

## ABSTRACTS

#1

Biopsy specimens were taken from intact areas of antral mucosa in 100 consecutive consenting patients presenting for gastroscopy. Spiral or curved bacilli were demonstrated in specimens from 58 patients. Bacilli cultured from 11 of these biopsies were gram-negative, flagellate, and microaerophilic and appeared to be a new species related to the genus *Campylobacter*. The bacteria were present in almost all patients with active chronic gastritis, duodenal ulcer, or gastric ulcer and thus may be an important factor in the aetiology of these diseases.

#2

Export of transmembrane proteins from the endoplasmic reticulum (ER) is driven by directed incorporation into coat protein complex II (COPII)-coated vesicles. The sorting of some cargo proteins into COPII vesicles was shown to be mediated by specific interactions between transmembrane and COPII-coat-forming proteins. But even though some signals for ER exit have been identified on the cytosolic domains of membrane proteins, the general signaling and sorting mechanisms of ER export are still poorly understood. To investigate the role of cargo protein oligomer formation in the export process, we have created a transmembrane fusion protein that - owing to its FK506-binding protein domains - can be oligomerized in isolated membranes by addition of a small-molecule dimerizer. Packaging of the fusion protein into COPII vesicles is strongly enhanced in the presence of the dimerizer, demonstrating that the oligomeric state is an ER export signal for this membrane protein. Surprisingly, the cytosolic tail is not required for this oligomerization-dependent effect on protein sorting. Thus, an alternative mechanism, such as membrane bending, must account for ER export of the fusion protein.

#3

The rate of production of scientific information vastly exceeds the amount of attention available to consume it. As a result, science educators must be increasingly selective in choosing curricula competing for the limited attention of their students. Difficult choices must often be made about topics and about the breadth, depth and length (history) of their coverage. How are the choices made? We report the results of an archival study of topic coverage based on the tables of contents of introductory psychology and biology textbooks published between 1950 and 2010. Statistics on topic additions, deletions and page count changes support the hypothesis that social influence has become increasingly important in making curriculum choices, increasingly reducing the diversity of science education. Implications of increasing social influence for the future of science are discussed.

#4

Workaholic environmental attorney Alex has always relied on her husband George to take the reins at home. But when he unexpectedly asks for a break, his departure forces Alex to reevaluate her life.

#5

Dante Hicks is not having a good day. He works as a clerk in a small convenience store and is told to come into work on his day off. Dante thinks life is a series of down endings and this day is proving to be no different. He reads in the newspaper that his ex-girlfriend Caitlin is getting married. His present girlfriend reveals to have somewhat more experience with sex than he ever imagined. His principal concerns are the hockey game he has that afternoon and the wake for a friend who died. His buddy Randal Graves works as a clerk in the video store next door and he hates his job just about as much as Dante hates his.