Many of our original medicines were derived from plants - and many that we still use to this day, such as quinine and digitalis. Many new medicines, such as vincristine (from Rosy Periwinkle, or \textit{Vinca major}, shown here in my garden) to treat childhood leukemia, are derived from plants.

Many plants, like this trumpetflower, contain atropine and scopolamine compounds, long known to open airways during asthma - and also long known to induce hallucinations and possible death. One related plant, the jimsonweed, was long known to help asthma when it was thrown into a fire and the smoke inhaled, so it was made into cigarettes which could be smoked to treat asthma attacks!
Why do we seek new medicines in the rainforest? It is partly because of the greater diversity of species and the greater number of species found there.

In addition, the people of the rainforest are a valuable resource from which to seek information (the term "ethnobotany" describes that activity). With the decimation of forest populations and the migration to cities, it has been said that the loss of a shaman is like the burning down of a library.
At Ix Chel Farm (named after the Mayan goddess of healing) in Belize, Rosita Avirignon studies and teaches about plant medicines.

An important part of preserving the knowledge of plant medicines is bringing people together and teaching, and learning from each other. Rosita is coauthor of "100 Rainforest Remedies from Belize"
Miss Hortense has been a midwife and healer since she was 13 years old (she is now 70!) She is sitting next to a Mexican Yam, which is the source of natural hormones to treat many problems of women.

This plant used to be the source of a steroid compound from which all cortisones and hormones were made. The pharmaceutical companies eventually learned to make these drugs entirely synthetically, although now with the interest in more natural medicines, many are once again using Mexican Yam as a source of raw chemical.

In the Amazon, visitors have come to learn about plant medicines from Don Antonio. This has sparked a renewed respect for his knowledge within the local community.
"From bugs to drugs". Why do plants have biological activity in animals? Many times it is to protect themselves from being eaten by insects or higher animals. This butterfly has learned to eat plants which make it poisonous to birds and reptiles.

Plants have developed remarkable ways of defending themselves. When this passionflower feels itself being eaten by caterpillars, it begins to secrete sugar from these pores - which attracts ants, which drive off the caterpillars!
On Rosita's Rainforest Medicine Trail one can learn a lot about what plants have medicinal properties.

Chocolate is the original "feel good food" - it was revered as "nectar of the gods" by Mayan leaders (and only the leaders could have it!). Cocoa (pods shown here) contains caffeine and theobromine, both stimulants. Derivatives of theobromine are used to treat asthma.