

## Preview - February "In the Fold" Newsletter: The Latest Developments in Protein & Antibody Production

**WuXi Biologics**  
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*In the Fold* is a monthly newsletter from WuXi Biologics' Protein Sciences Department that shares leading insights in R&D antibody/protein production, so you can stay on the forefront of biologics discovery and development.

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## NEW PROGRESS IN DE NOVO DESIGN OF ALL- $\alpha$ STRUCTURES



In a recent paper in *Nature Structural & Molecular Biology*, researchers developed a method for designing 'difficult-to-describe'  $\alpha$ -helical protein structures. By combining 18 typical helix-loop-helix motifs with canonical  $\alpha$ -helices, they created a variety of all- $\alpha$  backbone structures. This approach achieved a high success rate with excellent solubility and thermal stability. Read the [full article](#).

Sakuma, K., Kobayashi, N., Sugiki, T. *et al.* Design of complicated all- $\alpha$  protein structures. *Nat Struct Mol Biol* (2024).

Did you know that instead of producing mini proteins in *E. coli*, they can also be produced in CHO cells? Watch our recent webinar to explore how our groundbreaking platforms are revolutionizing the production of mini proteins and T-cell-related proteins.

Watch Now

## REVEALING THE SECRETS OF ENDOGENOUS ANTIBODY PRODUCTION



Plasma cells are constantly working to produce antibodies, yet the inner workings of their translational machinery remain a mystery. In a recent paper in *Science*, researchers elucidated the mechanism of antibody gene regulation in plasma cells. They uncovered an enrichment of the tRNA pool with inosine (I34), a modification that enables tRNAs to expand the decoding capacity through "wobble" (non-Watson-Crick) base-pairing. The study demonstrated that antibody-secreting cells exhibited elevated I34 levels, important for efficient protein production. These findings imply that manipulating codon usage and tRNA pools could emerge as key strategies for therapeutic antibody production and vaccine design. Read the [full article](#).

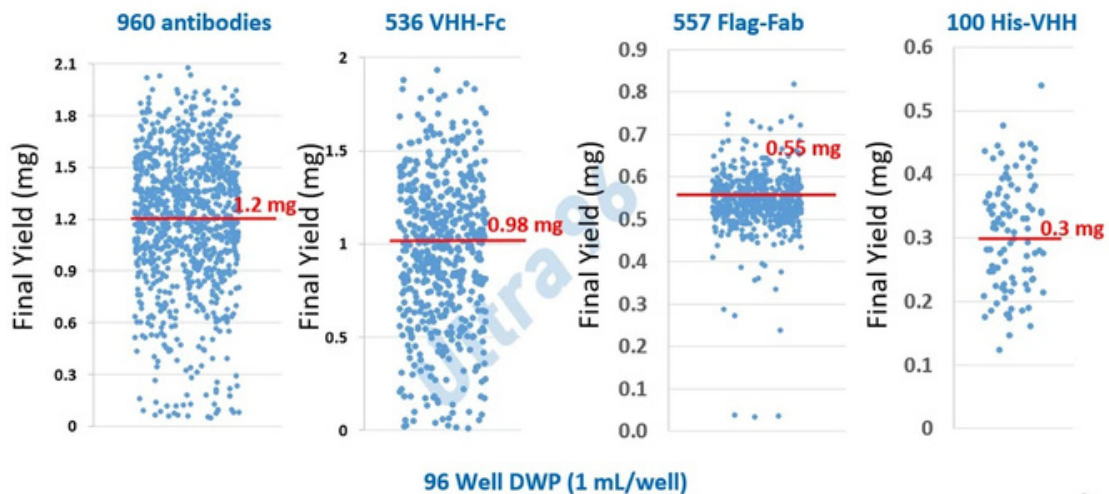
Seeking a partner to develop therapeutics antibodies? Look no further than WuXi Biologics' Protein Sciences Department. We combine our drug development expertise with antibody production services, offering guidance and advice on advancing your molecules from research to CMC.

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**INTRODUCING ULTRA 96+:**  
**Enhanced Ultra 96 Service**  
**for Higher Yield & Superior Quality**

The banner features a dark blue background with white text. On the right side, there is a circular logo with a hexagonal pattern and the text "Ultra 96" inside.

We are thrilled to introduce our latest innovation: the Ultra 96+. This service builds upon the success of our automated Ultra 96 HTP antibody production platform that integrates transfection, expression, purification and QC in 96/24 DWP. The Ultra 96+ features an ultra-high titer transient CHO expression system that significantly enhances antibody titers and overall yields. With the capability to process 1,000 molecules daily, the upgraded Ultra 96+ service delivers an average yield of 1.2 mg/mL for mAb, 1 mg/mL for VHH-Fc, 0.55 mg/mL for Fab and 0.3 mg/mL for His-VHH.



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