



CALEB CHUNG

 **AGE:** 49
BIRTHPLACE: Watsonville, Calif.
HOW LONG CAN GO BETWEEN MEALS: Twice as long as Pleo.

 **PLEO**

AGE: 2 weeks old, give or take 150 million years
BIRTHPLACE: Boise, Idaho
HOW LONG CAN GO BETWEEN MEALS: 1 hour if actively playing, 2 hours if taking it easy.

Emobots

CALEB CHUNG WANTS PLEO TO PERFORM. "Come on," he coaxes the rubbery toy dinosaur, stroking its nose, stretches, wags its tail and totters a few steps—then yawns and curls up for a nap.

Life is exhausting when you're a prototype robotic toy, just months away from your debut. It's even more exhausting for principal inventor Chung, 49, and his three dozen colleagues at Ugobe Inc., who are trying to create a "designer life form," a creature that can elicit the same cooing and warm fuzzy feelings as a new puppy.

OLIVIER LAUDE FOR FORBES

EGANG·ROBOTS

So far, so good. When Chung showed off Pleo earlier this year at a tech conference, 200 people sang "Happy Birthday" to the robot. Since then thousands have emailed Ugobe pleading to be among the first to pay \$250 for a Pleo. They need patience: Pleo, first planned for the holidays, won't emerge until March.

Pleo is a technical marvel, but all the wizardry is invisible, designed to create a personality. Chung knows how to prompt feelings without using words. He was a street mime; he played an orangutan on TV; he taught himself to make mechanized puppets and toys. In the 1980s he made a playful dinosaur for Mattel, but the company nixed the idea as too expensive. Chung later cocreated Furby, the big-eared fuzz ball that sold 50 million units. He retired comfortably but hankered to build a robotic dino pet.

Working with a friend, Chung came up with software that animates a four-legged robot with balanced, smooth motions. Soon entrepreneur Robert Christopher signed up to be chief executive of a new company, which he named "Ugobe" (as in, "You go be what you want to be"). They have raised \$2.7 million from investors so far and bank on getting another \$8 million in September.

In Boise, Idaho Chung and a dozen collaborators have modeled Pleo after a plant-eating baby camarasaurus from the Jurassic period. Pleo has an operating system, a microcontroller, 14 motors (one for each joint) and 31 sensors to detect changes in light, sound and motion. Skin has slowed Pleo's arrival; Chung wants the rubbery material to fit snugly yet move naturally.

Pleo's coolest feature is software that lets it react to stimuli and its environment in a thousand different ways. Touching its head can startle a young Pleo, make an older Pleo wag its tail playfully—and annoy a hungry one. Owners will be able to download new behaviors from the Web or write their own code. Young Pleos might even pick up habits or catch a cold by hanging out with other Pleos, sharing data via infrared links. "Our job is to create a relationship between Pleo and a person," Chung says. "You'll interact with it, share an emotional language with it. Then you can play."

—Elizabeth Corcoran