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The new biology: a bridge to clinical cardiology.

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Abstract

The recent advances in the biological research have produced new biological disciplines with clinical applications in medicine and cardiology. The integration of multilevel biological data and the connection with the clinical practice reveal the potential of personalized medicine and nanotechnology with future implications for prognosis, diagnosis and management. In the post-genomic time period the new disciplines, **systems biology**, synthetic **biology** and translational medicine are emerging as significant research areas in **biology** and medicine with extension in the field of clinical medicine and cardiology. These disciplines, with their predictive, preventive and therapeutic potential, are formulating the concept of personalized management, with patient's energetic involvement and participation in the diagnosis and treatment. Personalized medicine and cardiology, using biomarkers as health and disease indicators, encourage drug development and direct towards a better molecular comprehension of disease processes.

KEYWORDS: personalized cardiology, review, synthetic **biology**, **systems biology**, translational cardiology

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