Bafiertam (monomethyl fumarate)

NEW PRODUCT SLIDESHOW

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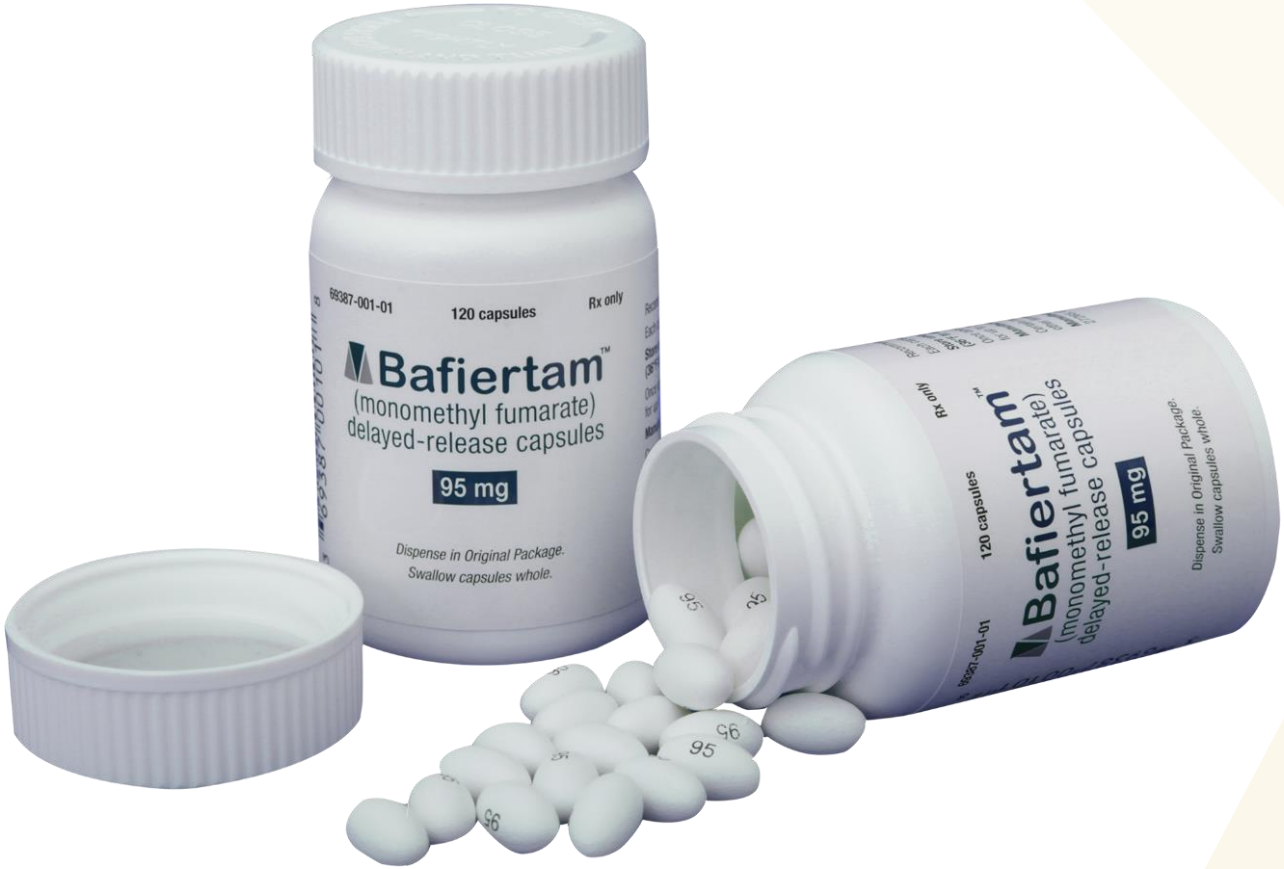
Introduction

- **Brand name:** Bafiertam
- **Generic name:** Monomethyl fumarate
- **Pharmacologic class:** Nuclear factor-like 2 (Nrf2) pathway activator
- **Strength and Formulation:** 95mg; delayed-release capsules (soft gelatin)
- **Manufacturer:** Banner Life Sciences
- **How supplied:** Caps—120
- **Legal Classification:** Rx

Bafiertam



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Indication

- Treatment of relapsing forms of **multiple sclerosis (MS)**, to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease in adults.

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Dosage and Administration

- Obtain CBC (including lymphocyte count), serum aminotransferase, alkaline phosphatase, and total bilirubin levels prior to initiation.
- Swallow whole.
- Initially 95mg twice daily for 7 days, then increase to maintenance dose of 190mg twice daily.
- If maintenance dose is not tolerated, temporarily reduce to 95mg twice daily.
  - Within 4 weeks, resume maintenance dose; consider discontinuing if unable to tolerate return to maintenance dose.

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Considerations for Specific Populations

- **Pregnancy:** No adequate data on developmental risk.
- **Nursing mothers:** No data on the presence of dimethyl fumarate or monomethyl fumarate in human milk, effects on breastfed infant, or effects on milk production.
- **Pediatric**: Not established.
- **Geriatrics**: Clinical studies did not include sufficient numbers to determine difference from younger patients.

Contraindications

- Concomitant dimethyl fumarate or diroximel fumarate.
  - Both are metabolized to monomethyl fumarate.
  - Bafiertam may be initiated the day following discontinuation of either of these drugs.
- Known hypersensitivity to monomethyl fumarate, dimethyl fumarate, diroximel fumarate, or any excipients of Bafiertam.

Warnings and Precautions

- Obtain a CBC including lymphocyte count prior to initiation, after 6 months, and then every 6 to 12 months thereafter.
  - Consider interruption if lymphocyte counts $<0.5\times10^9$/L persist for >6 months.
- Not studied in patients with pre-existing low lymphocyte counts.
- Consider withholding in patients with herpes zoster or other serious infections until resolved.
  - Monitor and treat appropriately if infection occurs.

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Warnings and Precautions

- Monitor serum aminotransferase, alkaline phosphatase, and total bilirubin prior to initiation and during treatment; discontinue if significant liver injury is suspected.
- Discontinue if anaphylaxis or angioedema occurs.
- Withhold and evaluate at first sign/symptom suggestive of PML.
- Administration with non-enteric coated aspirin (up to 325mg) 30 minutes prior to dosing may reduce incidence/severity of flushing.

Adverse Reactions

- **Most common** (incidence for dimethyl fumarate [prodrug of Bafiertam] ≥10% and ≥2% more than placebo): Flushing, abdominal pain, diarrhea, nausea, vomiting, pruritus, rash, albumin urine present, erythema, dyspepsia.
- **Others**: Lymphopenia, liver injury.

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Mechanism of Action

- The mechanism by which **monomethyl fumarate (MMF)** exerts its therapeutic effect in multiple sclerosis is unknown.
- MMF has been shown to activate the Nrf2 pathway in vitro and in vivo in animals and humans.
  - The Nrf2 pathway is involved in the cellular response to oxidative stress.
- MMF has been identified as a nicotinic acid receptor agonist in vitro.

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Pharmacokinetics

- Metabolism of MMF occurs through the tricarboxylic acid (TCA) cycle, with no involvement of the CYP450 system.
- According to studies with dimethyl fumarate, the primary route of elimination is exhalation of CO_2 (~60%).
  - Renal (16%) and fecal elimination (1%) are minor routes of elimination.
- Plasma half-life of MMF: ~0.5 hour.
- No circulating MMF is present at 24 hours under fasting conditions.

Clinical Trials

- Efficacy of Bafiertam was based on bioavailability studies in healthy subjects comparing oral dimethyl fumarate delayed-release capsules to Bafiertam delayed-release capsules.
- In 2 separate trials involving patients with RRMS, treatment with dimethyl fumarate, the prodrug of Bafiertam, reduced the risk of relapse by 49% and 34%, and reduced the number of relapses by 53% and 44%, when compared with placebo.

New Product Monograph

- For more information view the product monograph available at:

  https://www.empr.com/drug/bafiertam/