

COVER

Fluorescence microscopy picture of the flagellate *Trypanosoma brucei brucei* causing nagana in animals (three flagellates at different magnifications). Cell surface, flagellum and flagellum pouch are depicted red, an endoplasmic protein was labelled with green fluorescent protein (GFP). The closely related *Trypanosoma brucei gambiense* and *Trypanosoma brucei rhodesiense* cause sleeping sickness in humans. For a historical perspective of sleeping sickness see the article by Monika Mölders on pages 155-165. (By courtesy of Markus Engstler, Ludwig-Maximilians-Universität München, Munich, Germany)

CONTENTS

B.I.F. INTERNAL

- 146 Particulars
 147 »Die besten Meetings, die ich kenne, ...«
 217 Events, Imprint

RESEARCH

- 149 *Philipp J. Kahle, Bart De Strooper*
 Attack on amyloid – 87th International Titisee Conference on Alzheimer's and Parkinson's disease: from basic science to therapeutic treatment
Almost 100 years after Alois Alzheimer described the disease, Christian Haass, Munich, Germany, and Roger Nitsch, Zurich, Switzerland invited a panel of leading scientists, who discussed recent breakthroughs on the molecular mechanisms, animal models and the therapy of Alzheimer's and Parkinson's disease.

SCIENCE

- 155 *Monika Mölders*
 Clinical testing of medicines for sleeping sickness in Africa – The expeditions of Robert Koch, Friedrich Karl Kleine and Hugo Berg between 1900 and 1930
At the beginning of the 20th century, sleeping sickness and nagana, a trypanosome disease of domestic animals, were frustrating the colonial powers' plans for the economic development of the African continent. The somewhat difficult »clinical tests« of substances for the treatment of sleeping sickness were carried out without the consent, or adequate briefing of the patients.

PROJECTS

- 166 Repair of chromosomal breaks in mammalian cells • Characterization of a novel ubiquitin ligase in *Caenorhabditis elegans* • JAK/STAT-dependent modulation of epithelial cell movements in *Drosophila* • The human natural killer cell response to *Plasmo-*

dium falciparum malaria • Temporal and spatial aspects of chromaffin cell exocytosis • Function of the novel proteasomal activator Blm3 • Regulation of ectodomain shedding of the amyloid precursor protein • Control of asymmetric cell division in *Caenorhabditis elegans* • Visualization of mRNA transport in living hippocampal neurons • Recognition and membrane insertion of preproteins by the TOM complex • The molecular basis of asymmetric cell divisions • Differential signalling of synaptic and extrasynaptic NMDA receptors in neuronal cell death

RESULTS

- 183 *Sören Beinke*
 NF- κ B1 p105 regulates Tpl-2 kinase
 186 *Christine Boeddinghaus*
 Role of the SNAP-23 homologue Vam7
 188 *Sylvia Erhardt*
 Epigenetic regulation during development of murine primordial germ cells and early embryos
 193 *Shane Hanson*
 Tetracycline aptamer-mediated control of translation
 197 *Konrad Hochedlinger*
 Nuclear cloning, stem cells and genomic reprogramming
 201 *Andreas Kuglstatter*
 S-domain assembly of human signal recognition particle
 204 *Betina Macho*
 Functions and regulation of the testis-specific factor ACT
 208 *Hartmut Niemann*
 Structural characterization of dynamin GTPases
 212 *Marc Veldhoen*
 Modifying T cell differentiation via protein-based delivery of signalling attenuators