



## DDI Toolbox Information Submission Form

**May we list your name & institution/company/affiliation in the online Toolbox listing?**

<input checked="" type="checkbox"/> NO – please list anonymously
<input type="checkbox"/> YES – you may list my name & institution/company/affiliation

**B: Tool Type Submitted**

Tool Type	
<input checked="" type="checkbox"/>	In vitro model
<input type="checkbox"/>	In vivo model
<input type="checkbox"/>	Candidate therapeutic
<input type="checkbox"/>	Drug delivery technology
<input type="checkbox"/>	Other _____

## C: Tool Type: Details

Check as many as apply

Relevant to Disorder	Screening Models	Therapeutic Focus within NF	Signaling pathway/target
<input type="checkbox"/> NF1	<b>In vitro models:</b>	<input type="checkbox"/> Plexiform neurofibroma	<input checked="" type="checkbox"/> Growth factor receptor modulator
<input checked="" type="checkbox"/> NF2	<input type="checkbox"/> Cell line (human)	<input type="checkbox"/> Neurocutaneous fibroma	<input checked="" type="checkbox"/> Ras-dependent
<input type="checkbox"/> Schwannomatosis	<input type="checkbox"/> Cell line (animal)	<input checked="" type="checkbox"/> Schwannoma	<input type="checkbox"/> Ras-independent
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Primary cells (human)	<input type="checkbox"/> Meningioma	<input checked="" type="checkbox"/> PI3K
	<input type="checkbox"/> Primary cells (animal)	<input type="checkbox"/> Optic Glioma	<input checked="" type="checkbox"/> Raf/MEK/ERK
	<input type="checkbox"/> <b>Mouse models:</b>	<input type="checkbox"/> Astrocytoma	<input checked="" type="checkbox"/> Rac 1/2/Rho
	<input type="checkbox"/> Transgenic	<input type="checkbox"/> MPNST	<input checked="" type="checkbox"/> PAK1
	<input type="checkbox"/> Human xenograft	<input type="checkbox"/> PNS Tumors - other	<input type="checkbox"/> mTOR
	<input type="checkbox"/> Other _____	<input type="checkbox"/> CNS Tumors - other	<input type="checkbox"/> PKCalpha
	<input type="checkbox"/> <b>Animal models – other:</b>	<input type="checkbox"/> Dysplasia/Bone Defects	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Zebrafish	<input type="checkbox"/> Cardiovascular Defects	
	<input type="checkbox"/> Drosophila	<input type="checkbox"/> Cognition/learning	
	<input type="checkbox"/> Other _____	<input type="checkbox"/> Pain	
		<input type="checkbox"/> Blood disorders	
	<b>Candidate therapeutics:</b>	<input type="checkbox"/> Other _____	
	<input type="checkbox"/> Antibody		
	<input type="checkbox"/> Peptide		
	<input type="checkbox"/> Small molecule/chemical entity/array		
	<input type="checkbox"/> Gene therapy		
	<input type="checkbox"/> RNA silencing		
	<input type="checkbox"/> Other _____		

Continuation Page

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Our in vitro model is set up to analyse primary non transformed human cells. We use primary human schwannoma cells and compare them to normal primary human Schwann cells. Our cell cultures are almost pure Schwann resp. schwannoma cell cultures. We have cultures of both cell types up and running and numerous frozen down ready to use. In addition to cyto-toxicity assays we use a variety of different read outs which are all established in the lab and readily available. These are analysis of proliferation, apoptosis, cell-matrix adhesion, cell-cell adhesion and cell migration. With the exception of apoptosis, which is only slightly reduced in schwannomas, these assays all give robust read outs. The migration assays is somehow time consuming as it takes up to 8 days to see a reproducible easily quantifiable difference between Schwann and schwannoma cells. Moreover we are experienced in analysing ruffling and cell spreading. We scaled down Western and pull downs and are thus able to analyse activity of small GTPase and of PAKs, PI3k, Akt, Ras-Raf-Mek-Erk pathway in our primary human cells. Furthermore we analyse the targeting of the signalling molecule to different cell compartments by use of confocal microscopy. Our set up consisting of a Zeiss meta 510 confocal laser scanning microscope in combination with a microinjection system allows us the localization of those proteins in fixed cells, time resolved life cell imaging in living cells and the direct application of inhibitors with simultaneous monitoring of the cells.

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