

## SEARCH HISTORY

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<b>Application Number</b>	PCT/US 19/63044
<b>Search Conducted By</b>	VT
<b>Search Approved By</b>	SV

<b>US/IPC Classifications Searched</b>	IPC(8)- A61K 31/155; A61K 31/337; A61K 31/496 (2020.01) CPC- A61K 31/155; A61K 31/337; A61K 31/37; A61K 31/496; A61K 31/573; A61K 31/7036
<b>Date Conducted</b>	22 JANUARY 2020 (22.01.2020)

<b>Documentation Searched</b>	PatBase, Google Patents, Google Scholar (without Patents)
<b>Search Terms Used</b>	pharmaceutical composition reverse thermal gelation material
<b>Date Conducted</b>	22 JANUARY 2020 (22.01.2020)

<b>Electronic Database Searched</b>	PatBase
<b>Files Searched</b>	<p>Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO</p> <p>Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW</p>
<b>Date Conducted</b>	22 JANUARY 2020 (22.01.2020)
<b>Search Logic:</b>	
Classification and Keyword Search:	
<p>Search 1: IC=(A61K31/155 OR A61K31/337 OR A61K31/496) OR CPC=(A61K31/155 OR A61K31/33 OR A61K31/37 OR A61K31/496 OR A61K31/573 OR A61K31/7036) (Results 38660)</p> <p>Search 2: 1 AND FT=(PHARMACEUTICAL AND GELAND REVERSE AND THERMAL AND GELATION) (Results 0)</p> <p>Search 3: 1 AND FT=(THERMAL W3 GELATION) (Results 45)</p> <p>Search 4: 3 AND FT=REVERSE (Results 37)</p> <p>Search 5: FT=(REVERSE W3 THERMAL) (Results 1574)</p> <p>Search 6: 5 AND FT=(THERMAL W3 GELATION) (Results 280)</p> <p>Search 7: 6 AND FT=(PHARMACEUTICAL) (Results 215)</p> <p>Search 8: 7 AND FT=(METHYLCELLULOSE) (Results 72)</p> <p>Search 9: 8 AND FT=DMSO (Results 29)</p> <p>Search 10: FT=((REVERSE W3 THERMAL) W3 GELATION) (Results 278)</p> <p>Search 11: 10 AND FT=TRANSITION (Results 187)</p> <p>Search 12: 11 AND FT=(METHYLCELLULOSE AND CITRATE) (Results 26)</p> <p>Search 13: FT=(METHYLCELLULOSE AND (DIMETHYL SULFOXIDE) AND CITRATE) (Results 7229)</p> <p>Search 14: 13 AND FT=((REVERSE W3 THERMAL) W3 GELATION) (Results 16)</p> <p>Search 15: FT=(VISCOSITY AND MODULUS AND GEL) (Results 32617)</p>	

Search 16: 15 AND FT=((REVERSE W3 THERMAL) W3 GELATION) (Results 41)

<b>Electronic Database Searched</b>	Google Patents
<b>Date Conducted</b>	22 JANUARY 2020 (22.01.2020)
<b>Search Logic:</b>	
<p>assignee:(Aiviva Biopharma, Inc.) About 6 results</p> <p>inventor:(shulin ding) About 9 results</p> <p>inventor:(Diane Tang-Liu) About 18 results</p> <p>"reverse thermal gel" About 62 results</p> <p>"reverse thermal gel" pharmaceutical About 51 results</p> <p>pharmaceutical methylcellulose "dimethyl sulfoxide" citrate About 20,855 results</p> <p>pharmaceutical methylcellulose "dimethyl sulfoxide" citrate reverse thermal gel About 8,646 results</p> <p>pharmaceutical methylcellulose "dimethyl sulfoxide" citrate reverse "thermal gel" About 2 results</p>	

<b>Electronic Database Searched</b>	Google Scholar (without Patents)
<b>Date Conducted</b>	22 JANUARY 2020 (22.01.2020)
<b>Search Logic:</b>	
<p>"reverse thermal gel" About 294 results</p> <p>"reverse thermal gel" pharmaceutical About 273 results</p>	

pharmaceutical methylcellulose "dimethyl sulfoxide" citrate  
About 1,510 results

pharmaceutical methylcellulose "dimethyl sulfoxide" citrate reverse thermal gel  
About 576 results

pharmaceutical methylcellulose "dimethyl sulfoxide" citrate reverse "thermal gel"  
2 results

#### Supplemental

<b>Electronic Database Searched</b>	Google Patents
<b>Date Conducted</b>	25 JANUARY 2020 (25.01.2020)
<b>Search Logic:</b>	

"reverse thermal gelation"  
About 377 results

"reverse thermal gelation" liquid  
About 332 results