

1 *Supplementary Information*

2 **Two isomeric C₁₆ oxo-fatty acids from the diatom *Chaetoceros karianus* show dual agonist activity**
3 **towards human peroxisome proliferator-activated receptors (PPARs) α/γ**

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17 **List of tables in supporting information:**

18 **Table S1.** PPAR agonist activity found in the Marbank collection of invertebrates and diatoms

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39 **Table S1.** PPAR agonist activity found in the Marbank collection of invertebrates and diatoms
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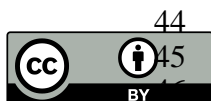
Marbank ID	Organism	PPAR α	PPAR δ	PPAR γ
M10004-0-L03	<i>Actiniaria sp.</i>	nt	+	+
M11002-0-L03	<i>Alaria esculenta</i>	-	-	-
M11006-0-L03	<i>Alcyonium digitatum</i>	nt	nt	-
M10010-0-L03	<i>Astarte crenata</i>	nt	++	++
M10066-0-L03	<i>Atlantopandalus propinquus</i>	++	-	++
M11016-0-L03	<i>Attheya longicornis</i>	++	++	++
M10051-1-L03	<i>Attheya longicornis</i> (0 min UV light exp)	++	-	++
M10062-1-L03	<i>Attheya longicornis</i> (110 min UV light exp)	+++	-	-
M10056-1-L03	<i>Attheya longicornis</i> (120 min UV light exp)	++	-	-
M10058-1-L03	<i>Attheya longicornis</i> (165 min UV light exp)	+	-	++
M10059-1-L03	<i>Attheya longicornis</i> (180 min UV light exp)	-	-	+
M10057-1-L03	<i>Attheya longicornis</i> (60 min UV light exp)	+	+	+++
M10055-1-L03	<i>Attheya longicornis</i> , MI #2, (0 min UV light exp)	-	+	+
M10067-0-L03	<i>Aurelia aurita</i>	++	-	-
M11017-0-L03	<i>Bacteriosira bathyomphala</i>	+++	-	+++
M11031-0-L03	<i>Chaetoceros karianus</i>	+++	-	+++
M10013-1-L03	<i>Chimaera monstrosa</i>	+	-	-
M11003-0-L03	<i>Cnidaria indet</i>	nt	nt	-
M10001-0-L03	<i>Craniella polyura</i>	nt	-	+
M11001-0-L03	<i>Cyanea capillata</i>	++	-	++
M11030-0-L03	<i>Cylindrotheca closterium</i>	++	++	+++
M10027-1-L03	<i>Echinus-a esculentus</i> , MI #1	nt	-	-
M10027-2-L03	<i>Echinus-a esculentus</i> , MI #2	nt	-	+
M10027-3-L03	<i>Echinus-a esculentus</i> , MI #3	nt	-	+
M10065-1-L03	<i>Filograna implexa</i>	++	-	++
M10030-0-L03	<i>Fucus distichus</i>	-	-	-
M10031-0-L03	<i>Fucus serratus</i>	-	-	-
M10007-0-L03	<i>Gastropoda indet</i> , eggs	nt	+	-
M11040-0-L03	<i>Geodia barretti</i>	nt	nt	++
M11018-0-L03	<i>Halichondria panicea</i>	-	+	+
M10038-0-L03	<i>Haliclona (rhizoniera) rosea</i>	nt	-	+
M10005-0-L03	<i>Hormathia nodosa</i> , MI #1	nt	+	++
M10006-0-L03	<i>Hormathia nodosa</i> , MI #2	nt	-	++
M10002-0-L03	<i>Hymenaster pellucidus</i>	nt	+	-
M10034-0-L03	<i>Kukenthalia borealis</i>	nt	-	+
M10033-0-L03	<i>Laminaria hyperborea</i>	nt	-	++

M11024-0-L03	<i>Molgula retortiformis</i>	nt	nt	+
M10063-0-L03	<i>Munida sarsi</i>	-	+	+
M10014-0-L03	<i>Mycale (mycale) lingua</i>	-	-	+
M11015-0-L03	<i>Myxilla sp.</i>	nt	nt	+
M11029-0-L03	<i>Odontella aurita (hl,</i>	++	-	-
M11007-0-L03	<i>Ophioscolex glacialis</i>	nt	nt	+
M11026-0-L03	<i>Pelvetia canaliculata</i>	nt	nt	++
M11008-0-L03	<i>Phakellia ventilabrum</i>	nt	nt	+
M10003-0-L03	<i>Polymastia boletiformis</i> , MI #1	nt	-	-
M11036-0-L03	<i>Polymastia boletiformis</i> , MI #2	nt	nt	++
M10017-0-L03	<i>Polymastia sp.</i>	+	-	++
M10044-0-L03	<i>Polysiphonia lanosa</i>	+	-	-
M11019-0-L03	<i>Pontaster tenuispinus</i>	-	-	-
M10029-0-L03	<i>Porifera indet. A</i>	+	-	++
M10039-0-L03	<i>Porifera indet. B</i>	nt	-	++
M11009-0-L03	<i>Porifera indet. C</i>	nt	nt	+
M11010-0-L03	<i>Porifera indet. D</i>	nt	nt	+
M11011-0-L03	<i>Porifera indet. E</i>	nt	nt	-
M11012-0-L03	<i>Porifera indet. F</i>	nt	nt	-
M11013-0-L03	<i>Porifera indet. G</i>	nt	nt	-
M11014-0-L03	<i>Porifera indet. H</i>	nt	nt	-
M11027-0-L03	<i>Porifera indet. I</i>	nt	nt	-
M11035-0-L03	<i>Porifera indet. J</i>	nt	nt	++
M11037-0-L03	<i>Porifera indet. K</i>	nt	nt	++
M11038-0-L03	<i>Porifera indet. L</i>	nt	nt	+
M11039-0-L03	<i>Porifera indet. M</i>	nt	nt	++
M11041-0-L03	<i>Porifera indet. M</i>	nt	nt	+
M11042-0-L03	<i>Porifera indet. N</i>	nt	nt	-
M11043-0-L03	<i>Porifera indet. O</i>	nt	nt	++
M11045-0-L03	<i>Porifera indet. P</i>	nt	nt	++
M11005-0-L03	<i>Porifera indet. Q</i>	nt	nt	-
M11033-0-L03	<i>Porosira glacialis</i> , MI #1 (UV)	-	++	-
M11034-0-L03	<i>Porosira glacialis</i> , MI #2 (UV)	-	-	+
M10064-0-L03	<i>Pseudarchaster parelii</i>	++	-	-
M10032-0-L03	<i>Psolus phantapus</i>	-	+	-
M10035-1-L03	<i>Saccharina latissima</i> , MI #1	nt	-	++
M10035-2-L03	<i>Saccharina latissima</i> , MI #2	nt	-	-
M10035-3-L03	<i>Saccharina latissima</i> , MI #3	nt	-	+++
M10008-0-L03	<i>Scaphander lignarius</i>	nt	-	+

M10028-1-L03	<i>Solaster endeca</i> , MI #1	nt	-	-
M10028-2-L03	<i>Solaster endeca</i> , MI #2	+++	++	-
M10028-3-L03	<i>Solaster endeca</i> , MI #3	-	-	++
M11028-0-L03	<i>Solaster endeca</i> , MI #4	-	-	-
M11028-2-L03	<i>Solaster endeca</i> , MI #5	-	-	-
M11028-3-L03	<i>Solaster endeca</i> , MI #6	++	++	-
M10016-0-L03	<i>Styela rustica</i>	+	-	+
M10036-0-L03	<i>Tethya norvegica</i>	nt	-	-
M11032-0-L03	<i>Thalassiosira antarctica var. borealis</i>	-	-	-

41 + : activity screening, ++ : activity re-testing, +++ : activity in HPLC fractions, - : no activity,
 42 nt : not tested, MI: Material Identity (sampled at different locations, depths, time of year etc.)

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