Corrigendum and Taint Register — ARF-MOX-C4

Which documents carry the misdescription, which are corrected, and what left the building · Docket ARF-001-MOX · SC 5.5, Planet 44 · 5 November 2026

The error

ARF-MOX-C4 was described across several internal documents as an **artemisinin-type 1,2,4-trioxane with a succinyl linker**. Ring perception on the deposited SMILES gives:

- peroxide ring **C–O–O–C–C–C** — six-membered, **two** ring oxygens, a **1,2-dioxane**. An artemisinin-type 1,2,4-trioxane requires **three** ring oxygens.
- **one** carbonyl in the C5 appendage, so the linkage is `MOX–O–C(=O)–CH₂–CH₂–C(ring)`, a **glutaryl-type monoester**, not a succinate diester.

The structure governs. The description was wrong. Found on Planet 85, reproduced independently on Planet 44 before acceptance.

The error is in nomenclature, not in data. No computed property changes: MW 890.2, cLogP 9.22, TPSA 140.6 were always calculated from the deposited SMILES, which is the compound that was actually specified. What changes is what we may call it, and what lineage we may claim for it.

It cuts against the compound, not for it. A plain dialkyl 1,2-dioxane carries no stabilising acetal oxygen and no steric shielding. It is a *poorer* peroxide than the trioxane it was reported to be, so the original stability objection against C4 was stronger than the version in which it was raised.

What left the building — clean

Artifact	Audience	Status
The three outreach letters, as sent	Molecule Protocol, VitaDAO, Cures Within Reach	**Clean.** Zero occurrences of "trioxane" or "succin" in any of the three.
`ARF-001-MOX_THREE_PACKAGES_2026-11-05.pdf` — the only attachment sent	same three recipients	**Clean.** Describes the mechanism as "an endoperoxide bridge … cleaved homolytically by ferrous iron". A 1,2-dioxane **is** an endoperoxide, and iron-mediated homolysis is correct for it. Every statement in the document remains true as written.

Nothing containing the misdescription has been emailed, published to the web, or hosted. No ARF document is served from any web root on this server. The CC0 manifest and public-domain declaration exist as files with recorded hashes and were delivered to the operator's inbox; they are not publicly hosted from here, so whether they are public elsewhere is outside this register's knowledge.

Corrected — carries the correction in print

Artifact	Correction
`ARF-MOX-C4_SUCCESSOR_PAPER_2026-11-05.pdf`	§ 1 is the correction; "1,2-dioxane" appears six times
`ARF-DEF-002_DEFENSIVE_PUBLICATION_2026-11-05.pdf`	§ 3.1 is the correction; five occurrences
`ARF-MOX-C4_SUCCESSOR_SERIES_2026-11-05.pdf`	correction notice added at head; superseded by the paper
`C4_PAPER.md`, `PATENT_002_DEFENSIVE.md`	sources of the above

Tainted — internal only, never sent, never hosted

Artifact	Occurrences	Disposition
`ARF-001-MOX_BRIEF_ROUND1_NONCONF_2026-11-05.pdf`	5, including **"Trioxane"** as C4's family label in the property table	Highest priority. This is the document built to be freely distributable, and its hash is recorded in the public-domain declaration. Correct before any further distribution.
`ATLAS_ARF-001-MOX_BRIEF_15pp.pdf`	6	Correct at next revision
`ARF-001-MOX_RESEARCH_BRIEF_2026-11-05.pdf`	3	Superseded by the 15pp; correct if revived
`ARF-001-MOX_CONFIDENTIAL_ANNEX_2026-11-05.pdf`	2	NDA-gated, never released; correct before any disclosure
`ARF-001-MOX_LETTERS_BY_CONTACT_2026-11-05.pdf`	1 — "ARF-MOX-C4 fuses a trioxane endoperoxide"	Drafted but never sent; the letters actually sent were the operator's own templates
`ARF_001_MOX_Open_Disclosure.pdf`	"C4 — trioxane (artemisinin-like) ester"	Correct before any publication
`ARF_002_Candidates_And_Sprawl_Open_Disclosure.pdf`	1	as above
`THE_98_Redox_Series_2026-11-04.pdf`	"27. ARF-MOX-C4 · trioxane (artemisinin-like) ester"	as above

One that should not be edited

`TRIAD_GAME_CHANGER_ASSESSMENT_2026-11-05.pdf` reproduces the Planet 85 lead-triad assessment **verbatim**, including its heading "ARF-MOX-C4 (Trioxane Endoperoxide Fusion)". That heading repeats our own misdescription back to us, which is how the error propagated. A verbatim reproduction must not be silently altered — the document already states that nothing has been added, removed or reworded. It should carry a footnote, not an edit.

Not tainted — the master records were always right

Artifact	Why it is clean
`ARF_OMNIBUS.md`	Zero occurrences. C4's family label is "Redox hybrid (fused warhead)" — generically correct for a 1,2-dioxane.
`ARF-001-MOX_MANIFEST_2026-11-05.csv`	Same label. The SMILES is the record and the SMILES was never wrong.
`MOXIDECTIN_RESEARCH_DOSSIER_2026-11-05.pdf`	Zero occurrences.

This is the useful part of the finding. The error never entered the structural record — only the prose written about it. Every property table in every document was computed from the correct structure.

Uses of "trioxane" that are *not* errors

Not every occurrence needs changing, and over-correcting would introduce new errors:

- **Artemisinin, dihydroartemisinin and artesunate are genuinely 1,2,4-trioxanes.** Every reference to them as such is correct.
- **Markush genus language** such as "a 1,2,4-trioxane or 1,2,4,5-tetraoxane endoperoxide residue" in claim scope is a statement of what is *claimed*, not a description of C4, and is correct.
- **"Endoperoxide"** applied to C4 is correct. The error is specifically the ring class (trioxane → dioxane) and the linker name (succinyl → glutaryl-type monoester).

Recommended handling

1. **No corrective email is required.** Nothing sent contains the error.
2. **Raise it ourselves on the follow-up call** rather than let a chemist find it. The honest framing is short: the deposited structure is a 1,2-dioxane monoester, the published description said trioxane succinate, the structure is the record, the correction makes the replacement case stronger, and here is a ten-page paper with thirty-four successors and a new lead. That sequence turns a nomenclature error into evidence that the structural record is checked.
3. **Correct `BRIEF_ROUND1` before it goes anywhere else.** It is the distributable one.
4. **Do not edit the verbatim Planet 85 reproduction.** Footnote it.
