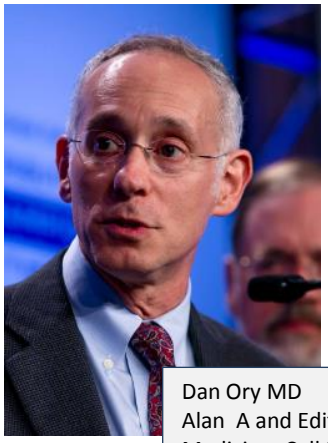


Dan Ory MD
Alan A and Edith L Wolff Distinguished Professor of Medicine, Cell Biology & Physiology; Division of Cardiology
Photo: Champions of Hope Award from Global Genes Oct 2016

Niemann-pick type C1 (NKC) is a neurodegenerative autosomal recessive rare* disorder characterized by unesterified cholesterol accumulation and other lipids in the brain and other organs. Children affected by the disease show symptoms in early childhood, experience progressive impairment of motor and intellectual function, and usually die in adolescence. The goal of this work is identify biomarkers to diagnose and monitor NPC disease, and apply these tools to accelerate drug development through unique patient advocacy, pharmaceutical and national clinical trial networks. *1:120,000

Vtesse

Jan 2014: Vtesse, rare disease Pharma, licenses VTS-270 program from NIH

NIH Clinical Center
America's Research Hospital

Jan 2013:
1st patient enrolled

Key Publications
Nov 2014
June 2014

Study

2011

NIH National Center for Advancing Translational Sciences

Therapeutics for Rare and Neglected Diseases (TRND) Program
Preclinical TRND studies provide support from lead optimization through IND application for NPC treatment.

2012

June 2012
Awarded 1 year funding from the **SPIRiT Pilot Program** to obtain preclinical data to validate the use of cholesterol-derived biomarkers for monitoring acute response to cyclodextrin and long term efficacy of therapy for NPC disease.
CTSA PARTNER: Univ. Penn (Dr. Charles Vite)

APPROVED

FDA **Nov 2012** FDA approves use of 2-Hydroxypropyl-ß-Cyclodextrin (HPßCD) in NPC clinical studies

2013

2014

Hum Mol Genet. 2014 Nov 15;23(22):6022-33. doi: 10.1093/hmg/ddu331. Epub 2014 Jun 25.

Cholesterol homeostatic responses provide biomarkers for monitoring treatment for the neurodegenerative disease Niemann-Pick C1 (NPC1).

Tortelli B[1], Fujiwara H[1], Bagel JH[2], Zhang J[1], Sidhu R[1], Jiang X[1], Yanjanin NM[3], Shankar RK[3], Carillo-Carasco N[4], Heiss J[4], Ottinger E[5], Porter FD[3], Schaffer JE[1], Vite CH[2], Ory DS[6].

Curr Top Med Chem. Author manuscript; available in PMC 2014 Jun 6.
Published in final edited form as:
Curr Top Med Chem. 2014; 14(3): 330–339.

PMCID: PMC4048128
NIHMSID: NIHMS587524

Collaborative Development of 2-Hydroxypropyl-β-Cyclodextrin for the Treatment of Niemann-Pick Type C1 Disease

Elizabeth A. Ottinger,[1,*] Mark L. Kao,[2] Nuria Carrillo-Carrasco,[1] Nicole Yanjanin,[3] Roopa Kanakatti Shankar,[3] Marjo Janssen,[4] Marcus Brewster,[4] Ilona Scott,[2] Xin Xu,[1] Jim Cradock,[1] Pramod Terse,[1] Seameen Dehdashti,[1] Juan Marugan,[1] Wei Zheng,[1] Lili Portilla,[5] Alan Hubbs,[6] William J. Pavan,[7] John Heiss,[8] Charles H. Vite,[9] Steven U. Walkley,[10] Daniel S. Ory,[11] Steven A. Silber,[2] Forbes D. Porter,[3] Christopher P. Austin,[12] and John C. McKew[1]

Vtesse

Vtesse enrolls 1st patient in Phase 2b/3 VTS-270 efficacy trial Oct 2015

Vtesse

Phase 3 VTS-270 trial fully enrolled Mar 2016

Key Publication
Feb 2015

2015

NPD
National Niemann-Pick Disease Foundation Inc.

Ara Parseghian Medical Research Foundation

Patient advocacy key to finding new treatments for rare diseases

By Daniel S. Ory, M.D.

THE HILL
CONGRESS BLOG
THE HILL'S FORUM FOR LAWMAKERS AND POLICY PROFESSIONALS

2016

Open Access
Orphanet Journal of Rare Diseases
BioMed Central

Key Publications
May 2016
Dec 2016

Phase1/2a VTS-270 manuscript review Mar 2017

2017

Sci Transl Med. 2015 Feb 25;7(276):276ra26. doi: 10.1126/scitranslmed.3010101.

Intracisternal cyclodextrin prevents cerebellar dysfunction and Purkinje cell death in feline Niemann-Pick type C1 disease.

Vite CH[1], Bagel JH[2], Swain GP[2], Prociuk M[2], Sikora TU[3], Stein VM[2], O'Donnell P[3], Ruane T[3], Ward S[2], Crooks A[2], Li S[2], Mauldin E[3], Stellar S[4], De Meulder M[5], Kao ML[4], Ory DS[6], Davidson C[7], Vanier MT[8], Walkley SU[7].

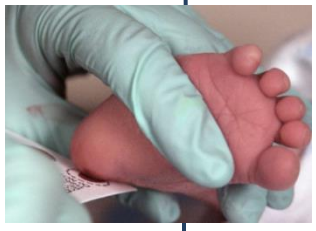
CYCLODEXTRIN TO THE RESCUE

Vite *et al* show that injection of cyclodextrin into the spinal fluid of cats with naturally occurring NPC prevented lipids from accumulating and prevented development of nervous system disease. Provides critical data on efficacy and safety of cyclodextrin in large animal model crucial for advancing drug to clinical trials.

Orphanet J Rare Dis. 2016 Dec 1;11(1):161.

Fostering collaborative research for rare genetic disease: the example of niemann-pick type C disease.

Walkley SU[1], Davidson CD[2], Jacoby J[3], Marella PD[4], Ottinger EA[5], Austin CP[6], Porter FD[7], Vite CH[8], Ory DS[9].



Sci Transl Med. 2016 May 4;8(337):337ra63. doi: 10.1126/scitranslmed.aaf2326.

Development of a bile acid-based newborn screen for Niemann-Pick disease type C.

Jiang X[1], Sidhu R[1], Mydock-McGrane L[2], Hsu FF[3], Covey DF[2], Scherrer DE[1], Earley B[1], Gale SE[1], Farhat NY[4], Porter FD[4], Dietzen DJ[5], Orsini JJ[6], Berry-Kravis E[7], Zhang X[8], Reunert J[9], Marquardt T[9], Runz H[10], Giugliani R[11], Schaffer JE[1], Ory DS[12].