

## Cover

Primordial germ cells on their way to the gonads in a 12-day-old zebrafish embryo (green: plasma membrane, blue: cell nucleus; red: the cells' characteristic perinuclear granules). For further details on cell polarity, see the report on the 97th International TitiSee Conference on pages 5–12. (Photograph by Maria Doitsidou and courtesy of Erez Raz, Münster, Germany)

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*Cell polarity is crucial to embryonic development and the correct function of numerous cell types. The 97th International TitiSee Conference, organized by Anne Ridley (London, UK) and Matthias Peter (Zurich, Switzerland), examined the variety of molecules and mechanisms that establish and maintain cell polarity, and compared them in model systems ranging from unicellular bacteria to complex multicellular organisms.*
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**To B or not to be. B cells as regulators of autoimmunity**  
*Textbook knowledge has it that B cells are responsible for the production of antibodies, while T cells regulate this process. However, there is a growing body of evidence to the effect that B cells can also regulate T cells thereby preventing autoimmune responses.*

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**A roadmap for epigenetics**  
*The price tag is as impressive as are the goals: US \$190 million have been earmarked for the systematic identification of the characteristic epigenetic patterns of differentiation status, cell type, healthy and diseased cells. Alexander Meissner explains the project's opportunities and comments on the arguments of the critics.*

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