



Novel Diagnostics for Aspergillosis

Tired of slow and inaccurate aspergillosis diagnostics? acib's innovative DNA aptamer technology revolutionizes diagnostics with precision and speed.

BACKGROUND

Aspergillosis, a life-threatening infection caused by *Aspergillus* species, poses a significant health risk, especially to immunocompromised individuals. This fungal disease affects millions annually while limitations in diagnosis often delay treatment, exacerbating the mortality rate:

- **Time-consuming:** Traditional methods, such as culturing are slow, often delaying crucial early diagnosis.
- **Low sensitivity and specificity:** Many tests fail to detect early-stage infections or distinguish between *Aspergillus* species, hindering targeted treatment.
- **Complex procedures:** Existing diagnostics require specialized equipment, restricting their use in resource-limited settings.

TECHNOLOGY

acib has developed a groundbreaking diagnostic tool based on DNA aptamers. Aptamers are short, single-stranded synthetic DNA molecules that can specifically bind to target molecules such as proteins, toxins, or fungal cells. Their unique 3D structure allows for high specificity in target binding, making them ideal for diagnostics.

acib's aptamer-based platform detects *Aspergillus* infections with:

- + **Improved sensitivity:** Aptamer-based assays can potentially detect even low levels of *Aspergillus* cells, facilitating early diagnosis.
- + **Enhanced specificity:** By targeting unique *Aspergillus* antigens, aptamers can differentiate between *Aspergillus* species, guiding appropriate treatment.
- + **Simplified procedures:** Aptamer-based tests can be designed for point-of-care applications, requiring minimal laboratory equipment or expertise.

The technology's versatility extends across various fields. It can e.g., detect *Aspergillus* spores in hospitals to prevent infections, and monitor mycotoxins in food, making it a valuable tool for both healthcare and industry.

OFFER

acib's innovative diagnostic platform has the potential to transform fungal disease detection and save lives by offering fast, specific, and cost-effective diagnostics. We are actively seeking industry partners for joint projects to help bring this game-changing technology to market. Partners can gain exclusive rights to the IP developed in such a project, positioning them at the forefront of a new era in fungal diagnostics.

acib-EXPERTS:

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DEVELOPMENT STATUS:

Technology Readiness Level 2
(technology concept formulated)

KEYWORDS:

Rapid Diagnostic Tests
Species-specific detection
Molecular Diagnostics
Invasive Aspergillosis
Pulmonary Aspergillosis
R&D Partnership
Biomarkers
Healthcare Technology
Point-of-Care Diagnostics
Commercialization

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