



Drugs for extreme conditions

Bemitil leads. Chlodantane follows.
Dalargin targets tissue and organ injury after trauma.

\$1–2M PRE-SEED

Operational stress is a drug-development problem

- | | | |
|----|------------------------------|--|
| 01 | 518 heat-stroke cases | 2025 U.S. active-component surveillance. Heat-stroke incidence rose 6.9%. Heat exhaustion: 2,233 cases, incidence down 9.1%. |
| 02 | Secondary injury | Severe trauma triggers organ dysfunction. Delayed evacuation creates a demanding target product profile. |
| 03 | Why now | AI-assisted extraction makes the multilingual archive searchable. A defined endpoint makes the thesis testable. |

Sources: MSMR, May 2026 (2025 surveillance); Antaeus development strategy.

A relevant human performance research lineage

+10%

compensatory tracking
quality

**1.8-fold fewer pursuit errors
2.4-fold shorter detection time**

Placebo comparison / 56-hour continuous work
Bobkov & Epishkin, 1988 / PMID 3066983

Additional human context: heat + protective equipment (1997), long voyages (1991), oral PK (2011).

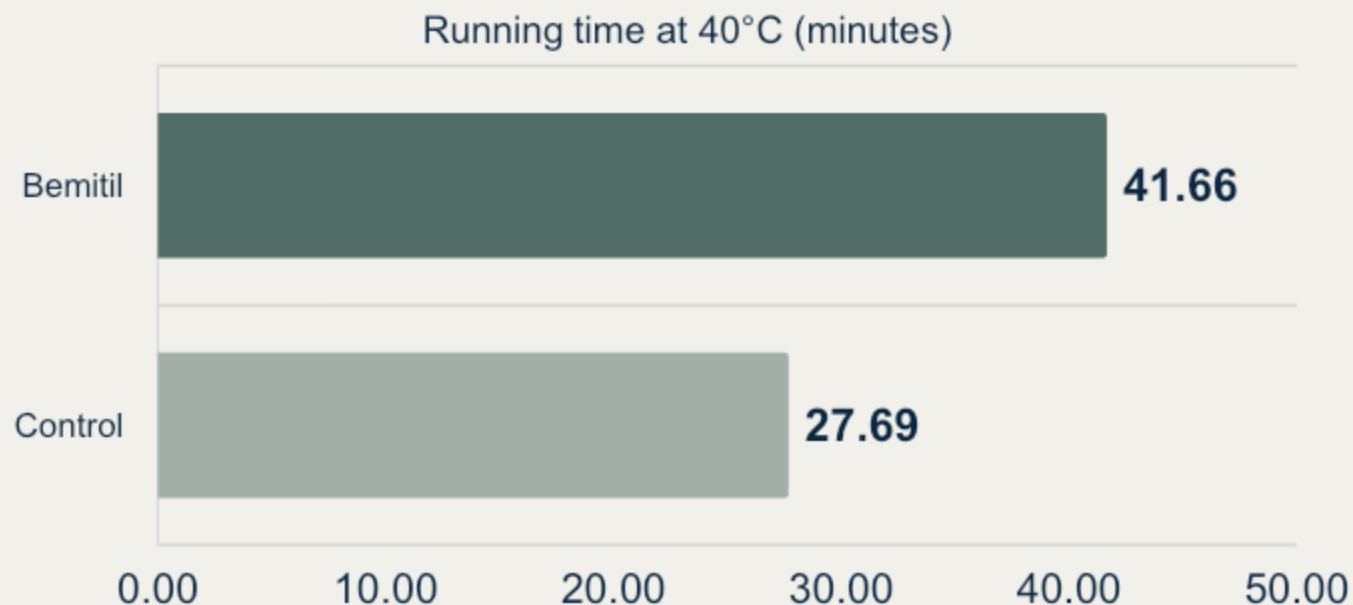
Historical task-specific results. Abstract omits sample size and detailed allocation. No modern target-indication efficacy claim.

Bemtil has a quantified heat-stress signal

MICE / 40°C / PATENT EXAMPLE / NOT INDEPENDENTLY REPLICATED

+50.5%

Longer running time in a mouse heat model



A reproducible animal result is the first gate. Historical human research strengthens indication fit.

RU2704126C2, Table 2. Small groups and inconsistent n reporting. Human efficacy requires clinical validation.

One asset. One endpoint. One candidate decision.

Time to work limit

Fixed workload. Controlled heat. Blinded assessment.

MONTH 9 STOP GATE

Stop for failed blinded replication, worsened heat strain or an unacceptable exposure / safety margin.

Scientific lead locks effect-size, statistical and safety thresholds before testing.

A research catalog becomes an experimental engine

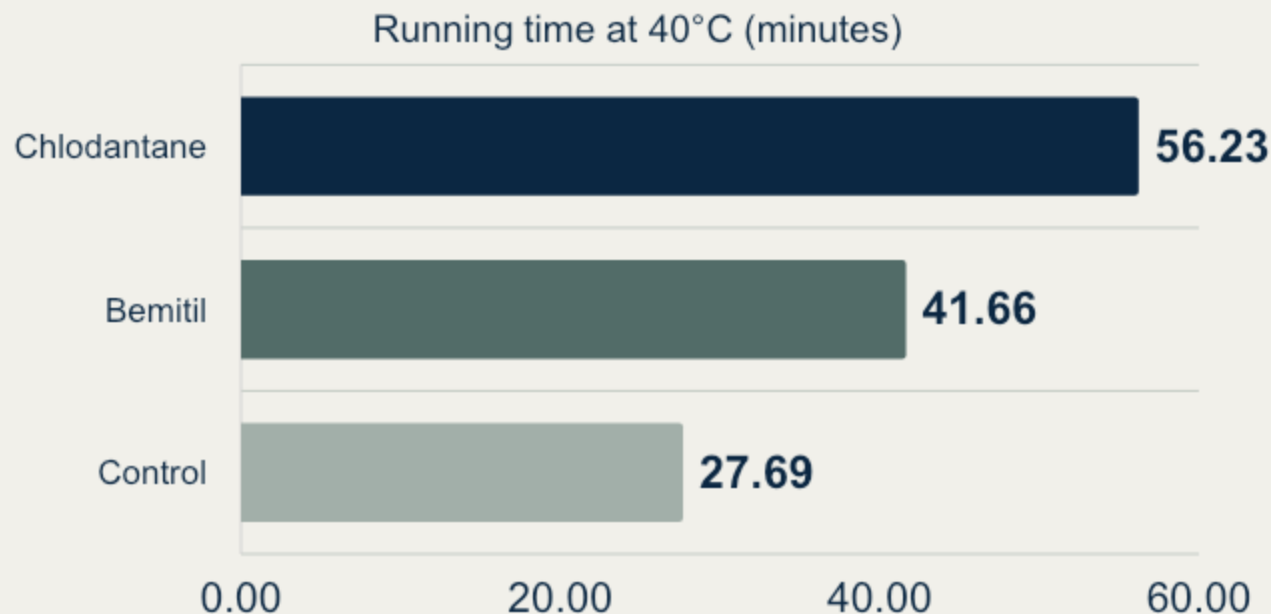
- | | | |
|----|-------------------------------|---|
| 01 | Source-linked research | Molekul connects compound identity, original findings and evidence gaps. AI-assisted extraction makes the archive searchable. |
| 02 | Experiment selection | Rank formulation and analogue hypotheses by exposure, safety, information value and development feasibility. |
| 03 | Laboratory feedback | Measure the result. Update the next prediction.
Benchmark prospective hit rate and cost per decision. |

Chlodantane is the next chemistry target

MICE / 40°C / PATENT EXAMPLE / NOT INDEPENDENTLY REPLICATED

+103.1%

Running time vs control
for a specific formulation



Next work: identity, formulation, exposure and safety. Comparator doses differ. Patent rights require review.

Tissue and organ protection after trauma

104

severe-trauma patients
38 Dalargin / 66 controls

Bemtil leads on indication fit.
Dalargin must resolve infusion
delivery and shock safety.

Opioid peptide: assess abuse liability, CNS exposure and respiratory / hemodynamic safety. Scheduling unresolved.

Parallel diligence priority. Hospital infusion, study exclusions and mixed shock evidence limit field translation.

Observed outcome	Dalargin	Control
ARDS	5.3%	21.2%
Stage-1 kidney injury	2.6%	19.7%
Mortality	21.1%	25.8%

Single-center hospital comparison. Randomization and masking not reported. Mortality: no significant difference.

Legacy molecules. New development IP.

- | | | |
|----|----------------------------------|---|
| 01 | Starting position | Publicly disclosed compounds. No unexpired original-molecule U.S. claim identified in our preliminary search. No granted Antaeus portfolio claimed. |
| 02 | Specific use rights exist | Dalargin: U.S. patent US11365216B2 covers a specific intranasal antiviral method. This does not establish coverage of trauma use. |
| 03 | Where we build value | Candidate data and patentable formulations, analogues or specific uses. Counsel reviews exact claims and jurisdictions before candidate selection. |

Defense research first. Civilian applications follow.

- | | | |
|----|------------------------------|---|
| 01 | First transaction | Sponsored R&D around the heat-exertion endpoint. Evaluate eligible SBIR/STTR calls and USARIEM scientific alignment. No award or partnership claimed. |
| 02 | Civilian expansion | Maritime, energy and emergency response share operational constraints. Each use needs its own product and adoption case. |
| 03 | Research sponsor path | science@antaeusbiosciences.com
A defined study and candidate decision support licensing or co-development. |

Gregory Battenfield

Founder of Antaeus Builder of Molekul.io

Finance, banking and commodity experience.
Merchant mariner working inside the first target
environment.

Personal experiments sharpened the questions.
Controlled research will test the thesis.

RECRUITING: IND-experienced scientific lead, computational partner and qualified laboratory capacity

90+

COMPOUNDS

400+

SOURCE RECORDS

\$1–2M pre-seed

One lead-candidate decision

0–3 months: team and protocol
 3–9 months: controlled replication
 9–18 months: candidate selection

\$1.5M reference case	Share	Amount
Pharmacology / PK	35%	\$525k
Chemistry / material / formulation	20%	\$300k
Initial safety	15%	\$225k
Scientific lead / personnel	15%	\$225k
AI / evidence data	5%	\$75k
IP / regulatory	5%	\$75k
Operations / contingency	5%	\$75k

Planning allocation. Laboratory quotes determine scope. Clinical development requires subsequent financing.

Research and decision boundaries

Bemtil human studies

1988 operators / 1997 heat / 1991 voyages / 2011 PK

PubMed 3066983 / 9162292 / 9235216 / 1885014 / 21870773

Animal patent examples

Bemtil and chlodantane / Table 2 / small groups

RU2704126C2; formulation and comparator doses differ

Dalargin trauma + risk

Antonova 2023 / 104 patients / no mortality difference

DOI 10.21320/1818-474X-2023-4-185-196; PMIDs 2717231 / 9622035

U.S. IP starting point

Specific Dalargin use rights; claims require counsel

US11365216B2; /ip on antaeus.bio documents search scope

Why now + regulation

MSMR 2026 / 2025 surveillance; FDA July 2026 update

Generic-peptide draft guidance does not create a Dalargin approval shortcut

\$1–2M pre-seed / investors@antaeusbiosciences.com / research: science@antaeusbiosciences.com