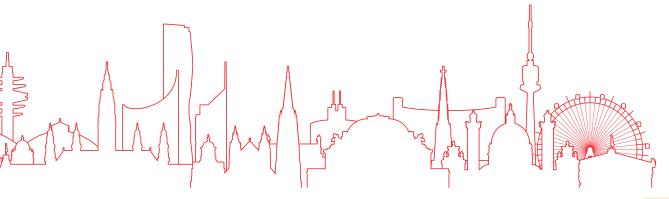


42nd International Symposium on the Separation of Proteins, Peptides & Polynucleotides



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42nd International Symposium on the Purification of Proteins, Peptides & Polynucleotides

VIENNA, NOVEMBER 5 - 8, 2023











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WELCOME TO ISPPP 2023



I am absolutely delighted to extend a warm welcome to all of you as we gather for the 42nd International Symposium on the Separation of Proteins, Peptides, and Polynucleotides, set against the captivating backdrop of Vienna, a city renowned for its rich history and cultural vibrancy.

Our chosen venue, the Parkhotel Schönbrunn, provides the perfect setting for this symposium. It encapsulates the essence of Vienna's imperial grandeur, offering a harmonious blend of history and modernity, mirroring the evolving landscape of the separation sciences we are here to explore.

Our scientific program features a diverse array of presentations, including 39 oral presentations, 25 flash talks, and 38 posters. The topics cover the most recent developments in analytical and preparative separations of relevant biological macromolecules such as proteins, peptides and polynucleotides. Two full sessions deal with the characterization and separation of biological particles, signifying the increased importance of these new modalities. One can't help but wonder if a fourth "P" should be added to our conference name to reflect the evolution of our field.

Our keynote speakers will cover diverse topics, including cutting-edge proteoform analysis through MS-hyphenated separation techniques, time-dependent sorption behavior of viral vectors, and the latest developments in modeling tools for the biopharmaceutical industry. We are honored to have an impressive lineup of invited speakers who will share their expertise and perspectives with us. It's worth noting that the overwhelming number of abstract submissions we received compelled us to include flash talks, ensuring a dynamic and inclusive experience for attendees, regardless of their experience levels.

In addition to the core program, we have scheduled informative Sunday workshops and created a vendor corner, providing opportunities for hands-on learning and interactions with industry experts. I'd like to extend my heartfelt gratitude to our sponsors and exhibitors, whose support is instrumental in making this symposium possible. I also want to acknowledge the tireless efforts of our scientific committee, the symposium manager Verena Beck, and the dedicated team at Austropa, our event organizer. Special thanks go to our session chairs and session aides who will ensure the smooth flow of our sessions.

At ISPPP, we value feedback and continuous improvement. We are always open to your suggestions on how to enhance the symposium's future editions. As you immerse yourselves in the scientific content, workshops, discussions, and networking opportunities, I hope you find solutions to your separation challenges and leave with valuable insights that will drive your research forward.

Thank you for being a part of ISPPP 2023, and I wish you an enlightening and productive symposium experience.

Warm regards,

Nico Lingg



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It's prepacked!

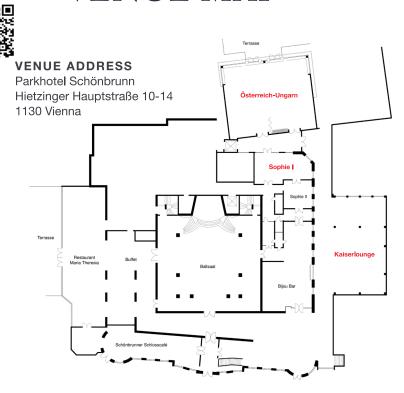
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VENUE MAP



The conference will be held in room Österreich-Ungarn (ground floor). Welcome Reception, refreshment breaks, lunch, poster sessions and exhibition will be held in Kaiserlounge (ground floor). The pre-conference workshops will take place in room Sophie I (ground floor).

Conference Dinner

The conference Dinner will take place on **Tuesday, Nov. 7, 2023 at 6:30 pm**.

Ottakringer Brewery
Ottakringer Platz 1
1160 Wien

PRE-CONFERENCE WORKSHOPS

SUNDAY, NOVEMBER 5, 2023

09:00	START OF REGISTRATION	
09:30	WORKSHOP 1	Magnetic separation in downstream processing
	Sonja Berensmeier TU Munich	processing
	Sebastian Schwaminger MedUni Graz	
11:15	WORKSHOP 2	Bioinformatics as a tool developing robust biotherapeutic proteins
	Michel Eppink Byondis BV	
13:00	WORKSHOP 3	Mechanistic understanding of biomolecules adsorption:
	Cristina Cabral Univ. of Beira Interior	theory and applications
	Alois Jungbauer BOKU, Vienna	
14:45	WORKSHOP 4	Poly-/Oligonucleotide separation in biopharmaceutical processing and their
	Sonja Berensmeier TU Munich	quality requirements
	Michel Eppink Byondis BV	
	Egbert Müller Tosoh Bioscience	



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Vienna Info



CONFERENCE PROGRAMME

SUNDAY, NOVEMBER 5, 2023

17:00

WELCOMING REMARKS BY NICO LINGG

KEY NOTE LECTURE CHAIR: NICO LINGG

17:20

Elena Dominguez Vega Leiden Univ. Medical Center **KN1:** Probing structure and function of proteoforms by MS-hyphenated separation techniques

18:00

WELCOME RECEPTION



MONDAY, NOVEMBER 6, 2023

KEY NOTE LECTURE CHAIR: ALEŠ PODGORNIK		
08:30	Nico Lingg Alois Jungbauer	Chairman Remarks
08:45	Dan Bracewell University College London	KN2: Time-Dependent Sorption Behaviour of Viral Vectors
SESSION 1: DNA / VACCINES CHAIR: ALEŠ PODGORNIK		
09:25	Linda Gombos Biomay	OP1: High-Throughput Manufacturing of Personalized Plasmid DNA Cancer Vaccines
09:45	Ana Rita Santos iBB - Institute for Bio-engineering and Biosciences	OP2: Towards industrial manufacturing of DNA-origami nanostructures: scalling up ssDNA scaffold purification
10:05	Viviane Maimoni Gonçalves Instituto Butantan	OP3: Challenges for purification of a pneumococcal recombinant protein
10:25	Julian Grinsted University College London	FP1: Design of affinity separations for the manufacture of <i>in vitro</i> transcribed mRNA
	Nick Samuelson MSD	FP2: Increased Virus-Like Particle Recovery with Disassembly Prior to Purification
10:35	REFRESHMENT BREAK	(

SESSION 2: PROCESS INTENSIFICATION CHAIR: GIORGIO CARTA		
11:05	Michel Eppink Byondis BV	OP4: Cell Tolerant Radial Affinity Chromatography (cTRAC)
11:25	Egbert Müller Tosoh Bioscience GmbH	OP5: Step Gradient SMB for mAb polishing using salt tolerant anion exchangers
11:45	Mattia Sponchioni Politecnico Di Milano	OP6: Advantages and Opportunities of Multicolumn Countercurrent Solvent Gradient Purification Accessed by Tuning the Product Internal Recycling Phase
12:05	Ismaele Fioretti Politecnico Di Milano	FP3: Process Intensification in the Purification of an Oligonucleotide Sequence by MCSGP with UV-Based Dynamic Control
	Thomas Müller-Späth Chromacon AG	FP4: Automated two-column chromatography for the purification of Oligonucleotides and Peptides
	Touraj Eslami acib Gmbh	FP5: Optimizing chromatography for maximum efficiency: an innovative approach to optimize productivity, resin utilization, and buffer consumption
12:20	LUNCH BREAK	
SESSION 3: NOVEL BIOSEPARATIONS & PRODUCTS CHAIR: ANA CECILIA ROQUE		
13:45	Nils Brechmann Magic Bioprocessing	OP7: Scalable magnetic bead-based cell separation technology for the depletion of receptor positive cell subpopulations
14:05	Dennis Röcker TU Munich	FP6: Enhancing chromatography by use of electrochemically modulated membranes
	Ryan Kilgore North Carolina State University	FP7: Peptide ligands: a bespoke affinity platform for next-generation biotherapeutics and gene-editing products
	Staš Vrh Univ. of Ljubljana	FP8: Implementation of polyHIPE monoliths for preparative and analytical separation of bacteriophages and their genomic DNA

14:20	Noor Mujahid University College London	OP8: Characterising feed and membrane interactions in tangential flow filtration of lentiviral vectors: hints for recovery improvement
14:40	Hironobu Shirataki Asahi Kasei Medical	OP9: Numerical calculations of membrane structure, virus removal performance, and filtration behaviours of virus filters based on a heterogeneous membrane structural model comprising multiple layers with different pore size distributions

15:00 REFRESHMENT BREAK

SESSION 4: PROTEIN ANALYTICS CHAIR: ELENA DOMINGUEZ VEGA

15:30	Deepika Sarin Indian Institute of Technology, Delhi	OP10: Multiattribute monitoring of charge-based heterogeneity of recombinant monoclonal antibodies using 2D HIC-WCX-MS
15:50	Tushar Savane Indian Institute of Technology Delhi	OP11: Quantification of concentration of mAb and excipients in a high concentration ternary mixture using ATR-FTIR spectroscopy and chemometrics
16:10	Markus Mozgovicz Vrije Universiteit Brussels	OP12: Towards comprehensive SAX × RP 2D-LC-MS/MS host cell protein profiling in biopharmaceutical manufacturing
16:30	Yehia Mechref Texas Tech University	OP13: Target Quantitative Analysis of Glycoproteins by Parallel Reaction Monitoring (PRM) LC-MS/MS
16:50	Estela Giménez Univ. of Barcelona	OP14: In-line enzymatic digestion strategies beyond trypsin for the sensitive targeted bottom-up analysis of protein biomarkers by capillary electrophoresis-mass spectrometry

SESSION 5: BIOPROENG CHAIR: ASTRID DÜRAUER		
17:10	Astrid Dürauer BOKU Vienna	Short Introduction Doctoral Programme BioProEng (BOKU)
17:15	David Scheich BOKU Vienna	FP9: Purification and characterization of recombinant secretory immunoglobulin A from CHO cell culture supernatant
	Anna-Carina Frank BOKU Vienna	FP10: Cationic flocculants assisted clarification
	Alexander Zollner BOKU Vienna	FP11: Chromatography-based purification of enveloped virus-like particles displaying different influenza surface antigens for an immunologic study in mice
	Lena Achleitner acib GmbH	FP12: Baculovirus working stock: the production and purification of an intermediate product for large scale VLP production in insect cells
	Matthias Medl BOKU Vienna	FP13: Uncovering the black-box of data-driven models in biotechnological process modeling
17:40	POSTER SESSION & N	NETWORKING RECEPTION





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TUESDAY, NOVEMBER 7, 2023

KEY NOTE LECTURE CHAIR: STEFANO MENEGATTI		
08:30	Arne Staby Novo Nordisk	KN3: Latest developments in the implementation of modelling tools in the biopharmaceutical industry
SESSION 6: mAbs CHAIR: STEFANO MENEGATTI		
09:10	Mariachiara Conti Univ. of Edinburgh	OP15: Porous platform ink for fast and high resolution 3D printing of stationary phases for affinity chromatography
09:30	Ines Zimmermann TU Munich	FP14: Selective antibody capture using low-cost magnetic particles in an automated high-gradient magnetic separator
	Malin Jönsson KTH Royal Institute of Technology	FP15: Mild purification of antibody fragments from human and mouse origin
	Igor T.L. Bresolin Federal Univ. of São Paulo	FP16: Precipitation of monoclonal antibodies with polyethylene glycol and zinc chloride: process performance and rheological behavior
	Daria Omralinov TU Darmstadt	FP17: 3D Printed Stationary Phases: The Future of Chromatography?
09:50	Dan Pham TU of Denmark	OP16: Novel multi-modal salt-tolerant cation-exchange membrane applied for the purification of a single-chain variable fragment produced in <i>Pichia pastoris</i>
10:10	Dorota Antos Rzeszow University of Technology	OP17: PEG-aided precipitation for adjusting acidic variant content in monoclonal antibody pools

10:30	Abraham Lenhoff University of Delaware	OP18: Understanding and Mitigating Persistence of CHO Host-Cell Proteins in Monoclonal Antibody Bioprocessing
10:50	REFRESHMENT BREAK	
SESSION 7: FUNDAMENTALS & MODELLING CHAIR: CRISTINA DIAS-CABRAL		
11:20	SPONSORED TALK Tatjana Trunzer Cytiva	OP19: A chromatography system modeling strategy for precise <i>in silico</i> process scaling
11:40	Giorgio Carta Univ. of Virginia	OP20: Detective Stories in Chromatography: the Inseparable Pair, the Missing Peak, and the Gang of Three
12:00	Lukas Gerstweiler Univ. of Adelaide	OP21: Model based process optimisation of an industrial chromatographic process for separation of lactoferrin from bovine milk
12:20	Marcel Ottens TU Delft	OP22: Digital Twins for High Throughput Chromatographic Process Development
12:40	Christian Frech Hochschule Mannheim – University of Applied Sciences	OP23: Mechanistic modeling of cation exchange chromatography scale-up considering packing inhomogeneities
13:00	LUNCH BREAK	
13:00	LUNCH BREAK POSTER SESSION	
14:15 SESSION		TIONS

SESSION 8: PROTEIN SEPARATIONS CHAIR: MARKUS BERG

15:40	Nico Lingg acib GmbH	OP25: CASPON – a platform process for non-platform proteins
	Daniel Elsner Boehringer Ingelheim RCV	
16:00	Matthias Müller BOKU Vienna	OP26: Purification of recombinantly produced Somatostatin-28 comparing hydrochloric acid and polyethylenimine as <i>E. coli</i> extraction aids
16:20	Ana Cecilia Roque Nova School of Science and Technology	OP27: A scalable method to purify reflectins from inclusion bodies
16:40	Preeti Saroha Indian Institute of Technology Delhi	FP18: Production of bioactive recombinant monoclonal antibody fragment in periplasm of <i>E. coli</i> expression system
	Milan Polakovic Slovak Univ. of Technology	FP19: Single-pass diafiltration using a double-membrane module
	Aleš Podgornik Univ. of Ljubljana	FP20: Determination of immobilized proteins via pH transition method
	Oliver Spadiut TU Vienna	FP21: A Peroxidase from Inclusion Bodies as valuable Tool in Breast Cancer Treatment
17:00	END OF SESSION	
18:30	CONFERENCE DINNER	AT OTTAKRINGER BREWERY

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WEDNESDAY, NOVEMBER 8, 2023

SESSION 9: PARTICLE ANALYTICS CHAIR: PATRICIA PEREIRA AGUILAR		
09:00	Christian Hill Medical University of Graz	OP28: Optofluidic Force Induction (OF2i) - a BRAVE new way in time- resolved particle characterization
09:20	Roland Drexel Postnova Analytics GmbH	OP29: Multi-detector Field-Flow Fractionation for quality assessment of nano-sized drug delivery systems
09:40	Leo Jakob acib GmbH	FP22: Accelerating Virus-Like Particle Downstream Process Development Using Asymmetric Flow Field-Flow Fractionation (AF4)
	Ricardo Silva iBB - Institute for Bioengineering and Biosciences	FP23: Anion exchange chromatography for extracellular vesicles purification
	Rashmi Sharma Indian Institute of Technology, Delhi	FP24: Downstream Process Development for intact Virus-Like Particles (VLPs) from yeast expression system Pichia pastoris
	Jorge João Instituto Superior Técnico - Universidade de Lisboa	FP25: Downstream processing of non- viral protein nanocages for biotechnological and biomedical applications: development of chromatography-based purification strategies
10:00	Christoph Gstoettner Leiden University Medical Center	OP30: Novel Approaches for recombinant AAV genome and capsid characterization
10:20	REFRESHMENT BREAK	

SESSION 10: PARTICLE SEPARATIONS CHAIR: DAN BRACEWELL

10:45	Shuichi Yamamoto Yamaguchi University	OP31: Process modelling of chromatography of bio-nanoparticles based on linear gradient elution data
11:05	Rebecca Hochstein 3M	OP32: Advanced Approaches to Gene Therapy Viral Vector Separations
11:25	Rita Fernandes Ibet	OP33: Development of a robust workflow for purification of a fusogenic oncolytic virus
11:45	Patricia Pereira Aguilar acib GmbH	OP34: Functionalized non-woven fibers for purification of large labile enveloped viruses
12:05	Stefano Menegatti North Carolina State University	OP35: Novel affinity ligands for Adenoassociated virus (AAV) and Lentivirus (LV) purification
12:20	PRESENTATION OF POSTER AWARDS & CONCLUDING REMARKS	
12:35	END OF CONFERENCE	



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POSTER LIST

Poster Session 1 SUNDAY, NOV. 5 - MONDAY, NOV. 6, 2023

P1	Monika Antosova Slovak University of Technology	Effect of conditions on the separation of proteins on a multimodal cation exchange adsorbent
P2	Jonghwan Lee Korea Institute of Ceramic Engineering And Technology	Using Ca ²⁺ - dependent fusion protein with affinity precipitation for advanced antibody purification
P3	Jinho Bang Korea Institute of Ceramic Engineering And Technology	Screening of hydroxyapatite binding peptides for protein purification-tag
P4	Emily Berckman MSD	High-capacity purification of therapeutic mRNA with OligodT immobilized Fibro prototype chromatography media
P5	Carly Catella North Carolina State University	Development of Peptide Glucosyltransferase Inhibitors with Comprehensive Coverage Across Clostridioides difficile Toxin B Sub-Types
P6	Christian Fiedler Takeda Pharmaceuticals	Development of an affinity purification step of rADAMTS13 for the
P7	Christian Frech Hochschule Mannheim - University of Applied Sciences	Anion exchange membrane chromatography as capture step in plasmid DNA purification: Beneficial effect of salts on binding and elution
P8	Linda Gombos Biomay	Recombinant Nuclease Cas9 for Therapeutic Genome-Editing – the Manufacturer's Point of View
P9	Fabrice Gritti Waters Corporation	Identification of Resolution Limits and Recycling Solutions for the Characterization of Monoclonal Antibodies by Size Exclusion Chromatography.
P10	Sanket Jadhav Sartorius	Process Intensification using connected process for purification of mAbs: PD to Scale Up for Robust, cost effective, and agile manufacturing
P11	Johann Kaiser Novo Nordisk A/S	Improving Efficiency in Monoclonal Antibody Purification: An Experimental Evaluation of Membranes for Single-Pass Tangential Flow Filtration

P12	Benjamin Kiss TargetEx Ltd.	Prediction of adsorption model parameters for cation exchange chromatography of proteins using molecular dynamics simulation and a self-developed coarse-grained modeling method
P13	Tomáš Kurák Slovak University of Technology	Influence of chromatographic conditions on the adsorption of therapeutic antibodies and aggregates on multimodal adsorbents
P14	Jacob Lebarre North Carolina State University	Mixed-mode size-exclusion silica resin for polishing human antibodies in flow-through mode
P15	Marina Y. Linova Technical University of Denmark	Development of perfusion processes for <i>Pichia pastoris</i> : Opportunities for integrated purification of biopharmaceuticals
P16	Tomáš Molnár Slovak University of Technology	Preparation and characterization of multimodal chromatography resins for antibody purification: A comparative study with Capto Adhere
P17	Egbert Müller Tosoh Bioscience GmbH	Use of Immobilized Recombinant FcGamma III Receptor for Fractionation and Characterization of Antibody Preparations
P18	Thomas Müller-Späth Chromacon AG	Accelerating chromatographic isolation and concentration of impurities with the twin-column continuous technique N-Rich
P19	Marc Noverraz Sartorius Stedim Switzerland AG	Filtrations in mRNA Purification Processes. Studies of Tangential Flow Filtration and Sterilizing Grade Filtration.
P20	Marius Segl Knauer Wissenschaftliche Geräte Gmbh	Maximize flexibility and throughput. Scalable and efficient purification of synthetic peptides
P21	Ferdinando Sereno University College London	Extreme proteins require extreme purifications: a scalable and effective bioprocess for nanocompartment production.
P22	Hironobu Shirataki Asahi Kasei Medical	Viral clearance in end-to-end integrated process for mAb purification: Total flow-through integrated polishing on two columns connected to virus filtration
P23	Daniel Some Wyatt Technology	Advances in Downstream PAT for Biologics, Vaccines and Gene Vectors
P24	Toru Tanaka Tosoh Corporation	Development of Novel Protein L Resin with Selective Binding to Kappa 1 Light Chain

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P25	Jakob Liderfelt Cytiva	Purifying challenging entities: capture of bispecific antibodies and removal of product-related impurities
P26	Marco Kress Valneva Austria GmbH	The influence of unspecific viral adsorption on pharmaceutical container surfaces in vaccine process development
P27	Dominik Voltmer Roche Diagnostics GmbH	Mechanistic modeling case study: The early model catches the leanest process
P28	Carsten Voss Repligen GmbH	Rapid development of caustic stable AAV affinity chromatography resins for AAV5 and AAV6
P29	Maria Weinberger Boehringer Ingelheim RCV	Depth filtration for early recovery of soluble expressed microbials
P30	Tatsuya Yumoto Tosoh Co., Ltd.	FcRn Immobilised HPLC Affinity Column for Antibody Evaluation

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POSTER LIST

Poster Session 2

TUESDAY, NOV. 7 - WEDNESDAY, NOV. 8, 2023

P34 Rupali Kumthekar CSIR - National Chemical Laboratory Cytóplasmatic green fluorescent protein produced in Escherichia coli with high purity. Mapping time-dependent disulfide bond formation during in-vitro refolding of recombinant peptibody: A Fc-fusion protein			
P33 Alexander Jurjevec BOKU Vienna Polyethyleneimine efficiently extracts recombinant cytoplasmatic green fluorescent protein produced in Escherichia coli with high purity. P34 Rupali Kumthekar CSIR - National Chemical Laboratory Mapping time-dependent disulfide bond formation during in-vitro refolding of recombinant peptibody: A Fc-fusion protein A Fc-fusion protein Fluorescently Labeled Antibody as an Inert Tracer for Characterization of Residence Time Distribution in Counter Current Protein A Affinity Chromatography P36 Sabrina Leigheb BOKU Vienna Asymmetric field flow fractionation and Taylor Dispersion Analysis for separation and characterization of Adeno-Associated Viruses for gene therapy P37 Rashmi Sharma Indian Institiute of Technology Deprimental Process conditions with Gaussian processes P38 Martina Winter BOKU Vienna Efficient identification of optimal process conditions with Gaussian processes FP1 Julian Grinsted University College London Design of affinity separations for the manufacture of in vitro transcribed mRNA FP2 Nick Samuelson Increased Virus-Like Particle Recovery with Disassembly Prior to Purification of an Oligonucleotide Sequence by MCSGP with UV-Based Dynamic Control FP4 Thomas Müller-Späth Automated two-column chromatography for the	P31	Jürgen Beck BOKU Vienna	component protein adsorption using batch and
P34 Rupali Kumthekar CSIR - National Chemical Laboratory P35 Narges Lali acib GmbH P36 Sabrina Leigheb BOKU Vienna P37 Rashmi Sharma Indian Instititute of Technology P38 Martina Winter BOKU Vienna P39 Martina Winter BOKU Vienna P30 Sharma Winter BOKU Vienna P30 Martina Winter BOKU Vienna P30 Sabrina Leigheb BOKU Vienna P31 Rashmi Sharma Indian Instititute of Technology P32 Martina Winter BOKU Vienna P33 Martina Winter BOKU Vienna P44 Nick Samuelson MSD P55 Narges Lali Action protein Mapping time-dependent disulfide bond formation F45 Huorescently Labeled Antibody as an Inert Tracer for Characterization of Residence Time Distribution in Counter Current Protein A Affinity Chromatography Asymmetric field flow fractionation and Taylor Dispersion Analysis for separation and characterization of Adeno-Associated Viruses for gene therapy Optimization of the in-vitro refolding of biotherapeutic Fab Ranibizumab E45 Ranibizumab E46 Circle identification of optimal process conditions with Gaussian processes F40 Dispersion Analysis for separation of the in-vitro refolding of biotherapeutic Fab Ranibizumab E47 P5 Ranibizumab E47 P6 P6 P6 P6 P7	P32		
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P37 Rashmi Sharma Indian Institiute of Technology P38 Martina Winter BOKU Vienna FP1 Julian Grinsted University College London FP2 Nick Samuelson MSD FP3 Ismaele Fioretti Politecnico di Milano FP4 Thomas Müller-Späth Design of Analysis for separation and characterization of Adeno-Associated Viruses for gene therapy Department of the in-vitro refolding of biotherapeutic Fab Ranibizumab Efficient identification of optimal process conditions with Gaussian processes Design of affinity separations for the manufacture of in vitro transcribed mRNA Increased Virus-Like Particle Recovery with Disassembly Prior to Purification of an Oligonucleotide Sequence by MCSGP with UV-Based Dynamic Control FP4 Thomas Müller-Späth Automated two-column chromatography for the	P35		Distribution in Counter Current Protein A Affinity
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	FP3		Oligonucleotide Sequence by MCSGP with UV-
	FP4		

FP5	Touraj Eslami acib Gmbh	Optimizing chromatography for maximum efficiency: an innovative approach to optimize productivity, resin utilization, and buffer consumption
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FP19	Milan Polakovic Slovak University of Technology	Single-pass diafiltration using a double- membrane module
FP22	Leo Jakob acib GmbH	Accelerating Virus-Like Particle Downstream Process Development Using Asymmetric Flow Field-Flow Fractionation (AF4)
FP23	Ricardo Silva iBB - Institute for Bioengineering and Biosciences	Anion exchange chromatography for extracellular vesicles purification
FP24	Rashmi Sharma, Pragya Prakash Indian Institute of Technology Delhi	Downstream Process Development for intact Virus-Like Particles (VLPs) from yeast expression system <i>Pichia pastoris</i>
FP25	Jorge João Instituto Superior Técnico - Universidade de Lisboa	Downstream processing of non-viral protein nanocages for biotechnological and biomedica applications: development of chromatographybased purification strategies

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ADVANCING VACCINES FOR BETTER LIVES



Our Vision

is to contribute to a world in which no one dies or suffers from a vaccine-preventable disease.

We are a specialty vaccine company focused on the development, manufacturing and commercialization of prophylactic vaccines for infectious diseases.

Imagine

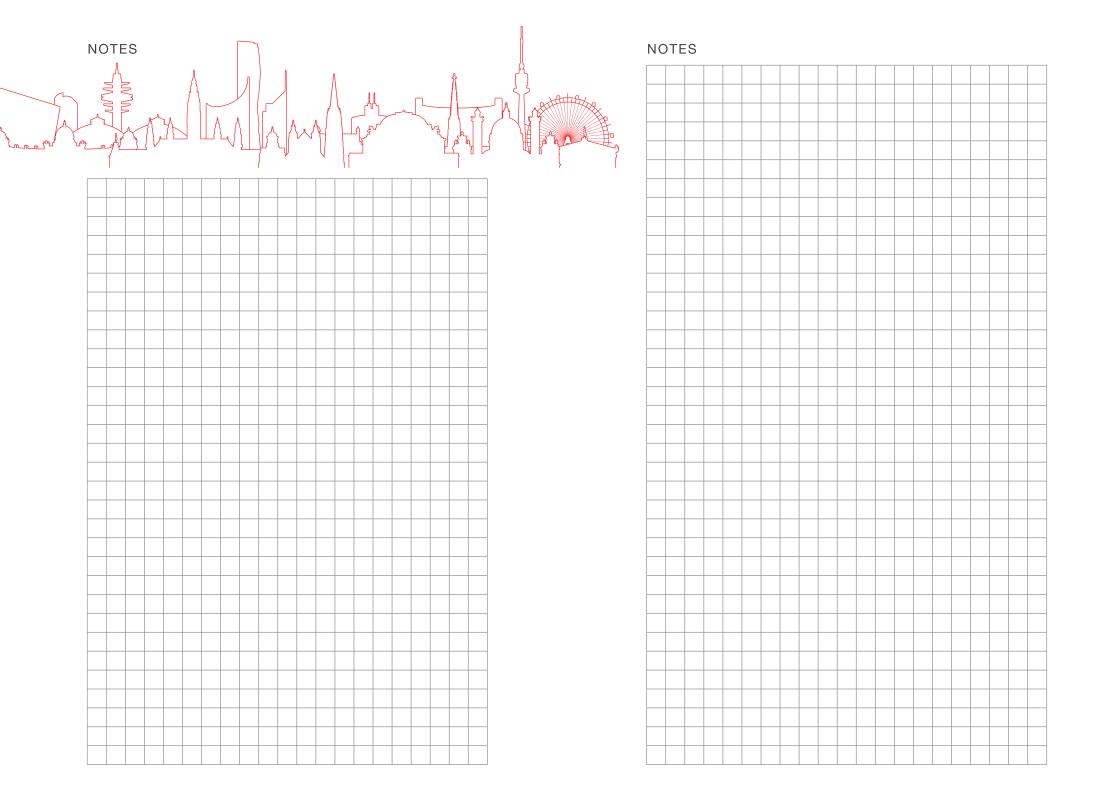


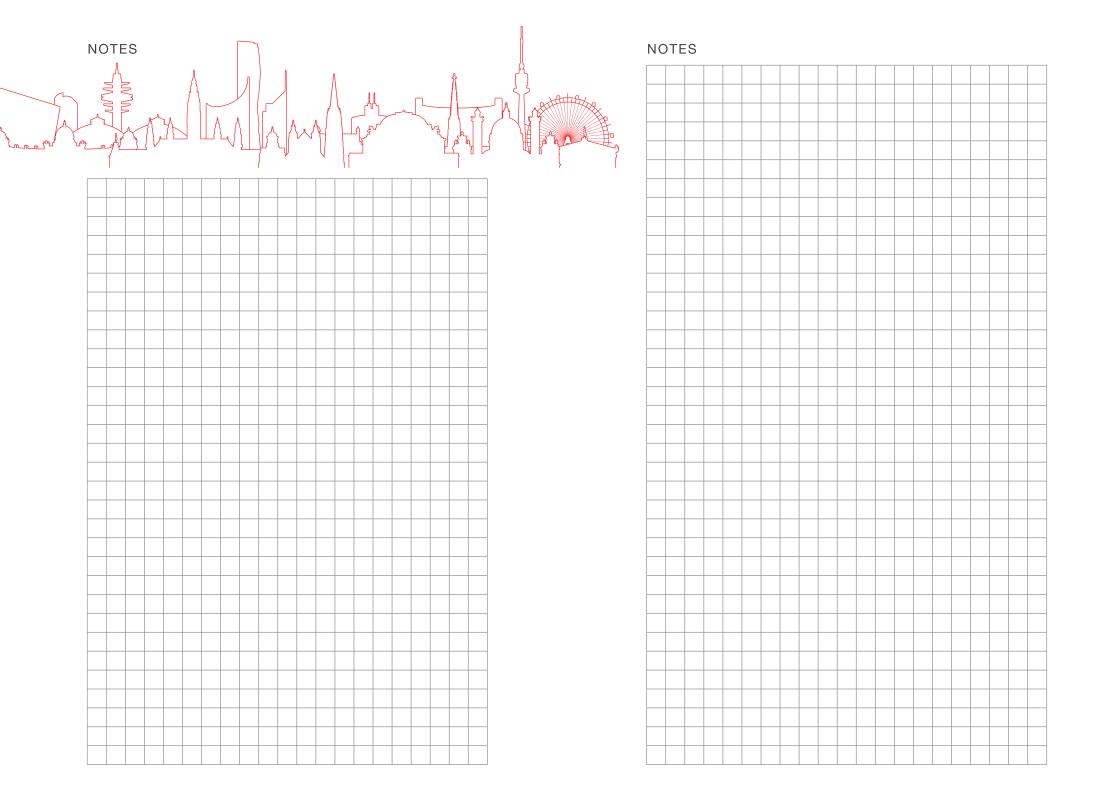
Chromatographic separation without chemical elution.

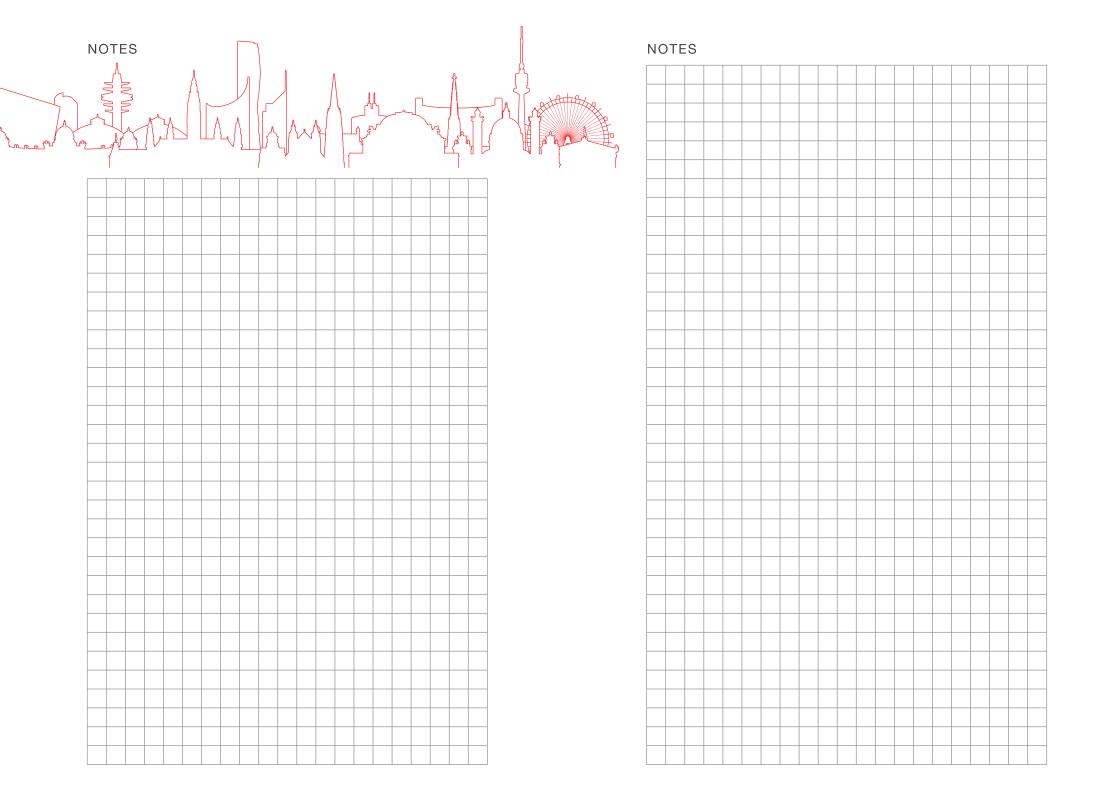
Coming soon.













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