

Topical immunotherapeutic agent for atopic dermatitis : FPR2-selective pro-resolving peptide ligand

Novacell Technology Inc.



IMMUNOLOGY	Phase 1																																														
Product Type	Peptide Product (7-mer, N-terminal lipidation)																																														
Indication	<ul style="list-style-type: none"> • Primary indication: Atopic dermatitis, Dermatitis, Atopic [MeSH term] (Target patients: Mild-to-Moderate) • Secondary indication: Psoriasis, Dry eye syndrome (eye drop) [MeSH term] (Target patients: Mild-to-Severe) 																																														
Target	Formyl peptide Receptor 2 (FPR2)																																														
MOA(Mechanism of Action)	<p>NCP112 is a FPR2-specific peptide ligand acting as a pro-resolving factor through FPR2 activation</p> <p>Resolution Dynamic & active process Restore homeostasis</p> <p>Anti-inflammation • Risk of infection ▲ • Inappropriate adaptive response</p> <p>Pro-resolution • Risk of infection (X) • Proper adaptive response</p> <p>PEPTIROID Code name: NCP112 Octanoylated heptameric peptide (MW: 1183.53)</p> <p>IMID Immune-Mediated Inflammatory Diseases</p> <p>[PEPTIROID] • PEPTIroid Resolving Overload of Immune/Inflammatory Diseases • Peptide candidate materials including NCP112 and immunotherapeutics being developed by Novacell Technology Inc.</p> <p>[Pipelines targeting FPR2]</p> <table border="1"> <thead> <tr> <th>Target</th> <th>Material</th> <th>Company</th> <th>Application [Phase]</th> </tr> </thead> <tbody> <tr> <td rowspan="7">FPR2</td> <td>PEPTIROID¹¹² [Peptide]</td> <td>Novacell Technology</td> <td>Atopic Dermatitis, Dry Eye Disease, Psoriasis, Ulcerative Colitis, Asthma (PC)</td> </tr> <tr> <td>Humanin [Peptide]</td> <td>CohBar Inc.</td> <td>Alzheimer's Disease, Atherosclerosis, Ischemic Stroke, Myocardial Ischemia, Type 2 Diabetes (PC)</td> </tr> <tr> <td>RTP-025 [Peptide]</td> <td>ResoTher Pharma</td> <td>Myocardial Infarction (PC)</td> </tr> <tr> <td>RTP-026 [Peptide]</td> <td></td> <td>Cardiovascular Disease, Inflammation (PC)</td> </tr> <tr> <td>TR-8 [Protein]</td> <td>Trio Medicines Ltd</td> <td>Crohn's Disease, Multiple Sclerosis</td> </tr> <tr> <td>Cmpd43 [Small Molecule]</td> <td>Bristol-Myers Squibb</td> <td>Heart Failure, Inflammation</td> </tr> <tr> <td>Small molecule</td> <td>Limulus Therapeutics</td> <td>Ischemia Reperfusion Injury (PC)</td> </tr> <tr> <td colspan="4">Reference: N-Formyl Peptide Receptor 2 – Pipeline Review, H2 2024 (Global Markets Direct)</td> </tr> <tr> <td>FPR2</td> <td>BLXA4ME [LXA4]</td> <td></td> <td>Gingival inflammation [1]</td> </tr> <tr> <td>GPR32</td> <td>15(R/S)-methyl-LXA4 [LXA4]</td> <td></td> <td>Eczema</td> </tr> <tr> <td></td> <td>BML-111 [LXA4]</td> <td></td> <td>Asthmatic Children [1]</td> </tr> <tr> <td>CMKLR1/BLT1</td> <td>RX10045 [Resolvin E1]</td> <td></td> <td>Dry Eye Syndrome [2]</td> </tr> </tbody> </table>	Target	Material	Company	Application [Phase]	FPR2	PEPTIROID ¹¹² [Peptide]	Novacell Technology	Atopic Dermatitis, Dry Eye Disease, Psoriasis, Ulcerative Colitis, Asthma (PC)	Humanin [Peptide]	CohBar Inc.	Alzheimer's Disease, Atherosclerosis, Ischemic Stroke, Myocardial Ischemia, Type 2 Diabetes (PC)	RTP-025 [Peptide]	ResoTher Pharma	Myocardial Infarction (PC)	RTP-026 [Peptide]		Cardiovascular Disease, Inflammation (PC)	TR-8 [Protein]	Trio Medicines Ltd	Crohn's Disease, Multiple Sclerosis	Cmpd43 [Small Molecule]	Bristol-Myers Squibb	Heart Failure, Inflammation	Small molecule	Limulus Therapeutics	Ischemia Reperfusion Injury (PC)	Reference: N-Formyl Peptide Receptor 2 – Pipeline Review, H2 2024 (Global Markets Direct)				FPR2	BLXA4ME [LXA4]		Gingival inflammation [1]	GPR32	15(R/S)-methyl-LXA4 [LXA4]		Eczema		BML-111 [LXA4]		Asthmatic Children [1]	CMKLR1/BLT1	RX10045 [Resolvin E1]		Dry Eye Syndrome [2]
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Differential Point	<ul style="list-style-type: none"> • First-in-class immunotherapeutic agent targeting FPR2, a validated molecular target to induce resolution of inflammation • Efficacy on characteristic symptoms of atopic dermatitis including skin inflammation, skin barrier disruption, and pruritus • Safety profile confirmed in Preclinical/Clinical study to meet unmet medical needs for long-term treatment as a topical agent • Convenient administration route for mild-to-moderate patients along with lower cost of treatment compared to biologics 																																														
Development Stage	Phase 1 (Application for Phase II clinical trial is scheduled on 1st quarter of 2023)																																														
Route of Administration	Topical (Dermal)																																														