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## Comparative phenotypic analysis of CHO clones and culture media for lactate shift

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### Highlights:

- Explored the effects of media and clonal variation on the lactate shift in CHO cells
- Conducted multivariate statistical analysis of various CHO cell cultures
- Found glutaminolysis as preferred pathway for lactate production by pyruvate supply
- Understood the balanced selection of clone and media composition for lactate shift

### Abstract

We explored the effects of media and clonal variation on the lactate shift which can be considered as one of the desirable features in CHO cell culture. Various culture profiles with the specific growth and antibody production rates under three different media conditions in two CHO producing clones were evaluated by resorting to multivariate statistical analysis. In most cases, glutamine depletion coincided with lactate consumption, suggesting that glutaminolysis rather than glycolysis was the preferred pathway for the pyruvate supply toward lactate production. With

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