

PUXANO

A 3D molecular model of a protein-antigen complex. The protein is shown as a red ribbon structure with a corresponding red surface representation. The antigen is shown as a teal ribbon structure with a corresponding teal surface representation. The protein and antigen are bound to each other, with the antigen fitting into a pocket on the protein. The background is a light blue gradient with a dark teal diagonal stripe in the top left corner.

A NEW ERA IN ANTIGEN DESIGN

Flanders Vaccine Pitch & Match Session

Presented by Moisés Maestro, Lead of Protein Services PUXANO

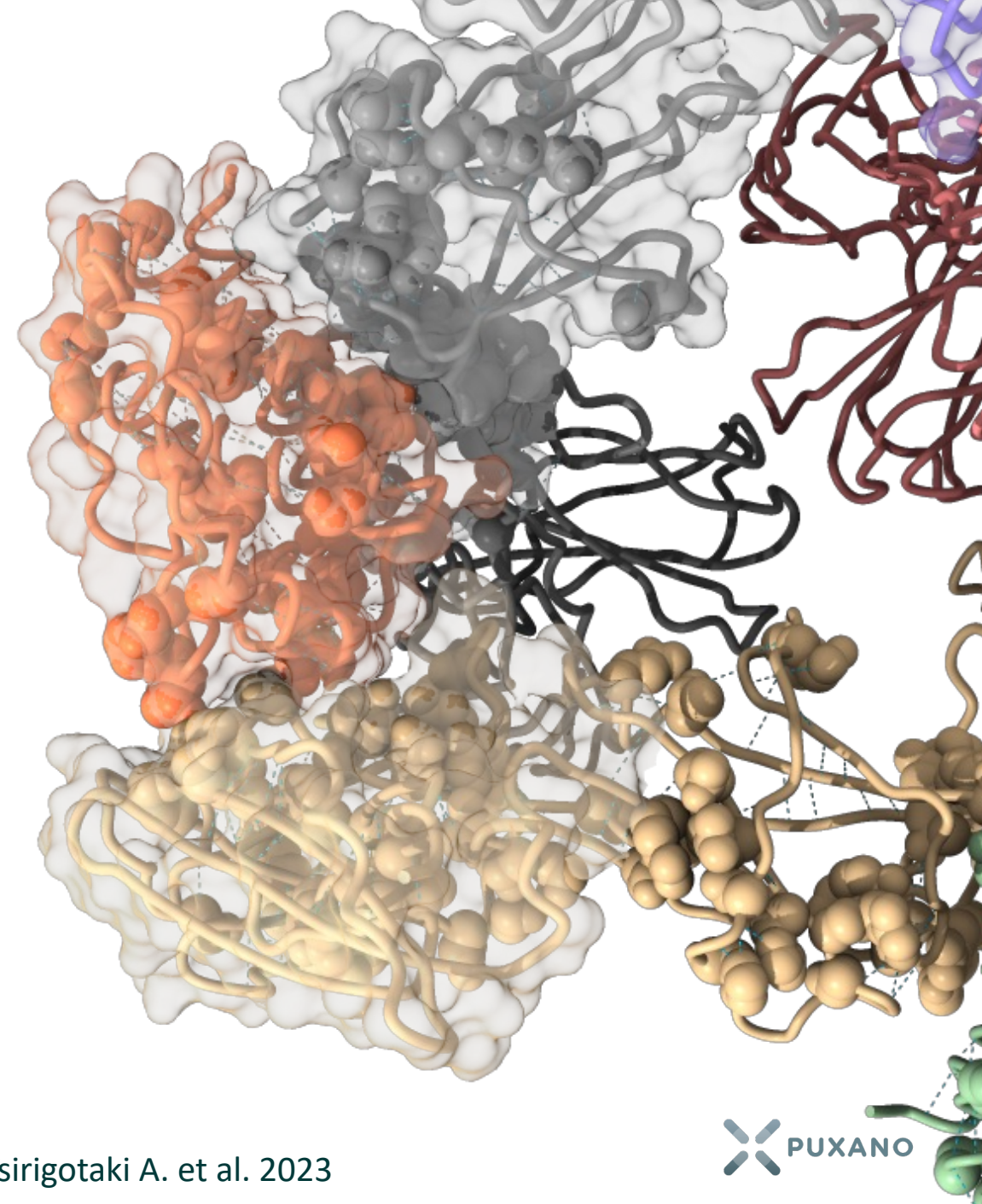
PUXANO

PUXANO functions as a platform-based CRO, focusing on:

- Protein engineering and design
- Structure-based protein research
- Cryo-electron microscopy

Dedicated to the development of:

- Vaccines
- Protein-based therapeutics
- Biopesticides

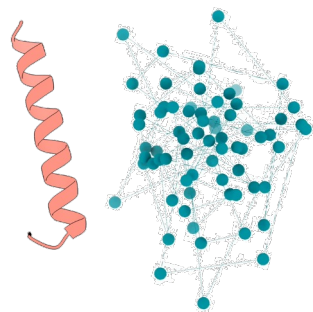


PLATFORM FOR TAILOR-MADE ANTIGEN DESIGN



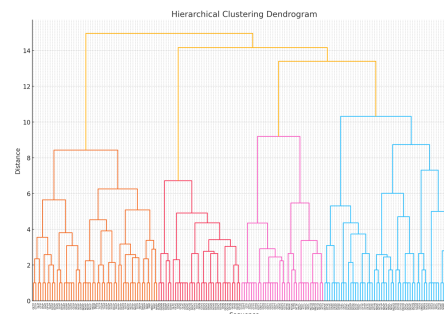
DATA AGGREGATION

- Epitopes
- Structure
- Conservation
- Patents



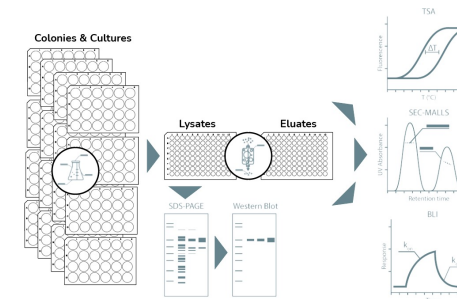
FORMULATE DESIGN STRATEGIES

- Combining epitopes
- Improving stability
- Designing scaffolds



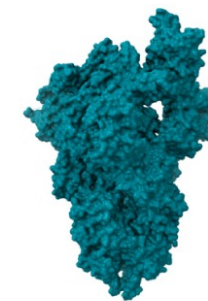
IN SILICO SELECTION

- Immunogenicity
- Stability
- Biophysical



EXPERIMENTAL VALIDATION

- Expression
- Thermo-stability
- Interaction assays
- Immune response

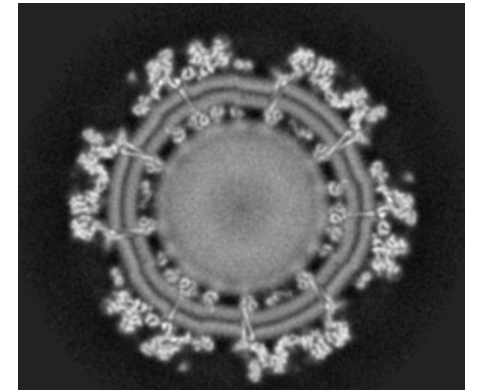
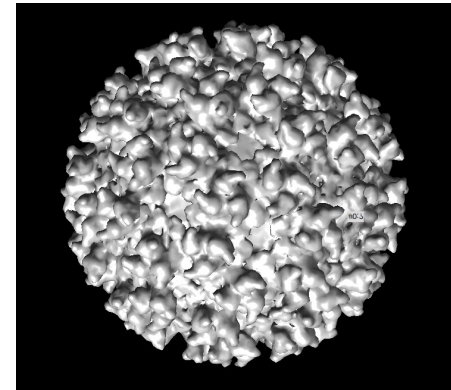
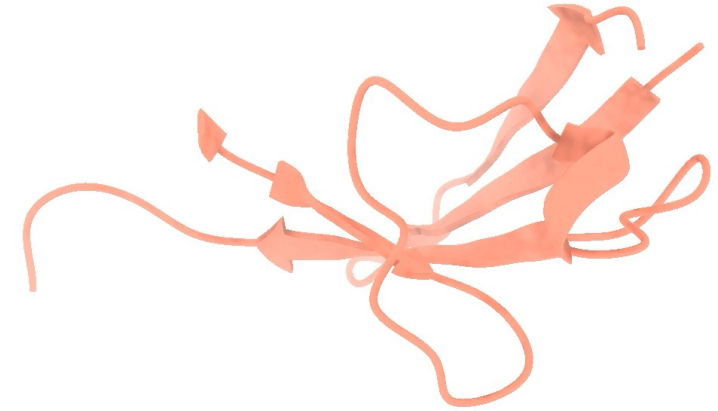


STRUCTURAL VALIDATION

- Proteins
- VLPs
- LNPs

PLATFORM ADVANTAGES

- World-leading technology platform:
 - AI protein Design
 - Cryo-EM (proteins, VLPs, LNPs...)
- High-throughput experimental validation with in-depth biophysical characterization
- Tailor-made approach
- Multiple design strategies in parallel



BUSINESS MODEL: SERVICE PLATFORM

Phase I: CRO Services

HT protein expression and purification
Cryo-EM protein sample screening and protein structure determination
Cryo-EM Lipid nanoparticle characterization

Fee-for-Service

DESIGN-TO-STRUCTURE WORKFLOW

Protein Design

(Structure-guided, diffusion-based)

Cell expression

(HEK, *E. coli*, insect, plant)

Protein purification

(IMAC, SEC, SDS, WB)

Protein biophysics

(2xTSA, BLI, ITC, MALLS, CD)

CryoEM grid screening

(TALOS ARCTICA/F4i)

Hi-res studies

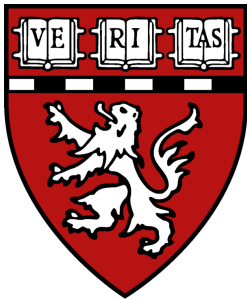
(Titan Krios/BioContinuum Imaging Filter/K3/F3)

Phase II: Partnerships

Partner-driven target R&D, from protein design to fully optimized and experimentally validated proteins that can act as antigens for vaccine development or protein Tx.

Upfront + Milestone Payment / Royalty %

SOME OF OUR PARTNERS



PUXANO

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Presented by Moisés Maestro, Lead of Protein Services PUXANO

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