

Supplementary Information of

Recent Advances of Controlled Drug Delivery Using Microfluidic Platforms

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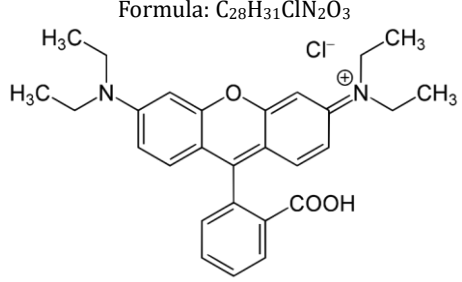
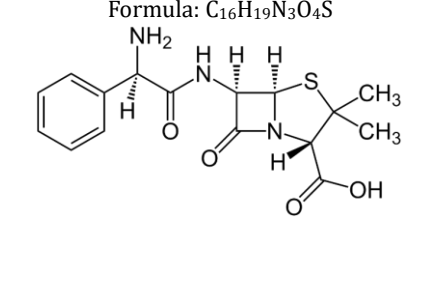
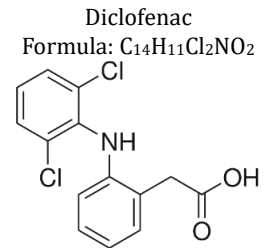
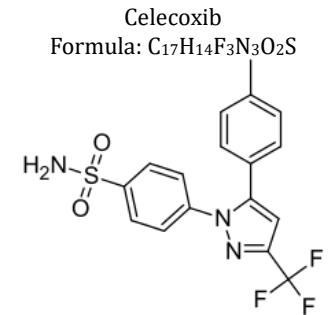
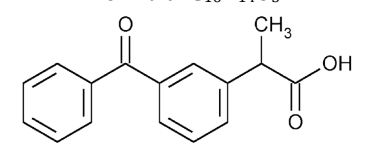
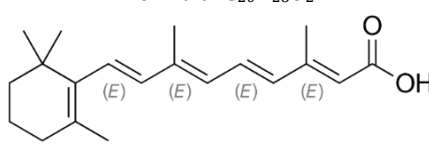
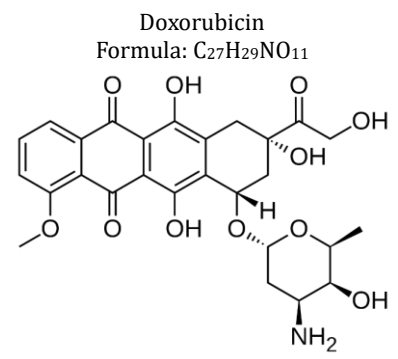
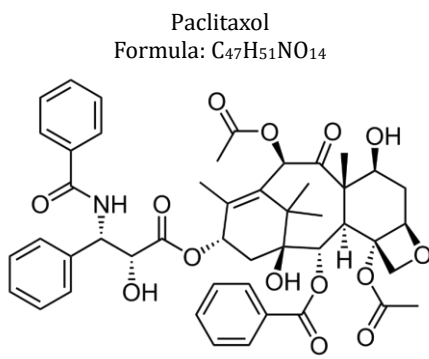
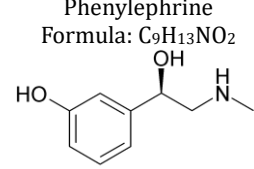
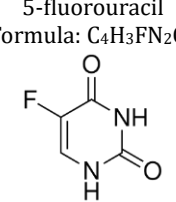
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Table S1. Transdermal drugs approved by US FDA*

Drug	Product name	Dosage form	Approval year	Indication	Marketing company
Buprenorphine	Butrans	Film/extended release	2010	Opioid addiction	Purdue pharma LP
Clonidine	Catapres-TTS	Film/extended release	1984	Hypertension	Boehringer Ingelheim
Estradiol	Alora	Film/extended release	2002	Menopausal symptoms	Allergan sales LLC
Estradiol; Levonorgestrel	Climara Pro	Film/extended release	2003	Menopausal symptoms	Noven pharmaceuticals Inc
Estradiol; Norethindrone Acetate	Combipatch	Film/extended release	1998	Menopausal symptoms	Bayer healthcare pharmaceuticals Inc
Ethinyl estradiol; Norelegstromin	Xulane	Film/extended release	2014	Contraception	Mylan technologies
Fentanyl	Duragesic	Film/extended release	1990	Chronic pain	Janssen pharmaceuticals Inc
Fentanyl hydrochloride	Ionsys	System/Iontophoresis	2006	Acute postoperative pain	The medicines Co
Granisetron	Sancuso	Film/extended release	2008	Nausea and vomiting after cancer treatment	Kyowa kiran Inc
Methylphenidate	Daytrana	Film/extended release	2006	Attention deficit hyperactivity disorder	Noven pharmaceuticals Inc
Nicotine	Habitrol	Film/extended release	1999	Smoking cessation	Dr reddys laboratories Inc
Nitroglycerin	Minitran	Film/extended release	1996	Angina pectoris	Valeant Pharmaceuticals
Oxybutynin	Oxybutynin	Film/extended release	2014	Bladder relaxant	Barr Laboratories Inc
Oxybutynin chloride	Gelnique	Gel	1009	Bladder relaxant	Allergan sales LLC
Rivastigmine	Exelon	Film/extended release	2007	Dementia	Novartis pharmaceuticals corp
Rotigotine	Neupro	Film/extended release	2012	Parkinson's disease	UCB Inc
Scopolamine	Scopolamine	Film/extended release	2015	Motion sickness	Perrigo pharmaceuticals Co
Selegiline	Emsam	Film/extended release	2006	Major depressive disorder	Somerset pharmaceuticals Inc
Testosterone	Androderm	Film/extended release	2011	Testosterone deficiency	Allergan sales LLC

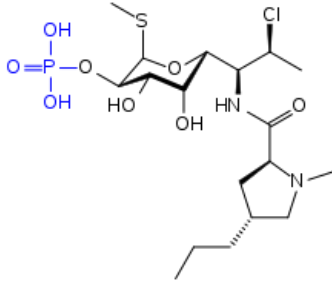
*Only one approved product for a given drug formulation is shown. Data were obtained from an FDA orange book. (http://www.accessdata.fda.gov/scripts/cder/ob/search_product.cfm)

Table S2. Chemical structures and formulas of small molecular drugs in the order as mentioned in Table 1 and 2.

<p style="text-align: center;">Rhodamine B Formula: $C_{28}H_{31}ClN_2O_3$</p> 	<p style="text-align: center;">Ampicillin Formula: $C_{16}H_{19}N_3O_4S$</p> 
<p style="text-align: center;">Diclofenac Formula: $C_{14}H_{11}Cl_2NO_2$</p> 	<p style="text-align: center;">Celecoxib Formula: $C_{17}H_{14}F_3N_3O_2S$</p> 
<p style="text-align: center;">Ketoprofen Formula: $C_{16}H_{14}O_3$</p> 	<p style="text-align: center;">Tretinoin Formula: $C_{20}H_{28}O_2$</p> 
<p style="text-align: center;">Doxorubicin Formula: $C_{27}H_{29}NO_{11}$</p> 	<p style="text-align: center;">Paclitaxel Formula: $C_{47}H_{51}NO_{14}$</p> 
<p style="text-align: center;">Phenylephrine Formula: $C_9H_{13}NO_2$</p> 	<p style="text-align: center;">5-fluorouracil Formula: $C_4H_3FN_2O_2$</p> 

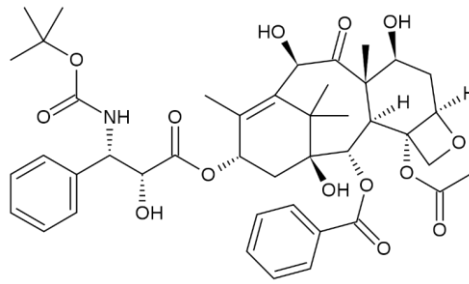
Clindamycin Phosphate

Formula: $C_{18}H_{34}ClN_2O_8PS$



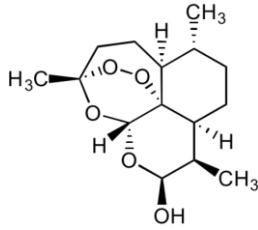
Docetaxel

Formula: $C_{43}H_{53}NO_{14}$



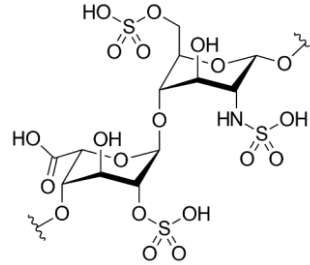
Dihydroartemisinin

Formula: $C_{15}H_{24}O_5$



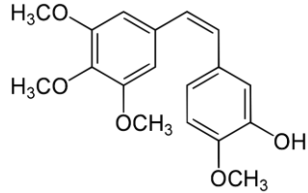
Heparin

Formula: $C_{10}H_{19}NO_{20}S_3$



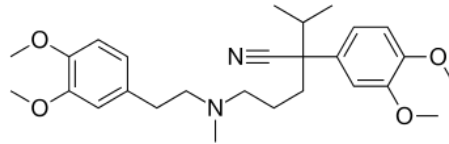
Combretastatin A4

Formula: $C_{18}H_{20}O_5$



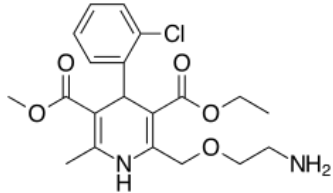
Verapamil

Formula: $C_{27}H_{38}N_2O_4$



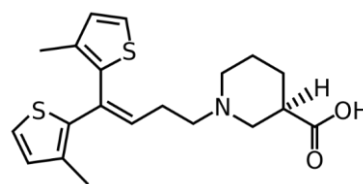
Amlodipine

Formula: $C_{20}H_{25}ClN_2O_5$



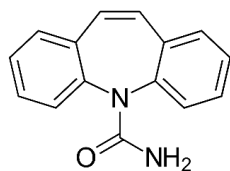
Tiagabine

Formula: $C_{20}H_{25}NO_2S_2$



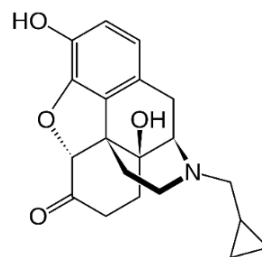
Carbamazepine

Formula: $C_{20}H_{25}NO_2S_2$



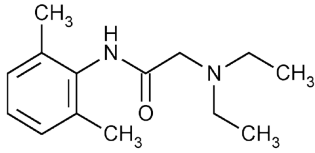
Naltrexone

Formula: $C_{20}H_{23}NO_4$



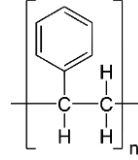
Lidocaine

Formula: $C_{14}H_{22}N_2O$



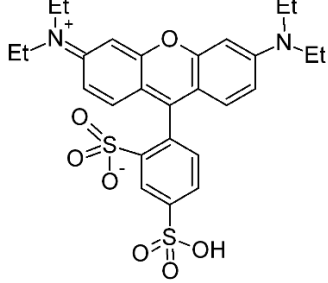
Polystyrene

Formula: $(C_8H_8)_n$



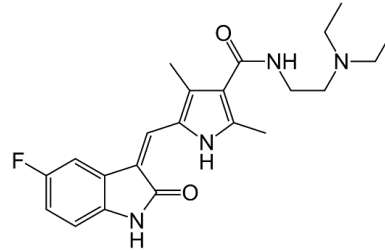
Sulforhodamine B

Formula: $C_{27}H_{30}N_2O_7S_2$



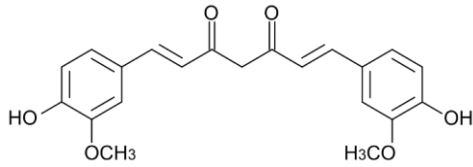
Sunitinib

Formula: $C_{22}H_{27}FN_4O_2$



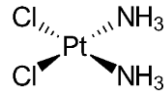
Curcumin

Formula: $C_{21}H_{20}O_6$



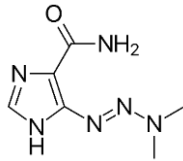
Cisplatin

Formula: $Cl_2H_4N_2Pt$



Dacarbazine

Formula: $C_6H_{10}N_6O$



Methotrexate

Formula: $C_{20}H_{22}N_8O_5$

