Abstract: Current rates of obesity among young children present an enormous public health challenge. Although research demonstrates which obesity-related behaviors require modification in young children, to date few nutritional interventions have been successful in translating this knowledge into healthier behaviors. A primary barrier is the need for nutrition education programs to compete with highly effective advertising for less nutritious foods to which children are exposed daily. The goal of this study is to create and evaluate a novel, appealing interactive website, *Honeybee Market (HM)*, which utilizes innovative technology to promote healthy food choices among young children. To achieve this goal, Hood Center scientists have formed a unique collaboration with a creative team of graphic, visual, and performance artists; and software experts in children’s multimedia programming from WGBH-Boston. *HM* will fuse multimedia entertainment programming with nutritional education to promote healthy food choices using a social marketing approach. Characters, storylines, and content of the website will build upon preliminary work, funded by a NCCC Prouty grant. A *HM* software prototype will be developed by the Kids’ Interactive team at WGBH-Boston. Prototype content will include a character slideshow and video cameos, an online game, printable games and activities, and recipes. Seven specific nutritional messages will be promoted throughout the website. Multi-method data sources, including structured observations, qualitative interviews, and survey data, will be utilized to collect information from 50 children and their parents to three components of the website: usability of the *HM* prototype, child/parent receptivity, and *HM* influence on child healthy eating attitudes and behaviors. Pilot results will inform an extramural (NIH) grant to evaluate the effectiveness of *HM* in improving child and family-level obesity-related behaviors.

Selected *Honeybee Market* Images