Pharmacy Policy Bulletin

Title:	Fosdenopterin (Nulibry™)
Policy #:	Rx.01.246

Application of pharmacy policy is determined by benefits and contracts. Benefits may vary based on product line, group, or contract. Some medications may be subject to precertification, age, quantity, or formulary restrictions (ie limits on non-preferred drugs). Individual member benefits must be verified.

This pharmacy policy document describes the status of pharmaceutical information and/or technology at the time the document was developed. Since that time, new information relating to drug efficacy, interactions, contraindications, dosage, administration routes, safety, or FDA approval may have changed. This Pharmacy Policy will be regularly updated as scientific and medical literature becomes available. This information may include new FDA-approved indications, withdrawals, or other FDA alerts. This type of information is relevant not only when considering whether this policy should be updated, but also when applying it to current requests for coverage.

Members are advised to use participating pharmacies in order to receive the highest level of benefits.

Intent:

The intent of this policy is to communicate the medical necessity criteria for **Fosdenopterin (Nulibry™)** as provided under the member's prescription drug benefit.

Description:

Molybdenum cofactor deficiency (MoCD) is characterized by early, rapidly progressive postnatal encephalopathy and intractable seizures, leading to severe disability and early death. MoCD is an autosomal recessive disorder that results from one of several single gene defects in the biosynthetic pathway of molybdenum cofactor. Approximately two-thirds of patients have MoCD type A, in which pathogenic variants in molybdenum cofactor synthesis gene 1 (MOSC1) result in the inability to synthesize the first intermediate in the pathway, cyclic pyranopterin monophosphate (cPMP), and the toxic accumulation of sulfites in blood and urine. Most patients present during the first few days of life with exaggerated startle, lethargy, intractable seizures, and autonomic dysfunction, a complex of symptoms that may resemble hypoxic-ischemic encephalopathy.

Patients with MoCD Type A have mutations in the MOCS1 gene leading to deficient synthesis of the intermediate substrate, cPMP. Substrate replacement therapy with fosdenopterin provides an exogenous source of cPMP, which is needed for the activation of molybdenum-dependent enzymes, including SOX, an enzyme that reduces levels of neurotoxic sulfites.

Nulibry™ (fosdenopterin) is cyclic pyranopterin monophosphate (cPMP) indicated to reduce the risk of mortality in patients with MoCD Type A.

Policy:

INITIAL CRITERIA Fosdenopterin (Nulibry™) is approved when ALL of the following are met:

A. One of the following:
    1. Presumed diagnosis of molybdenum cofactor (MoCD) Type A deficiency; or
    2. Diagnosis of molybdenum cofactor (MoCD) Type A deficiency confirmed by genetic test; and
B. Prescribed by or in consultation with a physician who specializes in the treatment of inherited metabolic disorders

Initial authorization duration: 6 months

REAUTHORIZATION CRITERIA Fosdenopterin (Nulibry™) is re-approved when ALL of the following are met:

A. Diagnosis of molybdenum cofactor (MoCD) Type A deficiency as confirmed by genetic test [if not previously confirmed]; and

B. Prescribed by or in consultation with a physician who specializes in the treatment of inherited metabolic disorders; and
C. Document of positive clinical response to therapy (e.g., reduction in urine concentrations of S-sulfocysteine (SSC))

Reauthorization duration: 2 years

Black Box Warning as shown in the drug Prescribing Information:

N/A

Guidelines:

Refer to the specific manufacturer's prescribing information for administration and dosage details and any applicable Black Box warnings.

BENEFIT APPLICATION

Subject to the terms and conditions of the applicable benefit contract, the applicable drug(s) identified in this policy is (are) covered under the prescription drug benefits of the Company's products when the medical necessity criteria listed in this pharmacy policy are met. Any services that are experimental/investigational or cosmetic are benefit contract exclusions for all products of the Company.

References:

Food and Drug Administration (FDA). Nulibry summary review. June 29, 2020. https://www.accessdata.fda.gov/drugsatfda_docs/nda/2021/214018Orig1s000IntegratedR.pdf. Accessed October 04, 2022.

Nulibry [affordability and distribution resource guide], Boston, MA: Origin Biosciences, Inc; 2021. Accessed October 04, 2022.

Nulibry [dossier], Boston, MA: Origin Biosciences, Inc; March 2021. Accessed October 04, 2022.

Nulibry™ (fosdenopterin) [package insert], Boston, MA: Origin Biosciences, Inc; February 2021. Available from: https://www.nulibry.com/pdfs/nulibry-prescribing-information-v2.pdf. Accessed October 04, 2022.

Shellhaas, R. Treatment of neonatal seizures. In: *UpToDate*, Post TW (Ed), UpToDate, Waltham, MA. Accessed on October 04, 2022.

Applicable Drugs:

Inclusion of a drug in this table does not imply coverage. Eligibility, benefits, limitations, exclusions, precertification/referral requirements, provider contracts, and Company policies apply.

Brand Name	Generic Name
Nulibry®	Fosdenopterin

Cross References:

Rx.01.33 Off Label Use

Policy Version Number:	2.00
P&T Approval Date:	September 15, 2022
Policy Effective Date:	January 01, 2023
Next Required Review Date:	September 15, 2023

The Policy Bulletins on this web site were developed to assist the Company in administering the provisions of the respective benefit programs, and do not constitute a contract. If you have coverage through the Company, please refer to your specific benefit program for the terms, conditions, limitations and exclusions of your coverage. Company does not provide health care services, medical advice or treatment, or guarantee the outcome or results of any medical services/treatments. The facility and professional providers are responsible for providing medical advice and treatment. Facility and professional providers are independent contractors and are not employees or agents of the Company. If you have a specific medical condition, please consult with your doctor. The Company reserves the right at any time to change or update its Policy Bulletins.