

# ACCELERATE QUALITY BY DESIGN



## Your complete solution for sample prep in process development and protein characterization

The JANUS® G3\* BioTx Automated Workstation enables consistent small scale protein purification and sample prep for analytical protein characterization required to support quality by design experimentation in both upstream and downstream processes.

### Automate three modes of small-scale protein purification on a single platform:

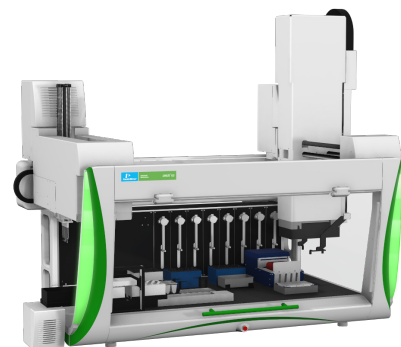
- PhyNexus PhyTips® Columns
- GE PreDicator™ / Pall AcroPrep™ Filter Plates
- Atoll RoboColumns® Chromatography Columns

Automating sample prep provides researchers more time to focus on new analytical tests obtaining critical information earlier in the protein development pipeline. Time and labor savings accelerate project workflows and thus, commercialization of protein therapies.

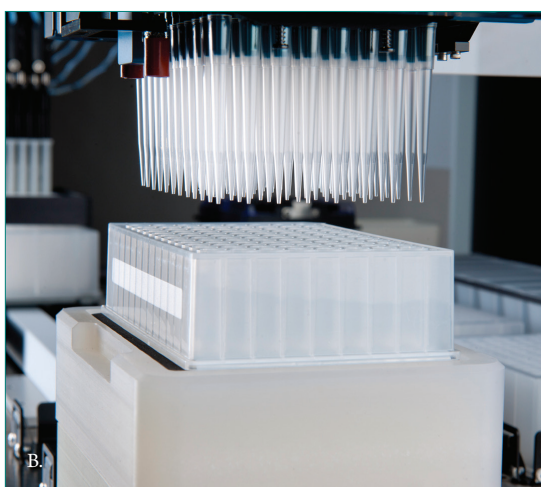
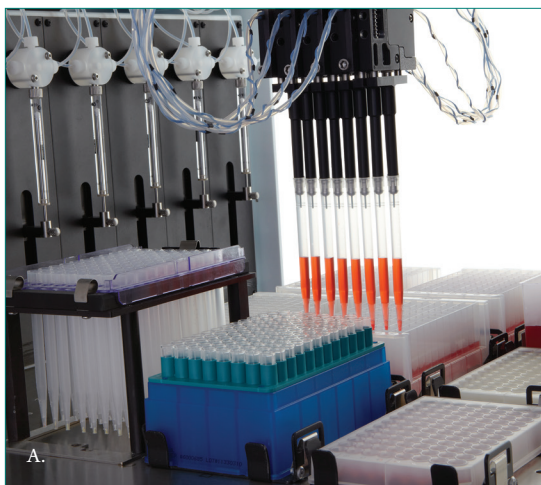
\*Coming Soon

### Consistent, time-savings results for your biotherapeutics development:

- Expression optimization
- Cell line selection
- Purification process development
- Bioanalytical sample prep



Automate small scale protein purification with the JANUS G3 BioTx Pro Plus workstation.



## Maximize productivity with automated purification methods

The JANUS G3 BioTx Workstation accommodates column, tip and batch chromatography modes on one platform. With just one instrument, you can achieve rapid analysis of a range of sample volumes and concentrations to support Quality by Design experimentation in both upstream or downstream processes.

### PhyNexus PhyTips® Columns

- Purify up to 96 samples in 15 min
- Column bed sizes from 5-160  $\mu\text{L}$  volumes
- Achieve high sample binding capacity and purity by passing samples back and forth through column
- Highly purified products with high concentrations achieved with low elution:bed volume ratio

### GE Predictor® Plates/Pall AcroPrep™ Filter Plates

- Rapidly screen binding, wash and elution conditions in 96 well plate formats
- Use centrifugation or vacuum filtration (optional gripper for full automation)
- Explore design space to optimize process development using DoE

### Atoll RoboColumns® Chromatography Columns

- Miniaturized column chromatography predictive of process scale-up
- Purify 96 samples/day or more depending upon load volume
- 50, 100, 200 and 600  $\mu\text{L}$  bed sizes; variety of resin types
- Sample volumes from 100  $\mu\text{L}$  up to 48 mL or more
- Automate sample loading and fraction collection; adjustable height accommodates multiple collection plates

The JANUS G3 BioTx Workstation accommodates PhyNexus PhyTips® (A), filter plates (B) and RoboColumns® (C) on one platform. Purification methods include affinity, ion exchange, reverse phase and gel filtration.

Perform QbD analysis in hours, not weeks

## Small-Scale High Throughput Process Development

Process Parameters

Purification & Sample Prep

JANUS G3 BioTx  
Pro Plus Workstation



Determination of Critical Quality Attributes

LabChip GXII  
Touch



- ✓ Purity & Fragmentation
- ✓ N-Glycan profiling
- ✓ Change Variant

DropletQuant



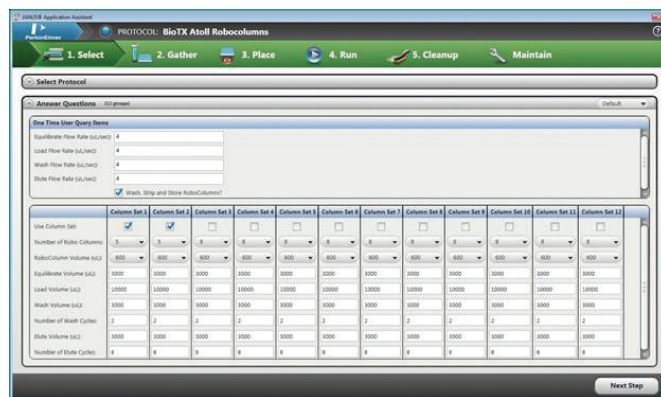
- ✓ Recovery & Yield

Informatics

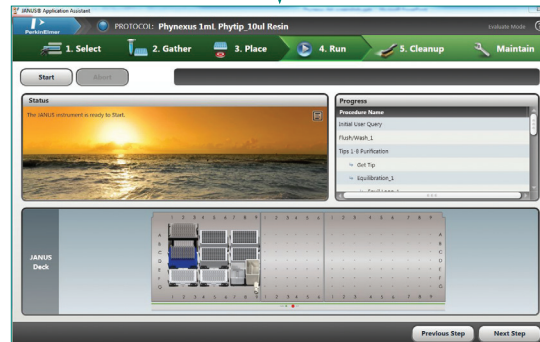
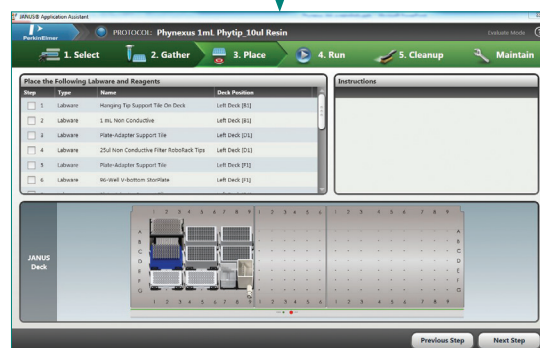
Process Outcomes

With the JANUS G3 BioTx workstation and LabChip® microfluidics technology, you can purify and analyze in one day what typically takes weeks with alternative methods. Explore a broader range of experimental conditions and save in both the development time and cost of your biopharmaceuticals research.

Simple to use protocols—designed for the scientist



Quickly enter experiment variables to easily translate your experimental design



Easily confirm placement of samples and labware on the workstation deck (top) and view workstation status or setup email confirmation for when process is complete (bottom).

- Wizard driven JANUS G3 application assistant guides preparation and execution of small scale purification and sample prep
- Enables true walk-up usability without need for advanced training
- Flexibility to easily modify purification parameters



## Choose the JANUS G3 BioTx Pro or the JANUS G3 BioTx Pro Plus depending upon your throughput and capacity needs.

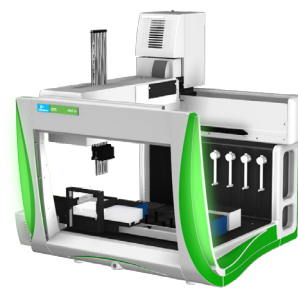
- Eight tip independent pipetting arm designed for multiple protein chromatography applications : PhyNexus PhyTips® Columns, GE Predictor® Plates/Pall AcroPrep™ Filter Plates, Atoll RoboColumns® Chromatography Columns
- Flexible control software and wizard driven application assistant
- Automated fraction collection station with housing for up to 96 small scale columns

### JANUS G3 BioTx Pro:

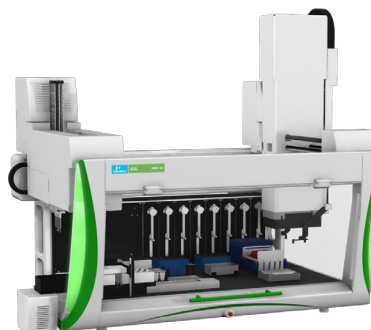
- 12 deck positions
- Compact footprint

### JANUS G3 BioTx Pro Plus:

- 24 deck locations
- MDT 96 tip head for parallel purification methods
- Integrated Gripper for labware positioning
- Integrated Vacuum manifold



JANUS G3 BioTx Pro



JANUS G3 BioTx Pro Plus

## Complete your small scale protein purification workflow with the LabChip® microfluidics technology

LabChip® GXII Touch microfluidics technology complements QbD and small scale protein purification studies by offering high throughput, consistent and precise analysis of protein samples.

- Characterize seven protein critical quality attributes with comparable performance to traditional CE
- At 70X greater throughput
- And 75% greater labor savings

The DropletQuant is the first microliter microplate reader giving full spectrum scans of up to 96 samples in less than six minutes from samples volumes of 2 µL, allowing rapid full spectrum assessment of sample impurities before expensive downstream processing has begun.

- Quantify DNA, RNA and protein on the same sample in minutes
- Rapidly analyze sample purity for contamination



For more information, visit [www.perkinelmer.com/proteinpurification](http://www.perkinelmer.com/proteinpurification)

For Research Use Only. Not for use in diagnostic procedures.

PerkinElmer, Inc.  
940 Winter Street  
Waltham, MA 02451 USA  
P: (800) 762-4000 or  
(+1) 203-925-4602  
[www.perkinelmer.com](http://www.perkinelmer.com)



For a complete listing of our global offices, visit [www.perkinelmer.com/ContactUs](http://www.perkinelmer.com/ContactUs)

Copyright ©2013-2016, PerkinElmer, Inc. All rights reserved. PerkinElmer® is a registered trademark of PerkinElmer, Inc. All other trademarks are the property of their respective owners. PhyTips registered trademark of Phynexus inc; PreDicator Plates a trademark of GE inc; MediaScout a registered trademark of Atoll inc.