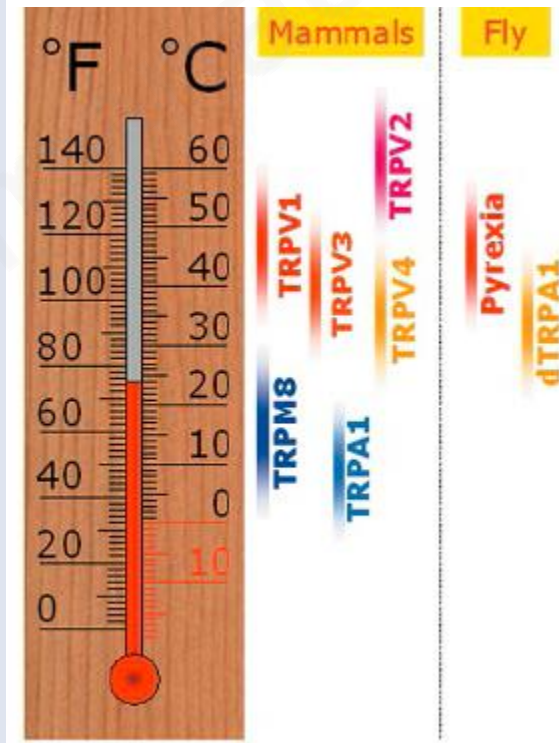
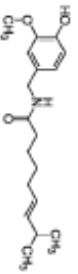
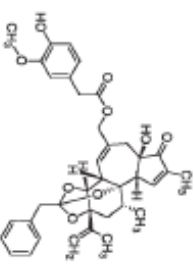
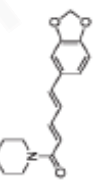


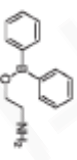
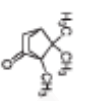
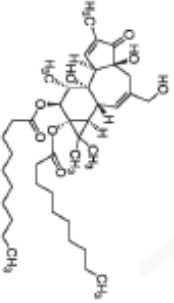

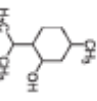
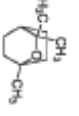
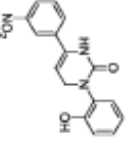

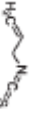
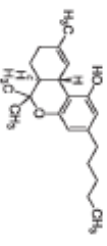



Chemical agonist (botanical source)	Thermo TRP receptor*
Capsaicin (hot chili peppers, e.g., Tabasco)	TRPV1
Piperine (black pepper)	TRPV1
[8] & [6]-Gingerol (ginger)	TRPV1
$\alpha$ -Hydroxysanshool (Sichuan pepper)	TRPV1, TRPA1
[6]-Shogaol (dried ginger)	TRPV1, TRPA1
Allicin (fresh garlic)	TRPV1, TRPA1
Polygodial ( <i>Persicaria odorata</i> , <i>Tasmannia lanceolata</i> )	TRPA1, TRPV1
Cannabichromene ( <i>Cannabis sativa</i> )	TRPA1
Allyl isothiocyanate (mustard, horseradish)	TRPA1
Benzyl isothiocyanate (mustard, horseradish)	TRPA1
Phenethyl isothiocyanate (mustard, horseradish)	TRPA1
Cannabidiol ( <i>Cannabis sativa</i> )	TRPV2
D-9-Tetrahydrocannabinol ( <i>Cannabis sativa</i> )	TRPV2, TRPA1
Carvacrol (oregano)	TRPV3
Thymol (thyme)	TRPV3
Camphor ( <i>Cinnamomum camphora</i> )	TRPV3, TRPV1
Cinnamaldehyde (cinnamon, cassia)	TRPA1, TRPV3
Eugenol (clove)	TRPV3, TRPA1, TRPV1
Bisandrographolide A ( <i>Andrographis paniculata</i> )	TRPV4
1,4-Cineole (lime)	TRPA1, TRPM8
1,8-Cineole, eucalyptol (eucalyptus)	TRPM8, TRPV3
Icilin [AG-3-5] (synthetic)	TRPM8, TRPA1
(-)-Menthol (peppermint)	TRMP8, TRPV3
WS-3 (synthetic)	TRPM8
WS-12 (synthetic)	TRPM8
WS-109 = CPS- 369 (synthetic)	TRPM8



\*Primary TRP receptors activated

**Table 1 Chemical agonists for thermoTRPs**

Name	Structure	Occurrence	Target	Concentration
Capsaicin		Plant-derived	TRPV1	$10^{-8}$ - $10^{-6}$
Resiniferatoxin		Plant-derived	TRPV1	$10^{-10}$ - $10^{-8}$
Piperine		Plant-derived	TRPV1	$10^{-5}$ - $10^{-4}$
Olivanil		Synthetic	TRPV1	$10^{-8}$ - $10^{-6}$
Anandamide		Endogenous	TRPV1	$10^{-6}$ - $10^{-4}$
2-APB		Synthetic	TRPV3 > TRPV1 > TRPV2	$10^{-5}$ - $10^{-3}$
Camphor		Plant-derived	TRPV3	$10^{-4}$ - $10^{-2}$
4 $\alpha$ -PDD		Synthetic	TRPV4	$10^{-2}$ - $10^{-5}$
5',6'-EET		Endogenous	TRPV4	$10^{-8}$ - $10^{-6}$
Menthol		Plant-derived	TRPM8	$10^{-5}$ - $10^{-3}$
Eucalyptol		Plant-derived	TRPM8	$10^{-4}$ - $10^{-2}$
Icilin		Synthetic	TRPM8 > TRPA1	$10^{-7}$ - $10^{-4}$
Cinnamaldehyde		Plant-derived	TRPA1	$10^{-5}$ - $10^{-4}$
Allylisoithiocyanate		Plant-derived	TRPA1	$10^{-5}$ - $10^{-4}$
$\Delta^9$ -Tetrahydrocannabinol		Plant-derived	TRPA1	$10^{-5}$ - $10^{-4}$
Allicin		Plant-derived	TRPA1 > TRPV1	$10^{-7}$ - $10^{-4}$

