Axial Dispersion Bioreactor (Adbr) for Production of Microalgae and Other Microorganisms

**Title:** Axial Dispersion Reactor (ADBR) for Production of Microalgae and Other Microorganisms

**Invention:** This technology is an original bioreactor capable of cultivating microorganisms (algae, bacteria, fungi, etc.) and cell cultures (plant, animal, insect, etc.) for the biotechnology, pharmaceutical and food markets.

**Background:** Currently, a variety of bioreactors suffer from the inability to provide a low shear-environment with superior mixing and efficient gas mass transfer within a medium.

**Applications:**
- Pharmaceutical/Medical applications where cell cultures can help produce new medicine or create cell cultures
- Food (ex. algae is a potential food source)
- Energy (ex. algae used as a potential biofuel)

**Advantages:**
- Provides a regulated or low shear culture environment
- Exhibits superior liquid mixing
- Efficient gas mass transfer
- Transparent walls for photoautotrophic/mixotrophic production
- Transparent or non-transparent walls and sterile environment for heterotrophic production

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