A New Approach to Prevent (Food) Allergy Development in Infants

**Background:** The occurrence of allergic disorders in children in Western societies increases rapidly. However, children that were breast fed, followed by gradual exposure to solid food but minimal exposure to antibiotics in the first year of life, do not follow this alarming trend. This prompted researchers at Washington University in St. Louis to study the mechanism that triggers or prevents food allergies. They have discovered a safe and practical method to prevent food allergy development in infants.

**Technology Description:** The team led by Dr. Newberry has shown that Epidermal Growth Factor (EGF), naturally present in breast milk, but not in infant formula, controls a regional and temporal pattern of antigen exposure in the offspring’s immune system. This controlled exposure to both dietary and microbial antigens promotes a healthy immune tolerance. Proven in mice, the research indicates that supplementing infant formula with Epidermal Growth Factor Receptor (EGFR) ligands, including EGF, in a decreasing concentration gradient similar to breast milk is prone to reduce allergic outcomes in children.

**Key Advantages:**
- Novel practical approach to prevent food-allergies development in infants
- Safer and simpler than oral immunotherapy
- Applicable to multiple types of food allergies
- Various commercial products possible including:
  - a series of ready-made infant formula containing age-appropriate EGF concentration
  - EGF or EGF-receptor ligand formulation (e.g. solutions) sold separately as a supplement


**Patent:** Pending

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**Application Space**
Prevention, Allergy, Pediatrics, Food Science, Nutraceuticals

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