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Volume 17, Issue 8 — August 2023

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Michael Chen, Sarah Williams, David Park

*Keywords: autophagy, neurodegenerative diseases, mTOR, AMPK, Beclin-1, protein aggregation, therapeutic strategies*

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#### **CRISPR-Cas9 Applications in Agricultural Biotechnology: Current Status and Future Prospects**

Elena Rodriguez, James Thompson, Wei Zhang

*Keywords: CRISPR-Cas9, gene editing, agricultural biotechnology, crop improvement, food security, sustainable agriculture, regulatory frameworks*

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3.

#### **Gut Microbiome Composition and Its Impact on Immune System Development**

Anna Kowalski, Robert Martinez, Lisa Chen

*Keywords: gut microbiome, immune system development, T-cell differentiation, microbial colonization, dietary factors, environmental exposures, infant cohort*

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Thomas Anderson, Maria Santos, Yuki Tanaka

*Keywords: climate change, marine ecosystems, carbon cycling, ocean acidification, phytoplankton productivity*

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### **Advances in Stem Cell Therapy for Cardiovascular Disease Treatment**

Jennifer Liu, Christopher Brown, Ahmed Hassan

*Keywords: stem cell therapy, cardiovascular disease, myocardial infarction, regenerative medicine, cell engraftment, safety profiles, clinical trials*