

# Investigation of the chemistry of the action of triorganotin compounds on mitochondria.

University of East Anglia - Design, Synthesis, and Biological Characterization of Novel Mitochondria Targeted Dichloroacetate

No	Compounds	LogP						References
		HLA	ADH	VECT-18	MDP-7	RDE	HL-60	
1	Bu <sub>3</sub> Sn <sup>+</sup>	82.4	—	76.7	—	—	—	Davies et al. (2003)
2	Bu <sub>3</sub> Sn <sup>+</sup>	77.5	—	76.2	—	—	—	Davies et al. (2003)
3	Ph <sub>3</sub> Sn <sup>+</sup>	86.4	—	80.7	—	—	—	Davies et al. (2003)
4	Me <sub>3</sub> Sn <sup>+</sup>	86.1	—	83.2	—	—	—	Davies et al. (2003)
5	Bu <sub>3</sub> Sn <sup>+</sup>	10.4	—	10.2	—	—	—	Davies et al. (2003)
6	Bu <sub>3</sub> Sn <sup>+</sup>	86.9	—	82.2	—	—	—	Davies et al. (2003)
7	Ph <sub>3</sub> Sn <sup>+</sup>	77.1	—	77.2	—	—	—	Davies et al. (2003)
8	Me <sub>3</sub> Sn <sup>+</sup>	86.7	—	82.5	—	—	—	Davies et al. (2003)
9	Bu <sub>3</sub> Sn <sup>+</sup>	10.6	—	10.6	—	—	—	Davies et al. (2003)
10	Ph <sub>3</sub> Sn <sup>+</sup>	86.3	—	77.1	—	—	—	Davies et al. (2003)
11	Me <sub>3</sub> Sn <sup>+</sup>	107.9	—	102.2	—	—	—	Davies et al. (2003)
12	Bu <sub>3</sub> Sn <sup>+</sup>	20.8	—	20.1	—	—	—	Davies et al. (2003)
13	Bu <sub>3</sub> Sn <sup>+</sup>	33.8	—	31.2	—	—	—	Davies et al. (2003)
14	Ph <sub>3</sub> Sn <sup>+</sup>	18.7	—	18.2	—	—	—	Davies et al. (2003)
15	H <sub>2</sub> AsO <sub>4</sub> <sup>-</sup>	—	0.07	0.07	0.20	—	—	Alonso et al. (2003)
16	H <sub>2</sub> AsO <sub>4</sub> <sup>-</sup>	—	0.08	0.08	0.16	—	—	Alonso et al. (2003)
17	H <sub>2</sub> AsO <sub>4</sub> <sup>-</sup>	—	0.1	0.07	0.40	—	—	Alonso et al. (2003)
18	Ph <sub>3</sub> AsO <sub>4</sub> <sup>-</sup>	—	0.08	0.08	0.10	—	—	Alonso et al. (2003)
19	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	—	—	—	—	4.0	—	Kamada et al. (2016)
20	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	—	—	—	—	8.9	—	Kamada et al. (2016)
21	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	78	—	—	—	—	—	Alpert et al. (2018)
22	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	85	—	—	—	—	—	Alpert et al. (2018)
23	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	288	—	—	—	—	—	Alpert et al. (2018)
24	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	1	—	—	—	—	—	Alpert et al. (2018)
25	Me <sub>3</sub> Sn <sup>+</sup>	14.4	8.9	—	—	—	—	Lu et al. (2017)
26	Ph <sub>3</sub> Sn <sup>+</sup>	0.0	1.2	—	—	—	—	Lu et al. (2017)
27	Me <sub>3</sub> Sn <sup>+</sup>	16.9	18.0	—	—	—	—	Lu et al. (2017)
28	Ph <sub>3</sub> Sn <sup>+</sup>	1.0	14	—	—	—	—	Lu et al. (2017)
29	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	—	—	—	0.08	—	—	Avasthi et al. (2018)
30	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	—	—	—	0.0	—	—	Avasthi et al. (2018)
31	H <sub>2</sub> AsO <sub>4</sub> <sup>-</sup>	—	—	0.007	—	—	—	Filova et al. (2018)
32	Ph <sub>3</sub> AsO <sub>4</sub> <sup>-</sup>	—	—	0.08	—	—	—	Filova et al. (2018)
33	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	176	—	—	—	—	—	Liang et al. (2016)
34	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>10</sub> CH <sub>2</sub> OH	68	—	—	—	—	—	Liang et al. (2016)
35	Ph <sub>3</sub> AsO <sub>4</sub> <sup>-</sup>	—	—	—	—	0.3	—	Khan et al. (2013)
36	Me <sub>3</sub> AsO <sub>4</sub> <sup>-</sup>	—	—	—	—	0.7	—	Khan et al. (2013)
37	Bu <sub>3</sub> AsO <sub>4</sub> <sup>-</sup>	—	—	—	—	0.1	—	Khan et al. (2013)

Description: -

-Investigation of the chemistry of the action of triorganotin compounds on mitochondria.

-Investigation of the chemistry of the action of triorganotin compounds on mitochondria.

Notes: Thesis (Ph.D.) - University of East Anglia, School of Chemical Sciences, 1978.

This edition was published in 1978



Filesize: 21.83 MB

Tags: #Mitochondria #as #a #possible #target #for #nicotine #action

mitochondrion

Macias, Daniel Maddox, Patrick C. Figure 4: Proliferation of ER-positive MCF-7 cells treated with mitochondria-targeted compounds.

## Design, Synthesis, and Biological Characterization of Novel Mitochondria Targeted Dichloroacetate

Simple and non-charged long-lived fluorescent intracellular organelle trackers. Key words: Tributyltin; Triphenyltin; Endocrine disruptor; Aromatase; Imposax; Mammalian reproductive organs Text Introduction Organotin OT compounds such as tributyltin TBT and triphenyltin TPT have been widely used as biocides, agricultural fungicides, wood preservatives, and disinfecting agents in circulating industrial cooling waters, as well as in antifouling paints for marine vessels 1. These results together with the other reports suggest that nicotine induces inhibition of complexes I and IV.

## Design, Synthesis, and Biological Characterization of Novel Mitochondria Targeted Dichloroacetate

L-arginine is metabolized and serves as a precursor of NO, a key molecule in signalling for vasodilation and hence is proposed to prevent metabolic strokes.

## Triorganotin as a compound with potential reproductive toxicity in mammals

Curiously, there is no significant change in its expression in SHR astrocytes when compared to astrocytes from Wistar rats.

## Triorganotin Compounds as Ionophores and Inhibitors of Ion Translocating ATPases

Nicotine Nicotine is a natural alkaloid discovered in *Nicotiana tabacum* by Posselt and Reimann in 1828 and was first synthesized by Pictet and Rotschy in 1904.

### **Biological activity studies on organotin(IV) $n^+$ complexes and parent compounds**

Surprisingly, SHR astrocytes release less  $\text{Ca}^{2+}$  to cytosol than Wistar astrocytes. British chemists were especially prolific.

### **Triorganotin as a compound with potential reproductive toxicity in mammals**

Increased expression of the NF- $\kappa$ B p65 subunit upon nicotine treatment was reported in HK-2 renal proximal tubule cells and was dependent on increased ROS levels and subsequent phosphorylation of ERK and JNK kinases Kim et al. We observed that all kind of hypoxias tested herein induced changes in mitochondrial polarization Fig. Moreover, such differences in the response of individual brain regions to nicotine treatment should be also represented as various alterations in mitochondrial bioenergetics metabolism and different modulation of OXPHOS complexes activities.

### **Role of Enzymes in Cellular Respiration**

Use the diagram below to answer the questions. Reprod Toxicol 2007; 23: 1-11. Cell cycle progression was analyzed using flow cytometry.

## Related Books

- [René Rapin - l'homme et l'oeuvre.](#)
- [Globalization and International Law](#)
- [Angelos Sikelianos - tria kephalaia viographias kenas prologos](#)
- [Testaments of time - the search for lost manuscripts and records.](#)
- [Getting started in stamp collecting.](#)