

Drug Transporters Test Systems

Pharmaron assists pharmaceutical and biotech companies in identifying and overcoming ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicity) barriers in drug development.

The CellPort Technologies® platform is a suite of human cell-based test systems for drug transporter characterization.

CellPort Test Systems

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| • Caco-2 (C2BBel) | • OCT2-HEK293 | • OATP1B3-HEK293 | • MATE2K-HEK293 |
| • MDR1-MDCK | • OAT1-HEK293 | • OATP1A2-HEK293 | • BSEP-Vesicles |
| • BCRP-MDCK | • OAT3-HEK293 | • OATP2A1-HEK293 | • MRP2-Vesicles |
| • OCT1-HEK293 | • OATP1B1-HEK293 | • OATP2B1-HEK293 | • NTCP-HEK293 |
| | | • MATE1-HEK293 | • PepT1 (C2BBel) |

CellPort Analytics

	2015	2016	2017		2015	2016	2017
MDR1	12.3 ± 2.89	12.1 ± 2.89	14.0 ± 3.68	OAT3	0.193 ± 0.0820	0.247 ± 0.110	0.170 ± 0.0452
BCRP	17.5 ± 4.70	17.5 ± 6.49	19.1 ± 5.78	OATP1B1	0.229 ± 0.0294	0.221 ± 0.0272	0.237 ± 0.0375
OCT1	0.46 ± 0.05	0.47 ± 0.05	0.57 ± 0.04	OATP1B3	0.303 ± 0.0288	0.288 ± 0.334	0.300 ± 0.0292
OCT2	0.21 ± 0.04	0.24 ± 0.04	0.26 ± 0.03	MATE1	0.464 ± 0.0588	0.480 ± 0.0507	0.472 ± 0.0658
OAT1	0.23 ± 0.12	0.27 ± 0.15	0.19 ± 0.12	MATE2K	0.129 ± 0.0152	0.151 ± 0.0191	0.175 ± 0.0318
Net Flux or Uptake ± SEM							

CellPort Assay Services

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| <ul style="list-style-type: none"> • Team Overview: <ul style="list-style-type: none"> - Study Directors (PhD, DVM) - Board Certified Veterinarians - Research Associates - Dedicated Study Managers | <ul style="list-style-type: none"> • State-of-the-art facilities • FDA inspected | <ul style="list-style-type: none"> • Quality standards (GLP/ISO) and SOPs • In-house QA with regulatory experience |
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CellPort Validation

Extensively characterized test systems using the most clinically-relevant substrates and inhibitors for complete regulatory confidence

	Substrate	Inhibitor		Substrate	Inhibitor
MDR1	Digoxin, Etoposide, Fexofenadine, Amprenavir, Talinolol, Loperamide	Valspodar, Cyclosporin A, Vinblastin, Ketoconazole, Loperamide	OAT3	Atorvastatin, Rosuvastatin, Pitavastatin	Rifamycin SV, Atenolol, Cyclosporin A, Digoxin, Estrone-3-Sulfate, Estradiol-17 β Glucuronide, Ketoconazole, Propranolol, Rifampicin, Ritonavir, Rosuvastatin, Taurocholic Acid, Tolbutamide, Verapamil
BCRP	Cladribine, Topotecan, Prazosin, Cimetidine, Sulfasalazine, Mitoxantrone, Actinomycin D, Doxorubicin, Estrone-3-Sulfate, Etoposide, Irinotecan, Rosuvastatin, Daunorubicin, SN-38, Fexofenadine	Ko143, Elacridar, FTC	OATP1B3	Atorvastatin, Pitavastatin, Rosuvastatin	Rifamycin SV, Rifampicin, Rosuvastatin, Taurocholic Acid, Ritonavir, Cyclosporin A, Estradiol-17 β Glucuronide, Estrone-3-Sulfate, Atenolol, Propranolol, Digoxin
IOCT1	MPP+, Amantadine, Amiloride, Metformin, Pindolol, Procainamide, Propanolol, Ranitidine	Repaglinide, Disopyramide, Quinine, Quinidine, Cimetidine, Rosiglitazone, Triethylamine, Metformin	MATE1	Metformin, MPP+, Cimetidine, Amiloride	Cimetidine, Atenolol, Triethylamine, Amantadine, Imipramine, Disopyramide, MPP+, Verapamil, Quinidine, Ritonavir
OCT2	MPP+, Pindolol, Ranitidine, Procainamide, Amiloride, Amantadine	Imipramine, TPA, Verapamil, Quinidine, Cimetidine, Metformin, Dopamine, Triethylamine	MATE2K	Metformin, MPP+, Cimetidine, Amiloride	Pyrimethamine, Ondansetron, Quinidine
OAT1	PAH, Adefovir, Cidofovir, Furosemide, Lamivudine, Tenofovir, Zidovudine	Probenecid, Bumetanide, Novobiocin, Quinaprilat, TEA, Methotrexate, Lamivudine	MRP2	CDCF	MK571
OAT3	Furosemide, Bumetanide, Cefaclor, Quinaprilat	Probenecid, Bumetanide, Novobiocin, Quinaprilat, Rosuvastatin, Naproxen	BSEP	[3H] Taurocholic acid	Cyclosporin A, Troglitazone