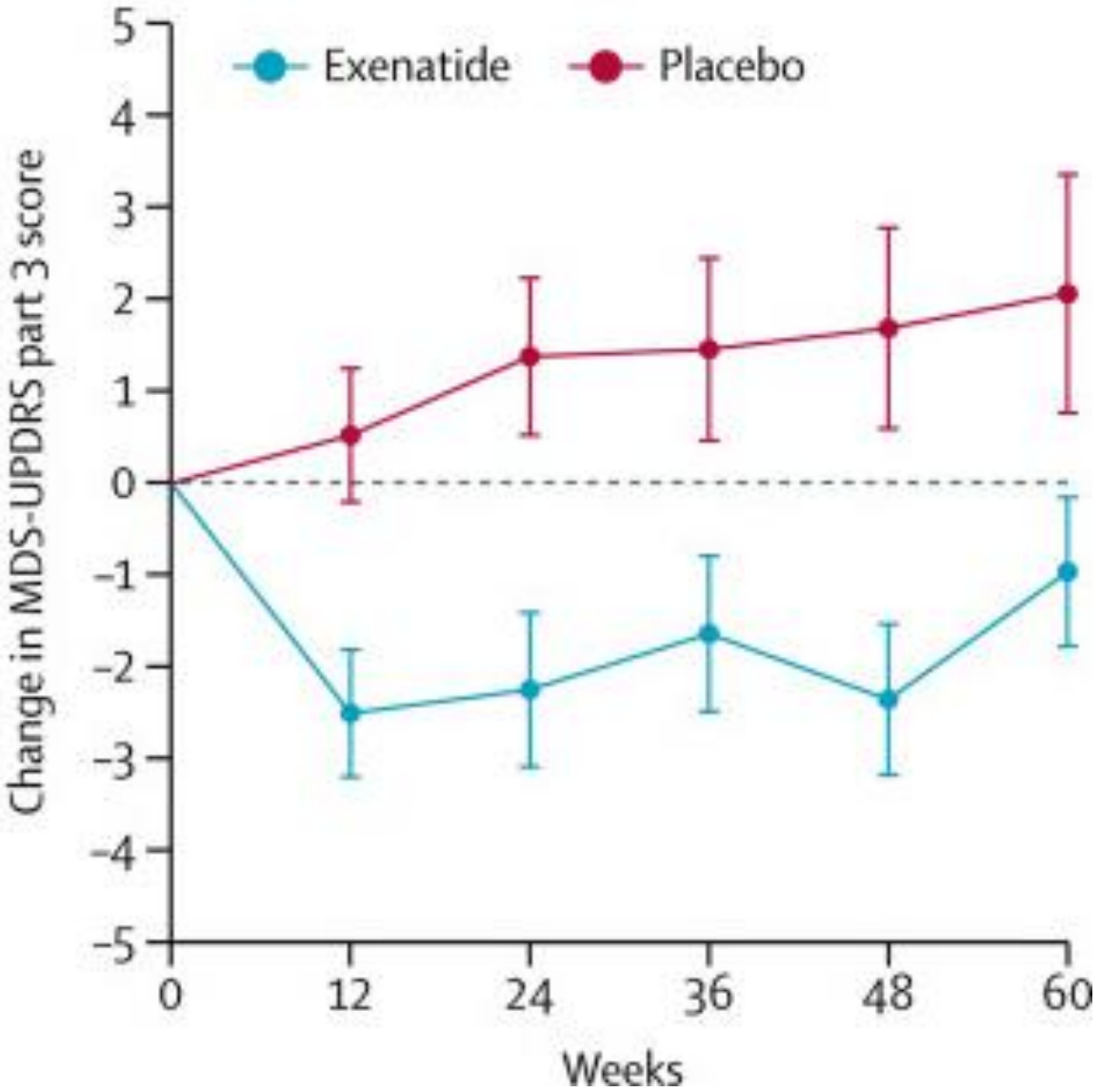
Results are expected shortly.

Cure Parkinson's / Van Andel Institute: Linked Clinical Trials Initiative



GLP-1 agonists

Exenatide/Bydureon



Phase II clinical trial results provided interesting results – a potential slowing of motor symptom progression over the 48-week study.

A Phase III clinical trial for bydureon is now underway in the UK.

Liraglutide

A Phase II clinical was conducted at the Cedars-Sinai Medical Center, Los Angeles. It involved daily self-administered injections of liraglutide or placebo for 54 weeks.

Results are expected in 2022.

Lixisenatide

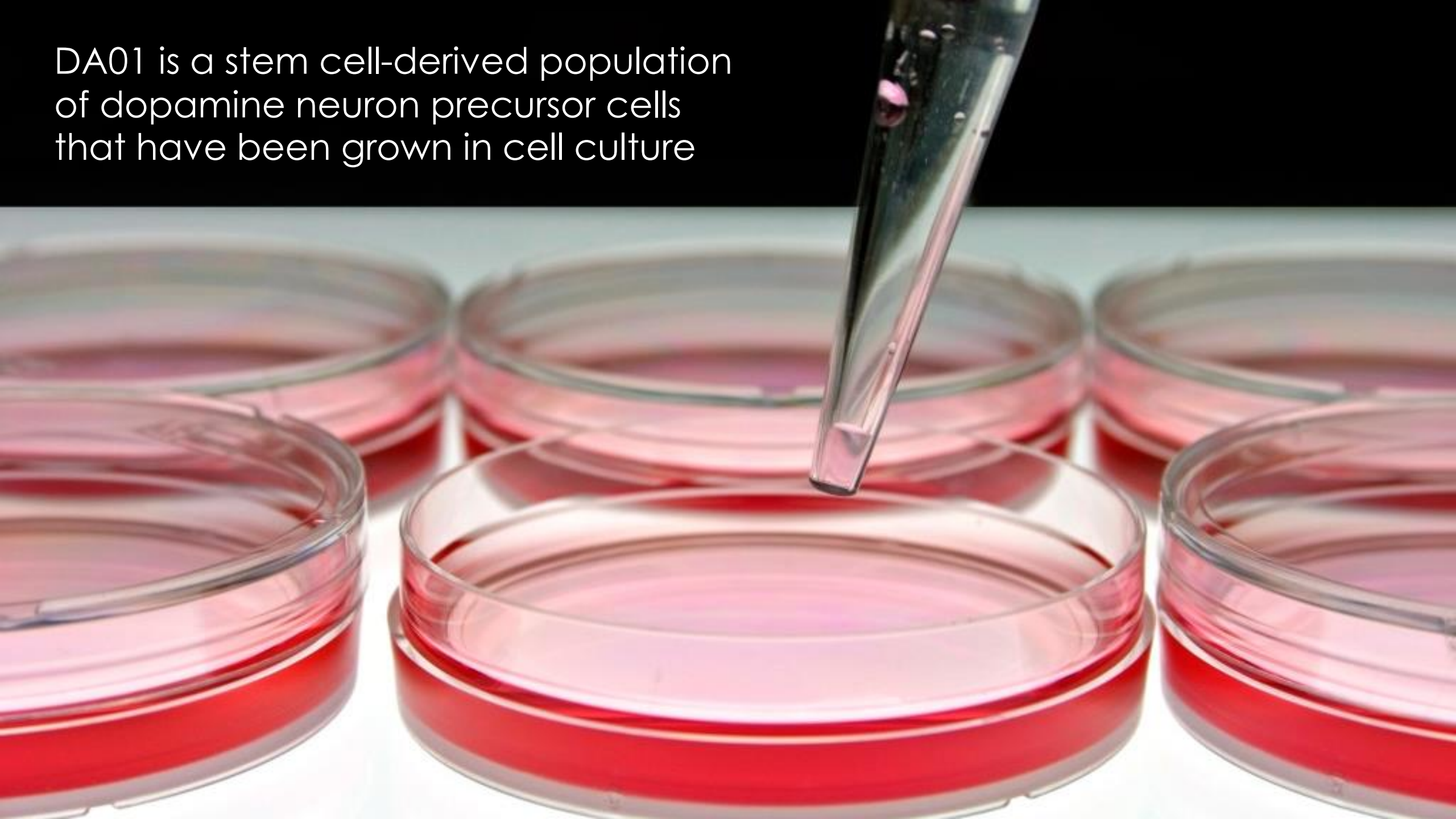
A Phase II multi-centre clinical trial was conducted in France. 158 patients were recruited for 12 months of treatment.

Results expected in 2022.

Bluerock & Bayer

On the 8th June, Bluerock therapeutics announced that they have ‘dosed’ the first participant in their Phase I trial evaluating the safety and tolerability of their therapy, DA01

DA01 is a stem cell-derived population of dopamine neuron precursor cells that have been grown in cell culture



The cells are being used for cell transplantation therapy.

The Phase 1 study is very small - just 10 participants will be enrolled in the US and Canada.

The participants will be followed up for 2 years.

In August 2019, the pharmaceutical company Bayer announced that they were fully acquiring BlueRock Therapeutics.

Bayer

The Kyoto study

Center for iPS Cell Research and Application, Kyoto University

CiRA

Sumitomo Dainippon Pharma

STEM-PD trial: Allogeneic hESC-derived DA product

ambridge & Lund University – DA CELL REPLACEMENT

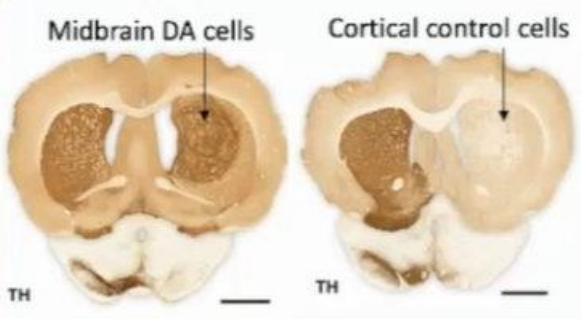
World Parkinson Coalition®

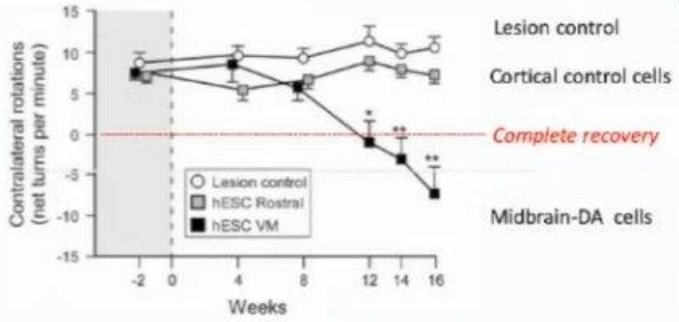
Cryopreserved product
Enables large-scale production

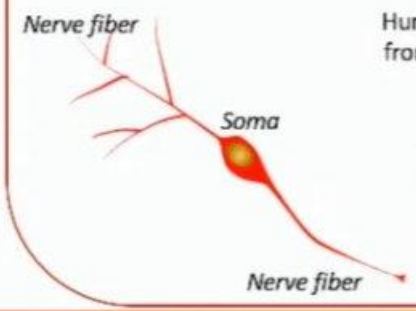
Trial design:

- 8 patients, Open-label
- 50-75 years old
- >5 yrs of PD, mild/moderate
- 2 dosing groups
- 1-year safety, primary endpoint
- 3-year efficacy, 2ndary endpoint
- Est. Start 2022

Preclinical efficacy data from rat model of PD







Human nerve fibers from stem cell graft

Kirkeby et al, *Cell Reports* 2012, **Kirkeby et al**., *Transl. Neuroscience* 2012; **Grealish et al**., *Cell Stem Cell* 2014; **Barker et al**., *J. Parkinson's Disease* 2016; **Kirkeby et al**, *Cell Stem Cell* 2017; **Kee et al**, *Cell Stem Cell* 2017; **Kirkeby et al**., *Progr. Brain Research 2017*; **Nolbrant/Kirkeby**, *Nature Protocols* 2017

STEM-PD study

Starting in 2022, 8 participants (>5 years post diagnosis) will be transplanted and followed for 3 years, with safety being assessed at 1 year and efficacy being determined after 3 years.

LUND UNIVERSITY

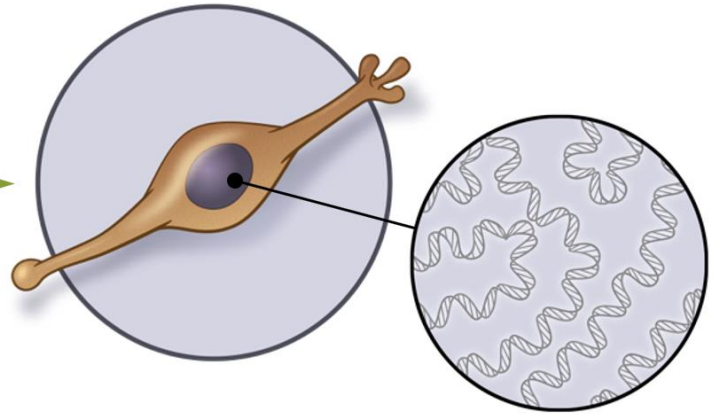
novo nordisk

UNIVERSITY OF CAMBRIDGE

Aspen NEUROSCIENCE

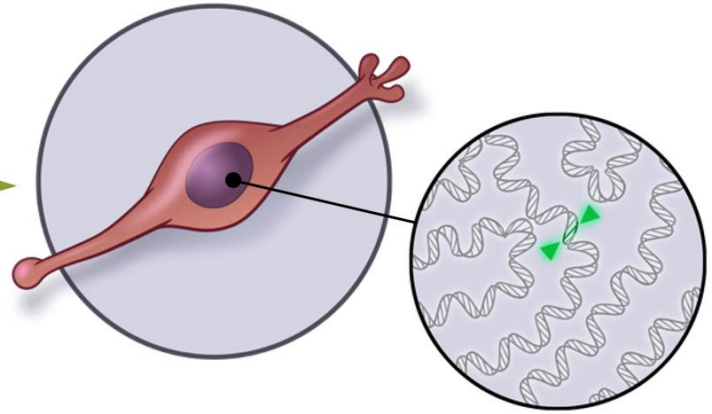
Combining cell therapy and gene correction technology, Aspen is seeking to start clinical trials in the near future for their cell transplantation products.

ANPD001 A9-like Dopamine Neuron Therapy



Gene Correction

ANPD002 A9-like Gene Corrected Dopamine Neuron Therapy



Bial

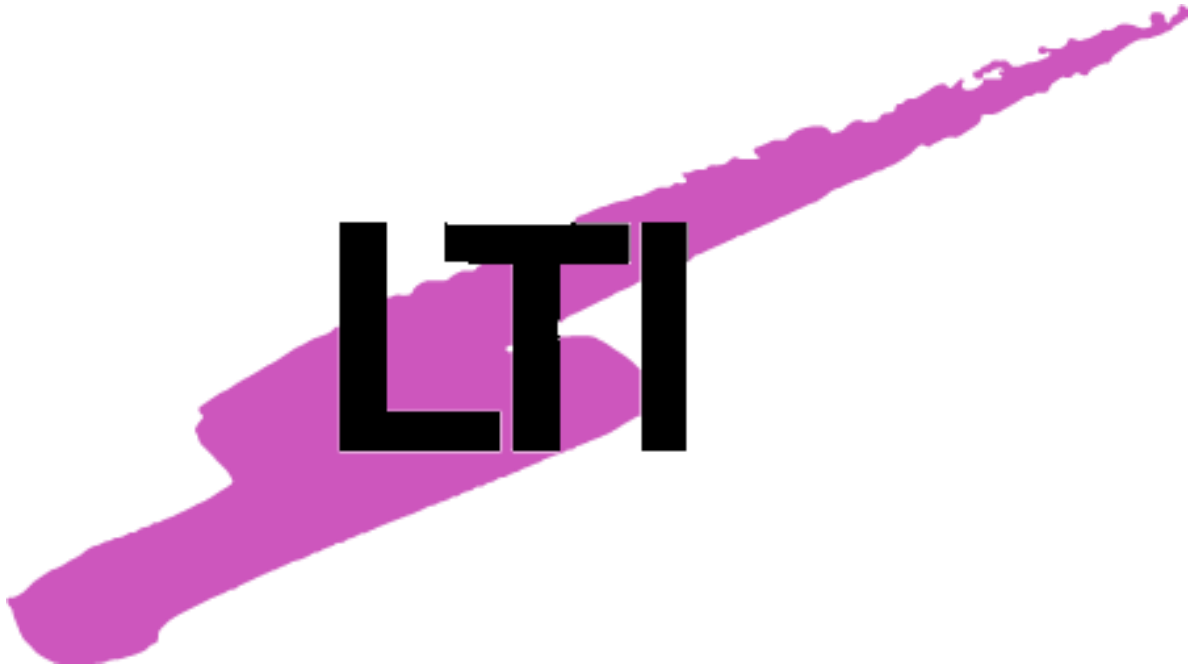
Enhancing waste recycling to make cells healthier and slow Parkinson’s progression

A key enzyme (called GCase) in the waste disposal system of cells may be reduced in some cases of Parkinson's.

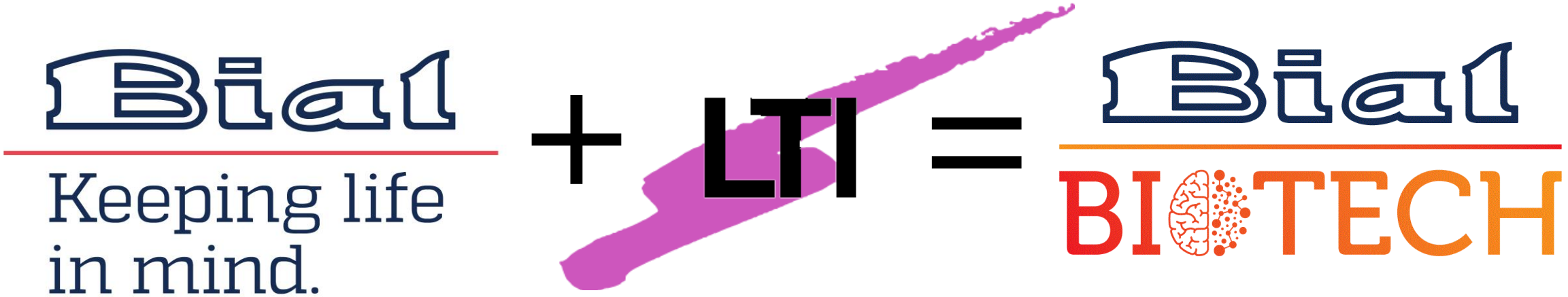
GCase enhancers

By increasing GCase levels and activity, researchers hope to slow the progression of Parkinson's.

One biotech company called Lysosomal Therapeutics has conducted Phase I clinical testing of a drug (LTI-291) which they are now planning to test in Phase II clinical trials.

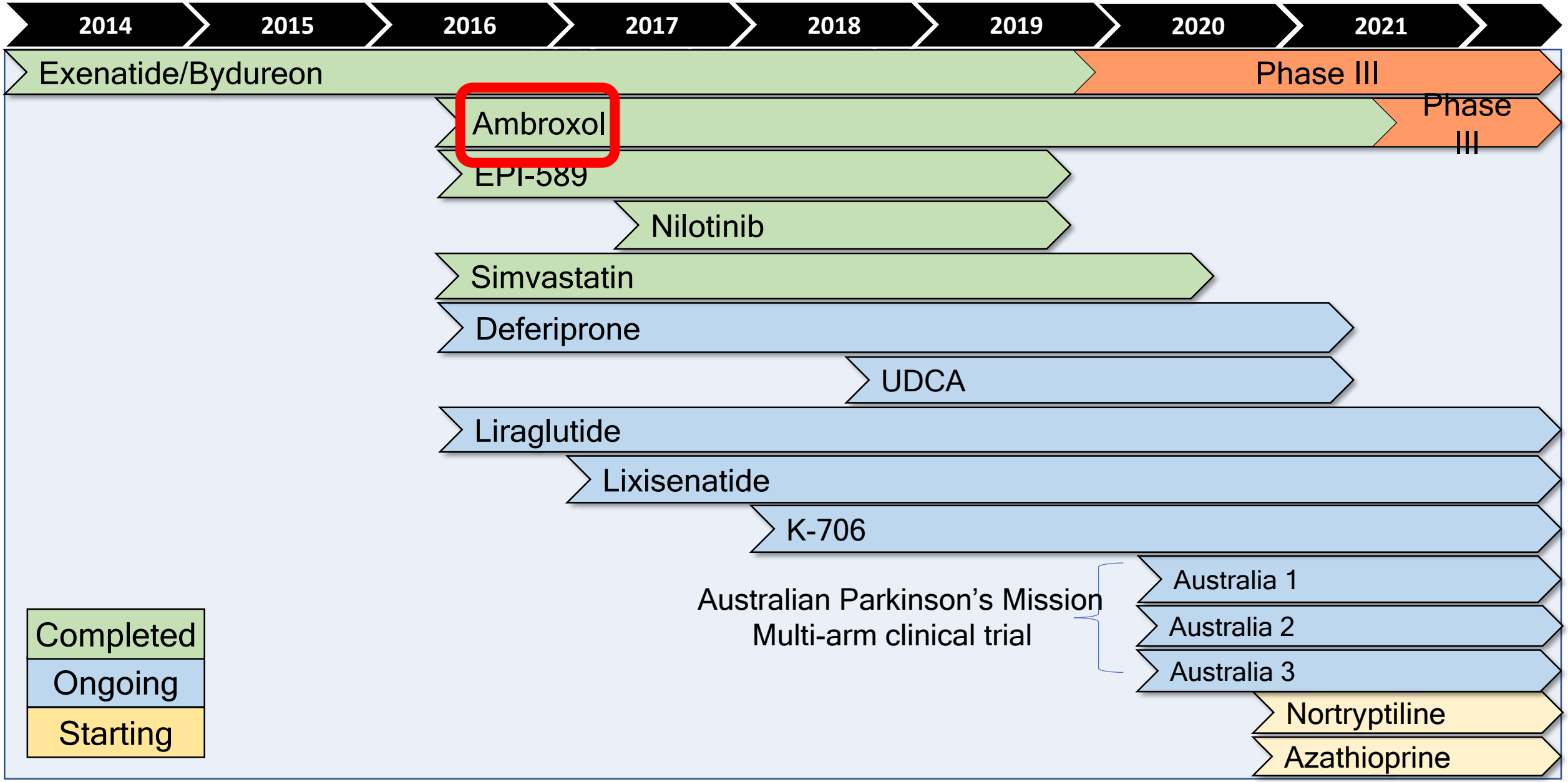


In 2020, the pharmaceutical company Bial purchased LTI.



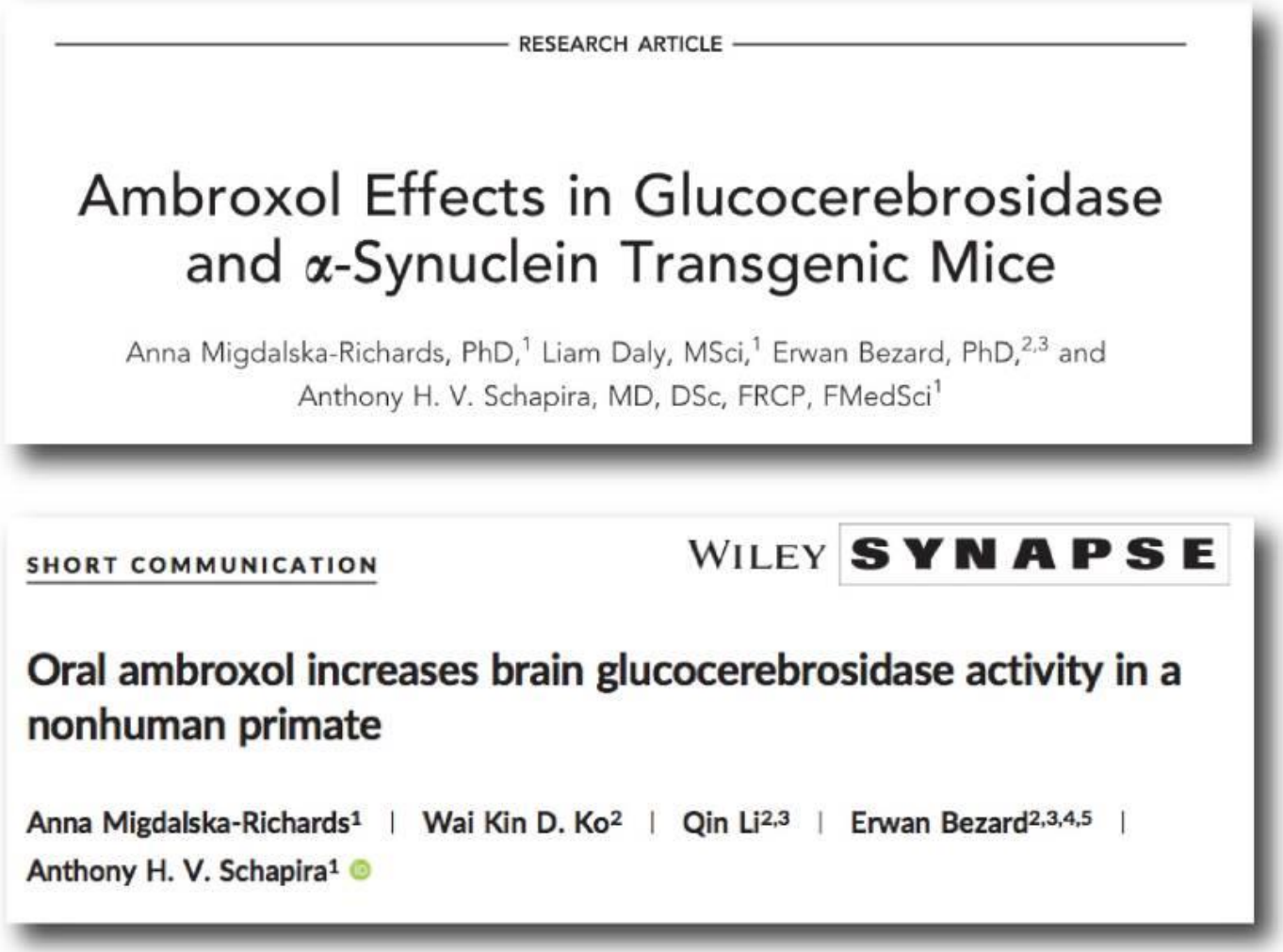
The company is setting up a Phase II clinical trial to start in 2022.

Cure Parkinson's / Van Andel Institute: Linked Clinical Trials Initiative



Ambroxol

Ambroxol is a drug which has been commonly used as an anti-mucolytic respiratory medicine since the 1980's.



RESEARCH ARTICLE

Ambroxol Effects in Glucocerebrosidase and α-Synuclein Transgenic Mice

Anna Migdalska-Richards, PhD,[1] Liam Daly, MSci,[1] Erwan Bezard, PhD,[2,3] and Anthony H. V. Schapira, MD, DSc, FRCP, FMedSci[1]

SHORT COMMUNICATION

WILEY SYNAPSE

Oral ambroxol increases brain glucocerebrosidase activity in a nonhuman primate

Anna Migdalska-Richards[1] | Wai Kin D. Ko[2] | Qin Li[2,3] | Erwan Bezard[2,3,4,5] | Anthony H. V. Schapira[1]

More recently, ambroxol has been shown to boost the levels of GCase activity and rescue models of Parkinson's.

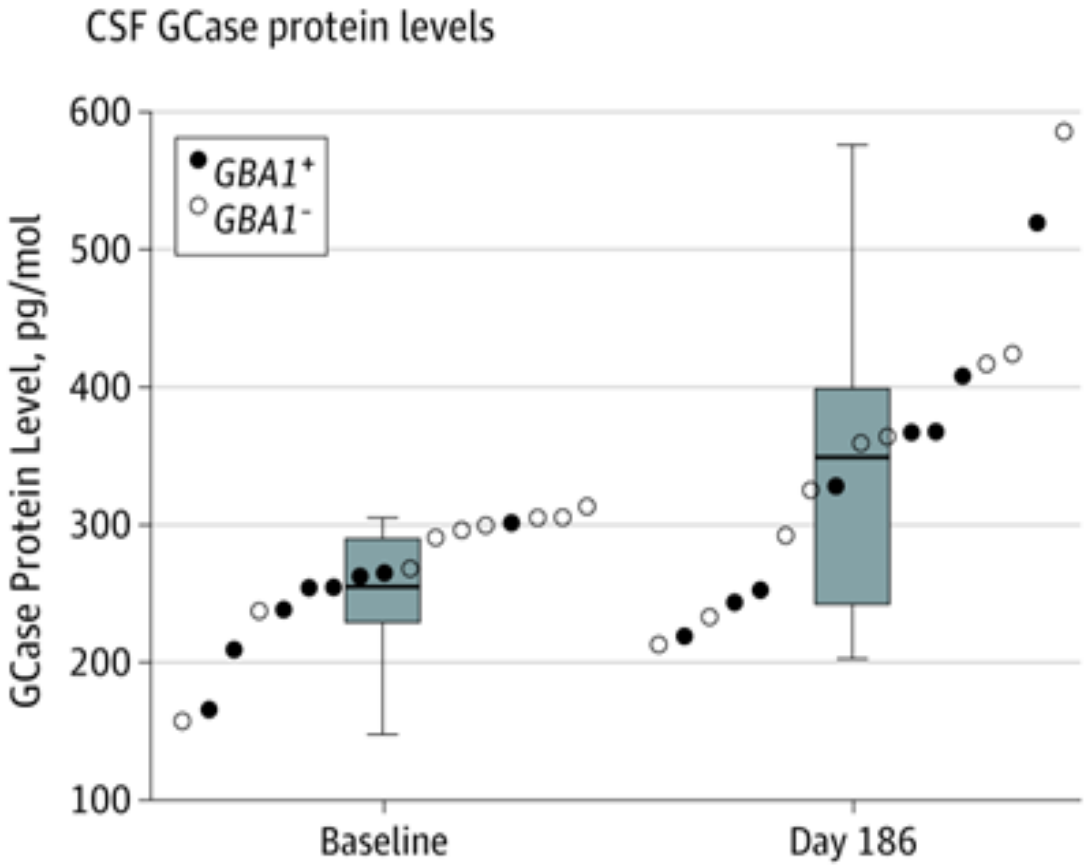
This led to a Phase II clinical trial funded by The Cure Parkinson's Trust, Van Andel Institute, and John Black Charitable Foundation.

Prof Anthony Schapira

UCL

Queen Square Institute of Neurology

Ambroxol trial



Mullin et al 2020 JAMA Neurol

The “Ambroxol in Disease Modification in Parkinson Disease” (AiM-PD) study involved 18 participants, who were treated for six months with either ambroxol or a placebo.

The treatment was well tolerated, and elevated levels of a key enzyme.

The next stage of the clinical development of ambroxol is now being planned.

Get in touch FAQs Feedback Login/Register

Home | About the study | Who we are | My study

Part of the Rapsodi study

Welcome to PD-Frontline

PD Frontline aims to put people with Parkinson's at the forefront of research. This is an exciting new era for Parkinson's research. For the first time, drugs that protect against or slow down the progression of Parkinson's are a real possibility. Many of these drugs will be targeted at specific genes which we know influence the development of Parkinson's.

To test whether these drugs work, we will need to identify people with abnormalities in these genes who can be enrolled in clinical trials. PD Frontline enables you to be tested for two genetic risk factors for Parkinson's, called LRRK2 and GBA.

If you currently live in the UK and would like to #GetTrialReady, register for the study. It will take about 10 minutes.

Register for PD Frontline

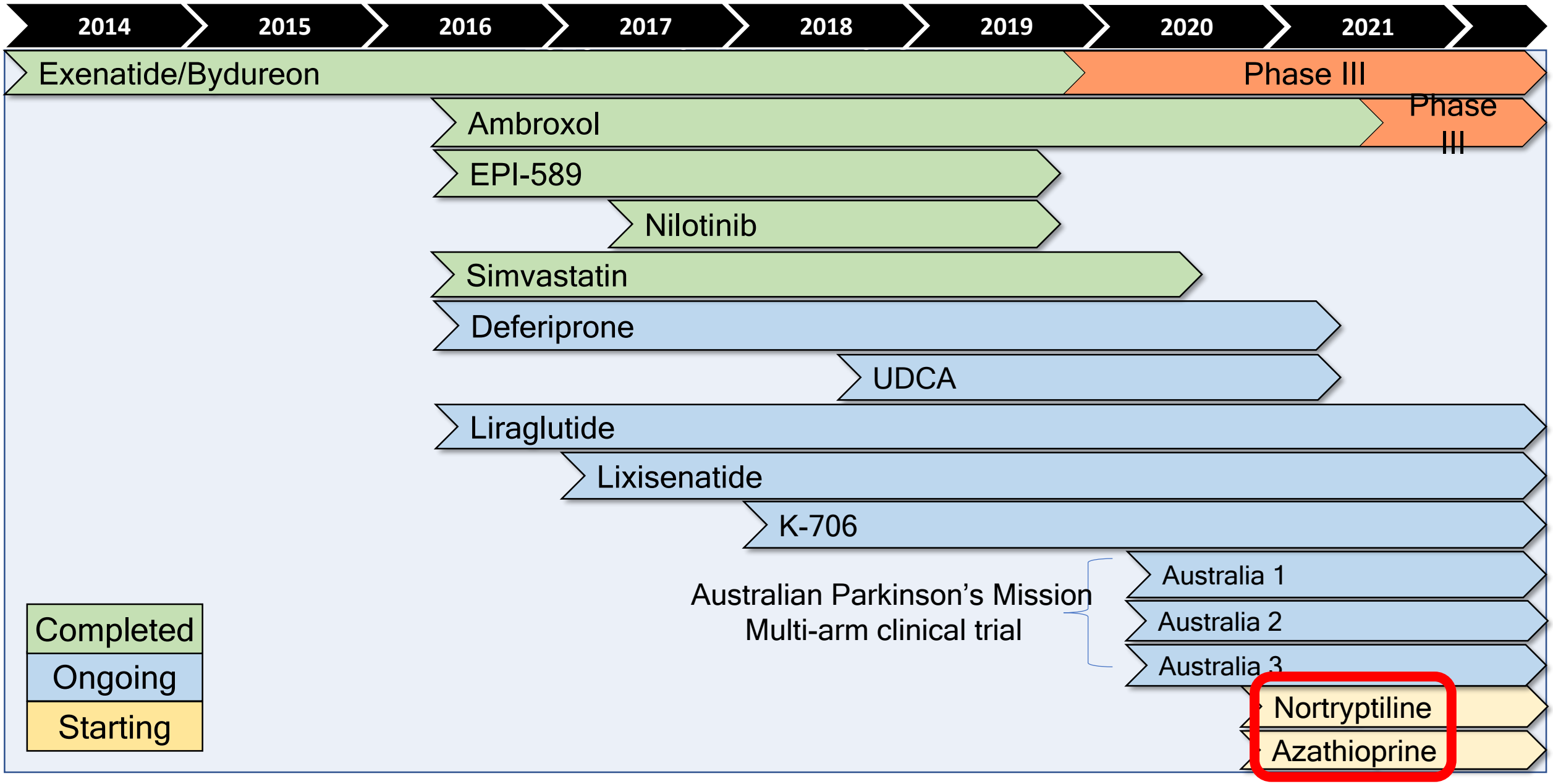
If you have already registered login here

The Cure Parkinson's Trust

https://pdfrontline.com/en

Additional trials of interest

Cure Parkinson's / Van Andel Institute: Linked Clinical Trials Initiative



Nortriptyline

ADepT-PD

An antidepressant that has potentially disease modifying properties for Parkinson's.

It is one of the drugs being evaluated in the Antidepressants Trial in Parkinson's Disease (or ADepT-PD) study.

Dr Anette Schrag

Azathioprine

An immunosuppressive medication which is used in inflammatory conditions, like rheumatoid arthritis.

New study (AZA-PD) will be starting in Cambridge (UK) in 2020. It will involve 12 months treatment and a further 6-months follow-up of 60 participants.

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Dr Caroline Williams-Gray

Summary

Exenatide/Bydureon - Phase III trial ongoing
Ambroxol - Phase II finished, Phase III planned
UDCA - Results shortly
Deferiprone - Results shortly
Liraglutide - Results shortly
Lixisenatide - Results shortly
Nortriptyline - Now recruiting
Azathioprine - Now recruiting
Bial Gcase enhancer - Phase II starting in 2022
Bluerock/Bayer trial - Phase I recruiting
STEM-PD - Phase I starting in 2022

Despite COVID, there are lots of additional trials ongoing or soon starting

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CURE PARKINSON'S

Thank you!

Simon Stott
simon@cureparkinsons.org.uk

EAST MIDLANDS PARKINSON'S RESEARCH SUPPORT NETWORK

THE SCIENCE OF PARKINSON'S