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## *Knowable Magazine Publishes a Special Report on **Building Bodies***

Palo Alto, CALIF. (February 4, 2020) — [Knowable Magazine](#) is pleased to announce the publication of [Building Bodies](#), a special report exploring how animals and plants develop their shapes and forms. The collection of nine articles looks at the captivating science behind the principles and strategies — and the many puzzles remaining. Presented in an inviting online format, the special report is written in language that is interesting and accessible for non-experts.

“How does a single cell grow into a collection of trillions of highly integrated, highly specialized cells, all working together in sync? Developmental biologists are obsessed with trying to understand how this happens, and the more we learned about it, the more we became so, too,” says *Knowable* Executive Editor [Rosie Mestel](#). “*Knowable Magazine* is excited to offer a special report for all who share this curiosity.”

*Knowable Magazine* provides in-depth, intelligent journalistic coverage across the broad arc of scientific disciplines. It launched in October 2017, with the goal of cultivating public understanding of science by making expert knowledge accessible to all.

The *Building Bodies* report consists of four in-depth features and five “shorts” that are freely accessible for anyone to read, and [are available for republication](#), either individually or as a package. The features, summarized below, delve into several key aspects of development.

- [Growing a body, one tiny tug at a time](#) — Sharing his sense of wonder as a new father, **David Levin** explores how mechanical forces — the way cells push, pull and squeeze each other — help to

develop organs. He also looks at how forces on the outside of a cell transmit their signals all the way into the nucleus, altering the activity of genes.

- [Plumbing 101: Building the body's tubes and branches](#) – Our bodies are full of branching pipes. The embryo builds them using a handful of basic methods, such as extending a dimple to form ducts of the mammary gland to the wrapping of single cells into capillaries. **Bob Holmes** explores how tubes and branches arise in lungs, blood vessels, kidneys and more, and what happens when the process goes wrong.
- [Regeneration: The amphibian's opus](#) – Certain salamanders can regrow lost body parts. How do they do it? And could people someday do the same? **Amber Dance** examines the axolotl, a remarkable creature that can regenerate limbs, and reflects on how the idea of human regeneration has evolved from an “if” to a “when” in recent decades.
- [Bent into shape: The rules of tree form](#) – *Knowable Magazine's* **Rachel Ehrenberg** looks at what causes the huge variety in tree architecture and how shapes morph in response to the environment. She describes what causes roots to grow down and shoots to grow up and how genetic changes have been pivotal during the history of agriculture.

The [five short articles](#) focus on “big questions” about embryo development (timing, organ size, symmetry, segmentation and a systems-level view of the whole process) that biologists ponder about.

- **Eryn Brown** explores [how an embryo makes all its parts at the right moments in time](#), and [how body parts know how to grow to their right sizes](#).
- **Amber Dance** looks at [how our bodies lay out left and right](#), and how a molecular “ruler” ensures that [arms, legs and organs form in the right spots along a body's length](#).
- **Bob Holmes** discusses how scientists, with much of the genetic work now under their belts, are stepping back to look at the whole picture in a growing field called [systems developmental biology](#).

*Knowable Magazine* has been recognized for its ability to present insights from research to a broader audience via compelling in-depth features, explainers, articles, essays, interviews, infographics, and comics. The publication won a Folio Award for best design of a new consumer magazine in 2018 and, in 2019, for the best article in a consumer science and technology magazine. The year ahead holds promise, as *Knowable* experiments with different forms of storytelling (video and podcasts) and adds more content partners (the *Atlantic*, the *Washington Post* and *Scientific American* already republish *Knowable's* articles) — possible because of the [renewed support of the Gordon and Betty Moore Foundation](#), as well as initial support from the Alfred P. Sloan Foundation.

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