

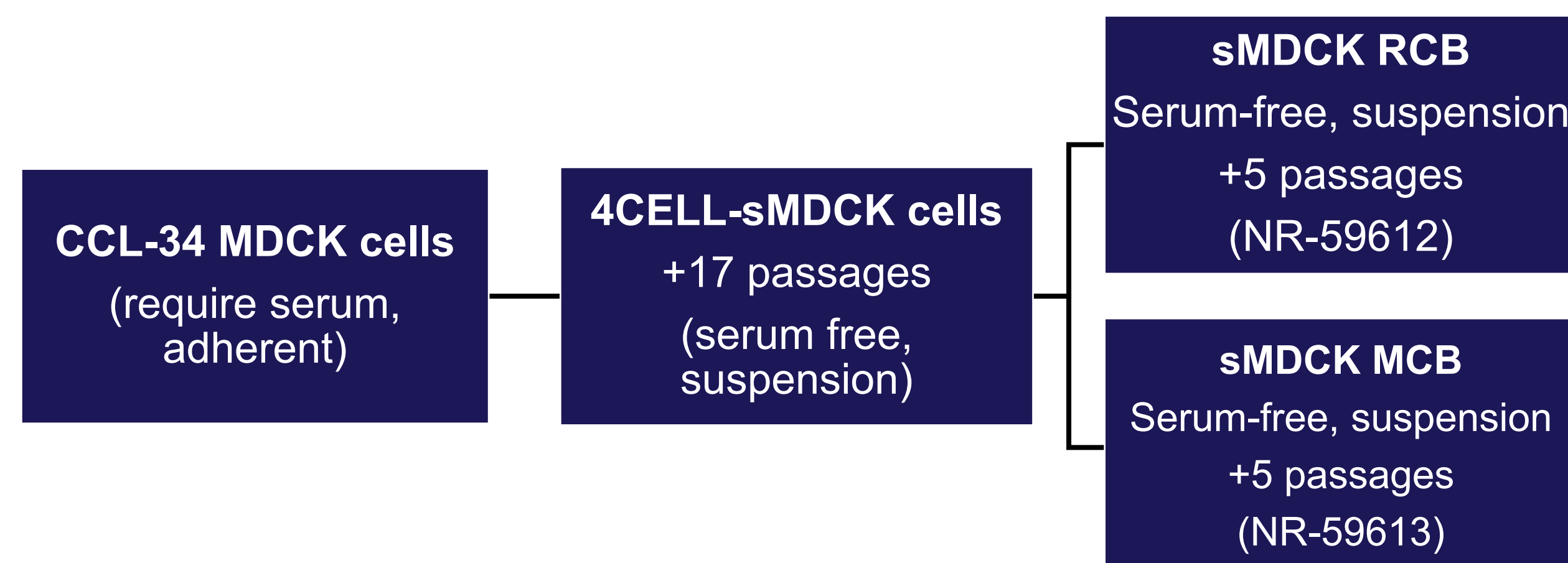
## ABSTRACT

BEI Resources serves as a vital centralized repository of quality-assured organisms, reagents, tools, services, and information related to the NIAID research portfolio. Infectious diseases supported by BEI Resources include Category A, B, and C priority pathogens, emerging infectious diseases, HIV, and non-pathogenic microbes. Reagents from BEI Resources are available free of charge to qualified registrants and can be requested through the online BEI Resources catalog. Registration with the BEI Resources program is open to all experienced researchers affiliated with institutions with the appropriate facilities and safety programs in place.

Suspension Madin-Darby Canine Kidney (sMDCK) cells are being made available through BEI Resources to enable rapid production of influenza virus strains, facilitating evaluation of vaccines and therapeutics in new pre-clinical studies and trials. An RCB version will be available for use by all BEI registrants. A cGMP MCB version will be available to a subset of BEI registrants approved by NIAID for work requiring the cell line produced and stored under cGMP.

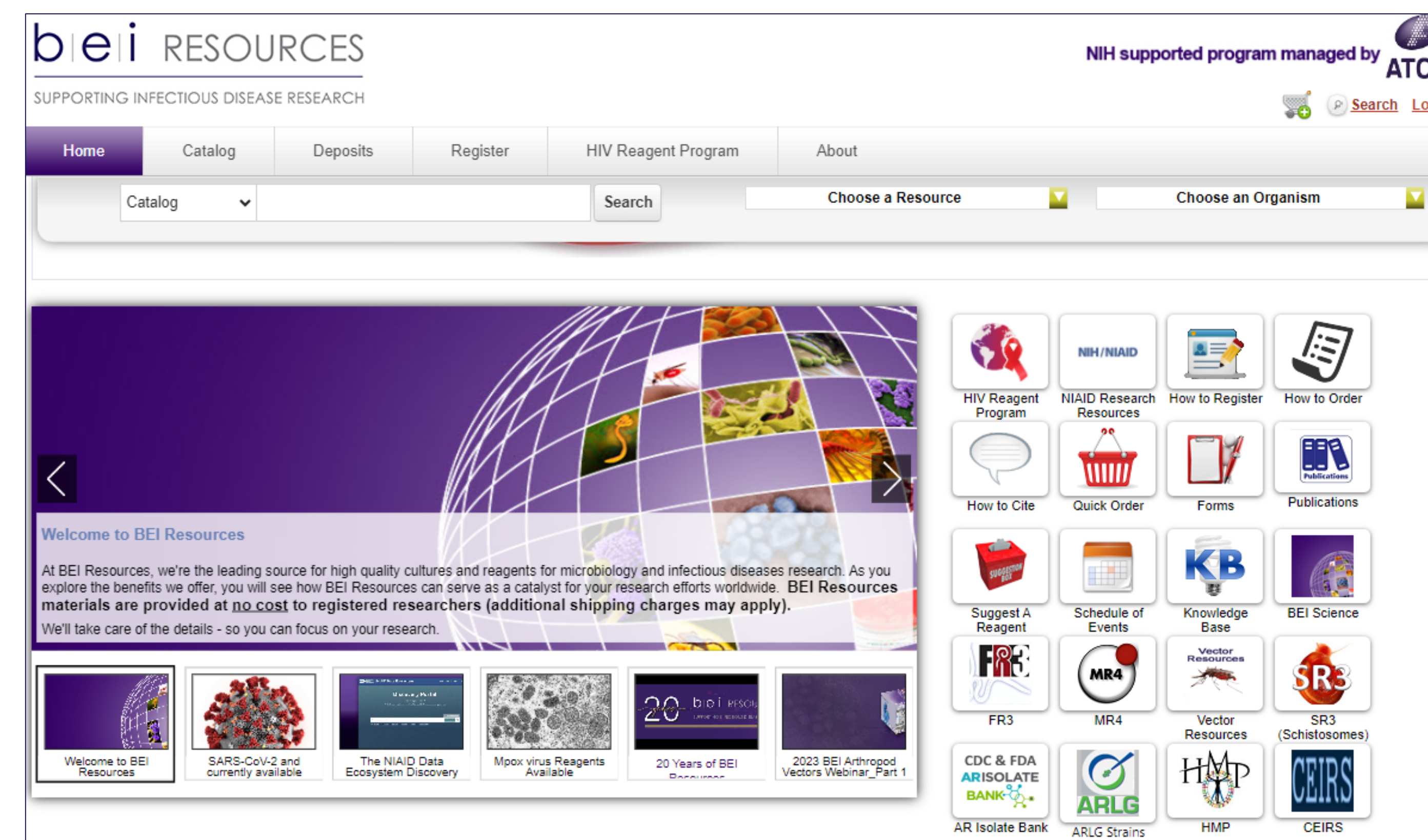
## sMDCK CELL LINE DEVELOPMENT

Suspension Madin-Darby Canine Kidney (sMDCK) research cell bank is a continuous cell line derived from ATCC® CCL-34™, an adherent cell line developed in 1958 from the normal kidney tissue of an adult female cocker spaniel, adapted to suspension culture under conditions free from animal-derived compounds, including bovine and porcine products at the Duke Human Vaccine Institute. MDCK is a model cell line widely used in biological research, including drug product manufacturing, biomedical research, and toxicology.



Process diagram of the development of serum-free suspension MDCK cell line from serum-dependent, adherent cells.

## sMDCK CELL BANKS IN BEI RESOURCES



Two sMDCK cell banks will be offered through BEI Resources:

BEI catalog #	Description	Availability
NR-59612	Research Cell Bank	BEI registrants
NR-59613	Master Cell Bank (cGMP)	BEI registrants approved by NIAID

### Product details:

Each vial contains approximately 1 mL of cell culture suspension frozen in cryopreservative (CryoStor® CS10, BioLife Solutions®). Sufficient cells are provided to initiate at least one new culture.

The following QC testing was performed for the sMDCK RCB and MCB

	Testing	RCB	MCB
Microbial Contamination	Sterility	X	X
	Mycoplasma	X	X
Cell Line Identity	DNA Barcoding	X	X
Virus testing	Adventitious Agent testing		X
	Transmission Electron Microscopy		X
Cell line testing	Osmolality		X
	Post-thaw viability	X	X
	Total cell count	X	X

## BEI RESOURCES REGISTRATION

BEI Resources allows public users to search our web catalog; however, only approved registrants may request reagents from BEI Resources.

Access to these cell lines requires a Level 1 registration with BEI Resources. Instructions and a link to the application are available on our website ([www.beiresources.org](http://www.beiresources.org)).

After your registration application has been approved by NIAID and ATCC, you will receive a login name and password to use to order reagents from the web catalog.

Access to the cGMP cell bank will require pre-approval by NIAID and is intended for manufacturers requiring cGMP material for their work.

## SUMMARY

The sMDCK cell line bank has been developed as a suspension culture under conditions free from animal-derived compounds. A research cell bank and master cell bank (cGMP) will be made available to the research community through the NIH-supported BEI Resources program. To access these reagents, researchers should be registered with BEI Resources and can order through the BEI Resources web catalog, [www.beiresources.org](http://www.beiresources.org).



## ACKNOWLEDGEMENTS

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