

糖鎖工学（館野 浩章）

Glycan engineering (TATENO Hiroaki)



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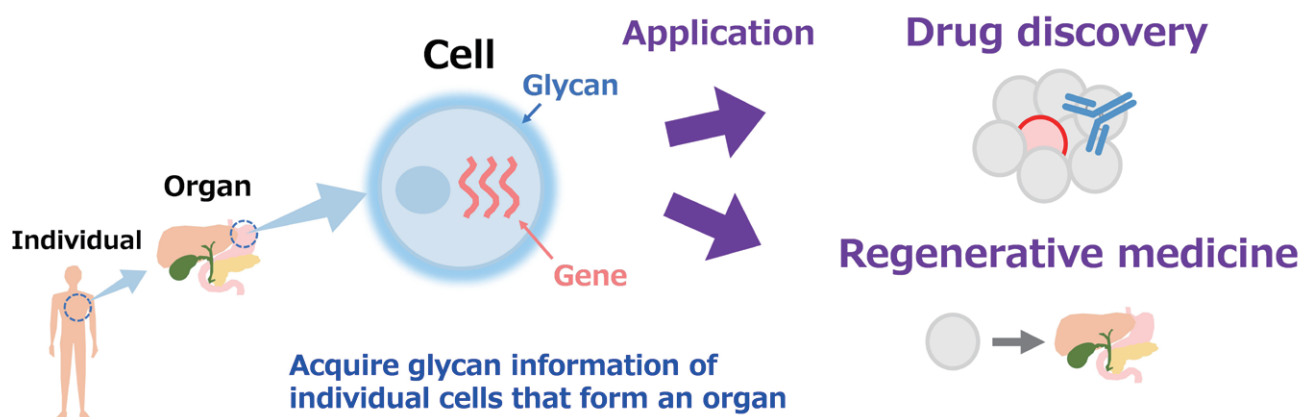


グライコミクスための新技術の開発と医療応用

糖鎖はブドウ糖などの複数の単糖がつながって構成される化合物であり、生命の最小単位である細胞の表面を覆っています。糖鎖は単糖の種類やつながりなどによりさまざまな種類が存在し、最も多様で複雑な細胞情報をもっています。糖鎖は細胞の種類や性質（分化、癌化など）により形が大きく変化することから、細胞の目印として、各種疾患の診断や治療、再生医療に用いる細胞の品質管理などへの応用が進んでいます。我々は、個々の細胞に発現する糖鎖を一斉解析するための基盤技術を開発しています。また、幹細胞、がん細胞、微生物叢など様々な生体試料に発現する糖鎖情報を取得することで、再生医療や創薬に貢献する実用的技術の開発を進めています。糖鎖の基礎から応用までの研究に興味を持って下さる方、是非一緒に研究しましょう！

Development of novel technologies and medical application for glycomics

Glycan is a compound composed of multiple monosaccharides such as glucose, which covers the surface of cells, which are the smallest unit of life. There are various types of glycans depending on the type and connection of monosaccharides, and they have the most diverse and complex cell information. Since the structure of glycans changes greatly depending on the type and properties of cells (differentiation, tumorigenesis, etc.), they have been applied to the diagnosis and treatment of various diseases and the quality control of cells used in regenerative medicine as cell markers. We have been developing basic technologies for simultaneous analysis of glycans expressed in individual cells. We have also been developing practical technologies that contribute to regenerative medicine and drug discovery by acquiring information on glycans expressed in various biological samples such as stem cells, cancer cells, and microbiota. If you are interested in research from the basics to applications of glycans, let's study together!



Development and medical application of technology to acquire information on glycans and genes of individual cells