



December 2019

Volume 24 Number 12

pp. 2225–2350



Cover Story

The lead story in this issue of *Drug Discovery Today* is by Wilson Wen Bin Goh, Subhash Thalappilly and Guillaume Thibault of Singapore. The authors discuss how understanding the complex phenotypes of aging and longevity requires careful examination and appropriate contextualization of multi-omic big data, strategic use of new technology and a continued focus on animal models.

DRUG DISCOVERY TODAY

EDITORIAL

2225 Superbugs but no drugs: steps in averting a post-antibiotic era

Mohamad Hamad, Farah Al-Marzooq, Gorka Orive and Taleb H. Al-Tel

2229 Introducing Project Africa GRADIENT

Iris Rajman and Oscar Della Pasqua

PERSPECTIVE

FEATURE

2231 Early Access to Medicines Scheme: real-world data collection

Hok Pang, Meng Wang, Christopher Kiff, Mira Soni, Dara Stein and David Tyas

REVIEWS

KEYNOTE

2234 Soft drugs for dermatological applications: recent trends

Silvio Aprile, Marta Serafini and Tracey Pirali

2247 ER stress response mediates diabetic microvascular complications

Himanshu Sankrityayan, Manisha J. Oza, Yogesh A. Kulkarni, Shrikant R. Mulay and Anil Bhanudas Gaikwad

2258 *In vivo* imaging of TGF β signalling components using positron emission tomography

Lonneke Rotteveel, Alex J. Poot, Harm Jan Bogaard, Peter ten Dijke, Adriaan A. Lammertsma and Albert D. Windhorst

2273 Moving beyond the current limits of data analysis in longevity and healthy lifespan studies

Wilson Wen Bin Goh, Subhash Thalappilly and Guillaume Thibault

2286 Applying synergy metrics to combination screening data: agreements, disagreements and pitfalls

Anna H.C. Vlot, Natália Aniceto, Michael P. Menden, Gudrun Ulrich-Merzenich and Andreas Bender

INFORMATICS

2299 Can BDDCS illuminate targets in drug design?

Giovanni Bocci, Leslie Z. Benet and Tudor I. Oprea

POST SCREEN

2307 Cholinergic muscarinic M₁ and M₄ receptors as therapeutic targets for cognitive, behavioural, and psychological symptoms in psychiatric and neurological disorders

Daniel Erskine, John-Paul Taylor, Geor Bakker, Alastair J.H. Brown, Tim Tasker and Pradeep J. Nathan