

YOUR
RELIABLE
IDEA-TO-
MARKET
PARTNER!

HIGH-TECH life science technology provider and engineering firm specialized in providing consultancy, engineering, supply, and construction services including innovative high-tech products and solutions



Segal Darou

Your Reliable Idea-to-Market Partner



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GLOBAL PRESENCE

Netherland-Amsterdam 

Austria-Viena 

Hong Kong 

Turkey-Istanbul 



OUR NATURE

Aria Pishro Segal Darou is high-tech life science technology provider and engineering firm specialized in providing consultancy, engineering, supply, and construction services including innovative high-tech products and solutions in following sectors:

- Biologic Drugs/Products and Supplements
- Biopharmaceuticals (recombinant proteins, vaccines, and mAbs)
- Regenerative Medicine (Cell and Gene therapies)
- Medical Devices
- Nutraceuticals
- Cosmetics and beauty

We offer consultancy services for our clients have a product idea or investment opportunity in mind to prepare feasibility studies, cell line development, product or process development in lab and pilot scale, basic and detailed engineering, turnkey cleanroom and facility construction, and validation/contract manufacturing/regulatory service, to introduce the products to the intended market thanks to our global reputable partners specialized in biopharma, medical and RM industries. We also support our clients from basic research to commercial production with research grade/GMP grade ancillary and raw materials from lab scale to commercial production through our global supply chain from reputable vendors.

We are subgroup of Aria Pishro Tajhiz Azma as one the leading medical/biomedical trading companies with about 20 years' experience in Iranian market established in 1991 and taking advantage from its reputation and highly successful experience in the market.

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- 1 BIOPHARMA

 - 2 REGENERATIVE MEDICINE
(CELL & GENE THERAPIES)

 - 3 INNOVATIVE MEDICAL DEVICES

 - 4 NUTRACEUTICALS

 - 5 ENGINEERING SERVICES

 - 6 TURNKEY CLEANROOM AND
FACILITY SUPPLY/ CONSTRUCTION

 - 7 ADVANCED LABORATORY AND PRODUCTION
SCALE MATERIALS AND DISPOSABLES SUPPLY

 - 8 AND LAB TO PRODUCTION SCALE
EQUIPMENT/MACHINERY SUPPLY/TURNKEY
SUPPLY SERVICES

OUR DIFFERENCE

Our scientific team established close collaborations with leading global and local companies and academics to offer our clients innovative services from idea to market products for improving patient's quality of life and human/animal health.

With rising of global warning about food, energy, and environmental issues because of industrialization and increasing the life-style related diseases such as cancer, obesity, diabetes, neurodegenerative diseases, chronic diseases, and COPD. We believe each firm should be committed to sustainability in activities and we oriented our company services and policy to offer innovative and high quality products and solutions for unmet medical needs and "Healthy Life and Future in the Green Planet". We also committed to follow Green Eco Process Development and Factory establishment concept.



BIOLOGICS AND BIOPRODUCTS DIVISION

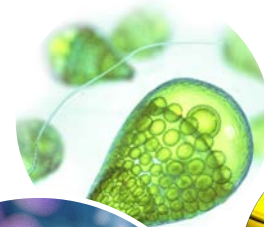
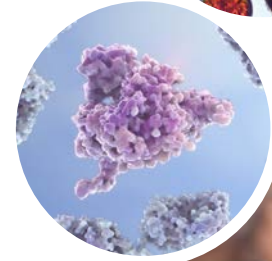
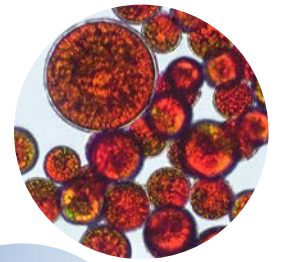
Our biologists and bioprocess engineers are specialized in bioprocess design from discovery to commercial product including:

Products range:

- Starter cultures
- Probiotics and prebiotics
- Bio-polymers: Collagen and Hyaluronic acid
- Enzymes (Food, Feed, Detergent industries)
- Carotenoids by microalgae (Beta-carotene, Chlorophyll, Astaxanthin, ...)
- PUFA production by fermentation

Offered services:

- Strain isolation & selection
- Strain improvement
- Laboratory process development
- Pilot scale-up
- Industrial scale-up
- Downstream process development
- Product formulation and packaging techniques
- Bio-Refinery and waste management consultancy
- Carbon recycling technology and wastewater re-use
- Novel integrated Bio-Processing for Green, White and Red Biotechnology
- Tech-transfer and Turnkey facility construction
- Lab, pilot scale, industrial scale machinery supply
- Raw and ancillary materials supply



WE BELIEVE
IN SUSTAINABILITY
FOR YOUR SMILE!

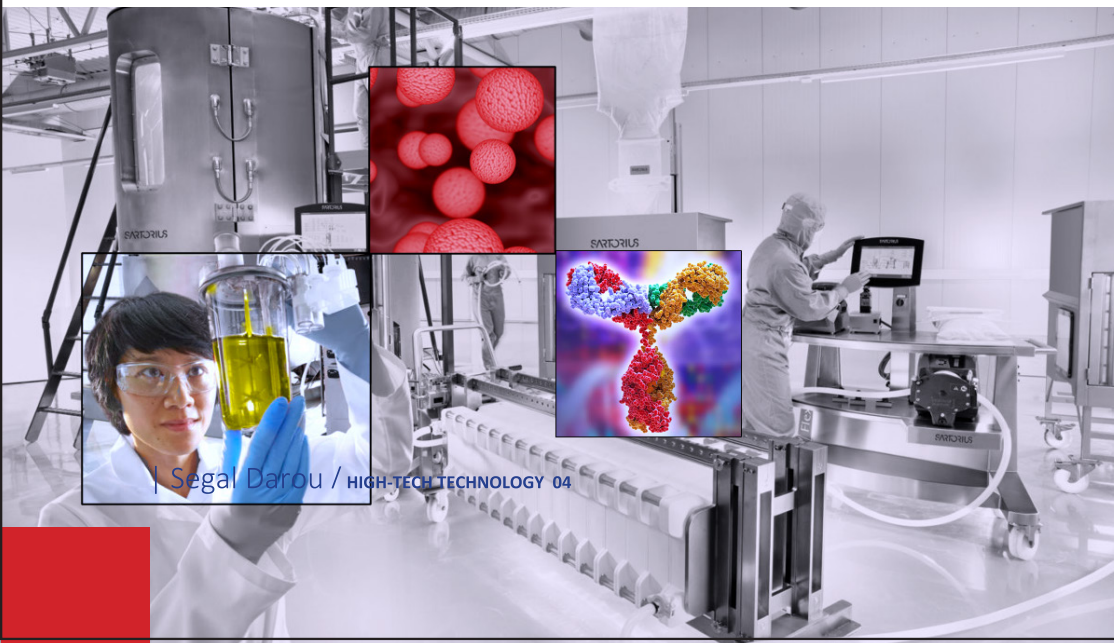


BIOPHARMA DIVISION

Segal Darou is your ultimate biopharmaceutical partner for production of recombinant proteins, recombinant vaccines, and monoclonal antibodies and providing services from cell line development to media and process development, contract manufacturing of API, turnkey construction of biopharmaceuticals facility, and supplying machineries/ancillary/raw materials thanks to collaboration with our leading global partners in biopharma industries.

We are exclusive representative of Quacell Biotechnology as one the leading companies in biopharma cell line and process development sector and culture media production for mAbs and vaccines manufacturing.

QuaCell® team developed over 300 medium formulas, led 15 process optimization projects and achieved 12 INDs. Centering biopharmaceutical up-stream development, QuaCell® provides one-stop CRO services, from cell line construction, medium development, to process optimization, along with complete recording documents by GMP standard and compatible with IND application. QuaCell® also provides medium custom development for continuous large-scale culture from 200 L to 2000 L working volume, ensuring standard, safe, stable and fast delivery.



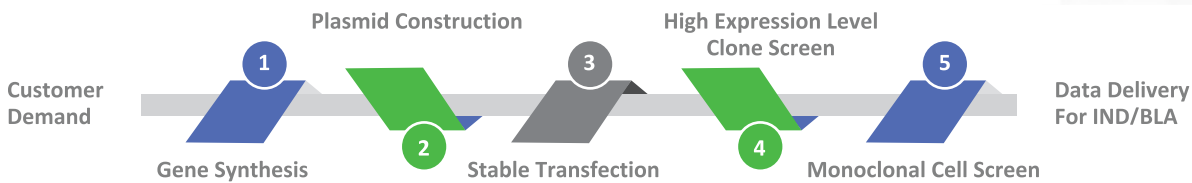
BIOPHARMA DIVISION

Segal Darou offer complete range of service and products form Quacell:

Products range:

- Chemically defined media/Feed for CHO for labs and industrial scale culture (Liquide and Powder forms)
- Chemically defined media for HEK293 for labs and industrial scale culture (Liquide and Powder forms)
- Transfection and cloning media for CHO and HEK 293
- Qualified FBS for mammalian culture with different grades and treatment
- Cell culture reagents and cryopreservation media
- Custom media formulation for your cell line and target molecule

Technical service:



Products range:

- Gene synthesis, plasmid construction
- Stable or transient expression evaluation
- Stable cell line construction
- Monoclonal quality and yield screening
- Cell line stability assessment
- Original experimental data and filings

Technical service:

- Multiple host cells for choice
- CHO-K1, CHO-S, CHO-DG44 or customer-specified cell lines.
- Fast delivery. Deliver within 90 working days.



HI-END CELL LINE, MEDIA, AND PROCESS DEVELOPMENT FOR BIOPHARMACEUTICALS PRODUCTION



Your Ultimate Biopharmaceutical Partner



Vector construction



Stable cell line



Medium development



Expression process optimization



Medium production



BIOPHARMA DIVISION

Four modules guarantee efficient and high-quality cell construction system-UACELL CLD Service

QuaCell® pKS001 | GS Vector expression system

GS high-efficiency expression screening vector system, suitable for the construction of stable cell lines of CHO cells, with antibody expression up to 8g/L

CHO-K1Q® | High expression cell line

Tolerant to high osmotic pressure, high ammonium, high lactic acid, the first domestic host cell line to provide NMPA certified commercial GMP

Single Cell Dispenser | Single cell printing technology

Single cell printing technology, single cell automatic plating, efficiency is 3 times higher than

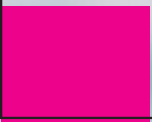
Cell Metric | Continuous cell imaging

Supports single-well panoramic photos of 96-well plates, provides proof of monoclonal origin, significantly shortens the screening cycle

We also offer contract manufacturing service of recombinant proteins, recombinant vaccines, and mAbs API's by Quacell in a sophisticated single use cell culture facility for our clients:

**Contract Manufacturing of
Biopharmaceuticals
Monoclonal antibodies,
Recombinant vaccines, and
Recombinant proteins**

| Segal Darou / HIGH-TECH TECHNOLOGY 06



Your expert in CHO and HEK-293.

BIOPHARMA DIVISION

Segal Darou is also proud offer ExcellGene company from Switzerland through our Turkish partner company Novo Bioinspired Technologies as a leading company in biopharma cell line and process development sector.

ExcellGene Services

ExcellGene is specialized in stable cell line development and recombinant protein manufacturing cover the value chain - from DNA construction and transfection to CHO and HEK process development, to large-scale protein production. ExcellGene cGMP compliant facility enables the generation of Master Cell Banks and Master Working Banks (MCB, MWB). ExcellGene scientists have generated a stable, clonally derived, recombinant, suspension grown CHO cell line that produces a secreted, stabilized version of the trimeric spike protein of SARS-CoV-2 and we can supply all related trimeric spike proteins from different in grams scale.



High Titers

up to 14g/L, 5 to 10 fold improvement



Speedy timelines

From DNA to highly productive, stable clone in 8 weeks



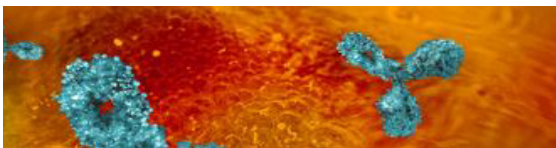
Diverse protein formats

mAbs, biosimilars, bispecifics, fusion proteins, etc...



Robust cells for scalable processes

up to 10.000 L



**Hight Titer Biosimilars Cell Lines
mAb's and Recombinant Proteins**



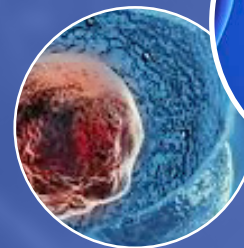
**Modern Recombinant Vaccines
Variant-Proof SARS-CoV-2 Vaccine**

REGENERATIVE MEDICINE AND MEDICAL DEVICE DIVISION

Segal Darou offering product and process development consultancy service for production of Advanced Medicinal Therapeutic Products (ATMPs) for developing technologies to address unmet medical needs from idea to market in collaboration

with Mares Ltd (Germany):

- Cell and Gene therapies
- Tissue engineered products
- Cell derived product (EV's, and ECM)
- Organoids generation
- Whole organ fabrication



In medical device division, we representing leading companies in introducing medical devices with regenerative therapies and orthobiologic such as Isto biologics (USA) and BPB medica (Italy) compnies and following product categories :

- Disposable stem cells isolation kits from adipose and bone marrow
- Automated cells and platelets-rich-plasma serration system
- Innovative synthetic bone grafts and extenders

Isto
BIOLOGICS

BPB
medica

MARES

Advanced Therapies for Unmet Medical Needs

ENGINEERING AND CONSTRUCTION DIVISION

We provide complete range of engineering service for establishment of life science products and biopharmaceuticals production facilities:

Conceptual Design

Conceptual design and scope definition are among the most challenging aspects of cGMP facility design. An essential prerequisite for any successful facility is concept development to provide the basis for project cost and time schedule.

Segal Darou starts with clients' process and do backward engineering to design the URS (User Requirement Specification) of project. Segal Darou also assist clients in designing a rational business model. We provide the entire gamut of bioprocess engineering and consulting services that will ensure that your project starts off on the right track.

- Master Planning
- Scope Definition
- Facility Layout (cGMP Manufacturing & Lab Space Planning)
- Opportunity, Feasibility Studies
- Site Selection
- Basis of Design
- Process Description
- Process Flow Diagrams
- Project Quality Planning
- Equipment Layout



Basic engineering and Detailed Design

Segal Darou provides design solutions that assure the process integrity, operational efficiency & regulatory compliance to clients' facility. Segal Darou assists in basic and detailed engineering of equipment and facility. Typically, our services are :

- Architectural Drawings
- Structural Drawings
- GMP drawings and Room Data Sheet
- Equipment Layout
- Mechanical & HVAC Details
- Electrical and BMS systems drawings
- Utility Matrix
- Process and Equipment engineering (URS prep.)
- Time Schedule and BOQ preparation

Facility and modular cleanroom construction

Segal Darou offer Turnkey project delivery service to clients interested in establishing biopharmaceutical production facilities including modular cleanroom components and equipment's, production equipment's , utilities, QC instruments and monitoring equipment's form leading manufacturers in the field.



Cell Bank

Production

LAB EQUIPMENT AND PRODUCTION MACHINERY SUPPLY

We provide complete range of lab, pilot, and industrial process equipment's for life science research, lab scale process development, pilot scale process development and industrial production from most reputable vendors specialized in life science and biopharma filed.

- GMP cell banking and controlled freezers for RCB/MCB/WCB creation (MVE and CBS isothermal dry-phase freezers)
- Cell line development equipment's including HT automated colony pick-up, single cell printer, HT colony image analyzer
- Mini-bioreactors/shake flask culture systems for cell line stability and fed-batch studies
- Shaking incubators and spinner flask culture system
- Automated cell culture systems
- Lab scale GMP bioreactors (parallel system, disposable, Autoclavable)
- Industrial scale GMP bioreactors (Modular SS and disposable)
- Automated media and buffer prep. systems (Modular SS and disposable) and SS vessels/disposable
- mixing and holding bins and pallettanks and drums for storge of biopharmaceutical fluids
- Cell harvesting systems (nozzle separator, SS/disposable depth filters)
- Cell/proteins buffer exchange/washing and concentration (TFF/cross-flow filtration systems)
- Protein purification system and related columns/resins (AKTA purification systems)
- Protein polishing/ concentration systems
- Viral filtration system
- Formulation systems and freeze drying
- F&F systems (Vial, PFS, aseptic closed vials) and packaging system
- Cleanroom monitoring and disinfection
- Cells and proteins quality control systems
- IPQC equipment (Biochemistry analyzer, off-gas analyzer, online cell density/glucose sensors)
- PW/WFI generation systems /dispensers and related accessories
- Utility systems and Bio-kill equipment's
- Complete range of disposable filters, cartridges, tubing's

LAB TO PRODUCTION MATERIALS SUPPLY

Segal Darou is specialized in offering consultancy service for introducing, choosing, sourcing, and supplying wide range of bio/chemicals, polymeric materials, biomolecules, biomaterials, research/diagnosis kits, high-tech laboratory and processing equipment's for pharma and medical industries as well as disposable solutions and consumables from most esteemed brands for life science research and industry.

- General Lab reagents
- Culture media and reagents (including GMP grade materials and chemically defined media for cell therapy, gene therapy, recombinant proteins, and mAbs production)
- GMP grade human platelet lysate, High qualified serum
- Biomaterials (Research and GMP grade, recombinant hyaluronic acid, collagen,)
- Custom protein, peptide, RNA, DNA, plasmid synthesis for research, discovery and clinical trials
- Cells characterization kits and assay systems
- Single uses culture system (shake flasks, culture bags, vented culture tubes, multi-layer culture systems, G-rex system)
- Single-use filtration and disposable units for air filtration and biopharmaceutical fluids (Sartorius, Pall, Millipore)
- Liquid and air handling disposable tubing's and aseptic connectors





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