

## Chain-Of-Thought Analysis:

### 1. Analyze User Constraints and Feedback:

- **Feedback:** The previous query (using OR/AND and many terms) "broke" the search engine and returned zero results when terms were known to exist in the corpus.
- **New Constraint 1 (Complexity):** Only use 3 phrases/words per query.
- **New Constraint 2 (Conditionals):** No conditional ORs or ANDs (Boolean operators).
- **New Constraint 3 (Quantity):** Create 14 queries.
- **Topic:** Researching herbal medications for Lyme and Babesia, focusing on studies that screen multiple compounds.

### 2. Determine Strategy:

Since Boolean operators and complex queries are banned, the strategy must be a highly segmented "shotgun" approach. I must create 14 distinct, simple queries, each containing 2-3 essential, non-redundant keywords related to the three core concepts:

- **Pathogens:** Lyme, Babesia, Borrelia.
- **Herbs/Compounds:** Cryptolepis, Artemisinin, Baicalein, Scutellaria, Polygonum, Knotweed, Wormwood.
- **Methodology/Focus:** Screening, Phytochemicals, Extract, Multi-drug.

### 3. Generate 14 Simple Queries (Maximum 3 Terms, No Operators):

Index	Core Concept 1 (Pathogen)	Core Concept 2 (Herb/Compound)	Core Concept 3 (Method/Focus)	Query String
1	Lyme	Cryptolepis	Screening	Lyme Cryptolepis Screening
2	Babesia	Artemisinin	Phytochemical	Babesia Artemisinin Phytochemical
3	Borrelia	Baicalein	Extract	Borrelia Baicalein Extract
4	Lyme	Scutellaria	Multi-drug	Lyme Scutellaria Multi-drug

5	Babesia	Polygonum	Screening	Babesia Polygonum Screening
6	Borrelia	Knotweed	Repurposing	Borrelia Knotweed Repurposing
7	Lyme	Wormwood	Bioassay	Lyme Wormwood Bioassay
8	Babesia	Cryptolepis	Multi-drug	Babesia Cryptolepis Multi-drug
9	Borrelia	Artemisinin	New Therapy	Borrelia Artemisinin New Therapy
10	Lyme	Baicalein	Discovery	Lyme Baicalein Discovery
11	Babesia	Scutellaria	Phytochemical	Babesia Scutellaria Phytochemical
12	Borrelia	Polygonum	Extract	Borrelia Polygonum Extract
13	Lyme	Knotweed	Screening	Lyme Knotweed Screening
14	Babesia	Wormwood	Repurposing	Babesia Wormwood Repurposing

4. **Final Review:** All 14 queries adhere strictly to the constraints: 14 distinct queries, no

OR/AND operators, and a maximum of three terms per query.

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## Segmented Query Strategy (14 Queries)

To address the search engine's failure with complex Boolean logic, these queries use a highly granular, simple keyword approach, adhering strictly to the constraint of **three or fewer terms per query with no Boolean operators**.

Index	Query String (Maximum 3 Terms)	Focus
1	Lyme Cryptolepis Screening	Pathogen, Herb, Methodology
2	Babesia Artemisinin Phytochemical	Pathogen, Compound, Compound Type
3	Borrelia Baicalein Extract	Pathogen, Compound, Formulation
4	Lyme Scutellaria Multi-drug	Pathogen, Herb, Efficacy/Testing
5	Babesia Polygonum Screening	Pathogen, Herb, Methodology
6	Borrelia Knotweed Repurposing	Pathogen, Herb, Focus
7	Lyme Wormwood Bioassay	Pathogen, Herb, Methodology
8	Babesia Cryptolepis Multi-drug	Pathogen, Herb, Efficacy/Testing
9	Borrelia Artemisinin New	Pathogen, Compound,

	Therapy	Focus
10	Lyme Baicalein Discovery	Pathogen, Compound, Methodology
11	Babesia Scutellaria Phytochemical	Pathogen, Herb, Compound Type
12	Borrelia Polygonum Extract	Pathogen, Herb, Formulation
13	Lyme Knotweed Screening	Pathogen, Herb, Methodology
14	Babesia Wormwood Repurposing	Pathogen, Herb, Focus