COMPANY PROFILE – ALLTRANZ INC

AllTranz is a leader in the formulation and development of unique dermal drug products to treat a variety of disorders. AllTranz was founded in 2004 by Dr Audra Stinchcomb, an expert in the field of transdermal drug delivery, working with several pharmaceutical firms, the US National Institutes of Health (NIH), and the US FDA.

The AllTranz intellectual property estate is the result of two decades of research conducted by Dr Stinchcomb. Since inception, AllTranz has established its reputation as a leader in the field of drug formulation, prodrug development, and dermal delivery products.

AllTranz is currently developing four products utilising proprietary dermal delivery technology that exploits the company’s expertise in formulation, prodrug development, abuse deterrent systems, and microneedle formulations. AllTranz seeks to leverage its expertise by developing pathways to treat pain, osteoarthritis, cancer chemotherapy nausea and vomiting, and decreased appetite in AIDS and cancer patients, as well as an abuse-deterrent treatment for opiate addiction and pain to bring underserved patient populations new treatment options expeditiously.

NEW SOLUTIONS TO ASSIST TRANSDERMAL DRUG DELIVERY

Microneedles are micron-scale needles, usually in an array, that are used for transdermal drug delivery and controlled release. Microneedles mechanically open the outer layer of skin creating drug delivery channels. However, current technical limitations only permit relatively short-term release of drug into the body. AllTranz has developed a proprietary microneedle technology that allows for up to 7-days of sustained systemic release of small molecules or biologics that are otherwise unable to cross the dermal barrier.

Prodrug development involves the modification of existing chemical entities with strong clinical outcomes to produce important new chemical entities that are pharmacologically improved and necessitate new patent coverage. Scientists at AllTranz have discovered and designed prodrug delivery technology that facilitates transdermal delivery of drugs with up to 20-times greater penetration rates across the skin. These new drug compounds delivered transdermally demonstrate improved drug efficacy, patient compliance and reduced side effects.

In conjunction with prodrug development, AllTranz has developed a patented abuse-deterrent patch delivery system for addictive and abuse prone drugs. This novel technology combines an agonist that permeates the skin with a drug antagonist that is retained within the patch, preventing opioid abuse via injectable and buccal routes. The company is directing development efforts for its abuse deterrent patch toward a buprenorphine prodrug product for the treatment of moderate to severe pain, in addition to treating opiate and alcohol addiction.

PATENT & TECHNOLOGY PIPELINE

The AllTranz patent portfolio includes filings across all aspects of the transdermal delivery pipeline of gels, patches and microneedle systems, including new chemical entities, an abuse-deterrent patch system, and extended porosity following microneedle treatment, allowing for delivery of drugs over a seven day period.

AllTranz is utilising unique dermal drug delivery technology to develop its own products for broad market appeal, as well as partnering with other pharmaceutical companies seeking to leverage the AllTranz technology platform to improve delivery of existing drugs to form new chemical entities thereby extending patent franchises.

Currently, the company has nine issued patents and multiple pending applications including PCT, US, Japanese and Canadian patents (see Table).

RELATED PUBLICATIONS:

- Milewski M, Stinchcomb, AL, “Vehicle


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**Table: Summary of AllTranz Issued Patents**

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>EP 2222274</td>
<td>Methods and compositions for enhancing the viability of microneedle pores</td>
</tr>
<tr>
<td>EP 1895960</td>
<td>Transdermal delivery of cannabidiol</td>
</tr>
<tr>
<td>US 8,293,786</td>
<td>Prodrugs of cannabidiol, compositions comprising prod-rugs of cannabidiol and methods of using the same</td>
</tr>
<tr>
<td>US 8,227,627</td>
<td>Prodrugs of tetrahydrocannabinol, compositions comprising prod-rugs of tetrahydrocannabinol and methods of using the same</td>
</tr>
<tr>
<td>US 8,309,568</td>
<td>Transdermally deliverable opioid prodrugs, abuse-resistant compositions and methods of using opioid prodrugs</td>
</tr>
<tr>
<td>US 7,511,054</td>
<td>Transdermally deliverable opioid prodrugs, abuse-resistant compositions and methods of using opioid prodrugs</td>
</tr>
<tr>
<td>US 12/511,226 (number pending)</td>
<td>Transdermal delivery of cannabidiol</td>
</tr>
<tr>
<td>US 11/157,034 (number pending)</td>
<td>Transdermal delivery of cannabidiol</td>
</tr>
<tr>
<td>US 13/079,758 (number pending)</td>
<td>Abuse-deterrent opioid formulations of opiate agonists and agonist-antagonists</td>
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**Dr Audra Stinchcomb**

Founder & Chief Scientific Officer

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United States
Transdermal Drug Development can be pain-free

Partnership & Development Opportunities

- 7 Day continuous transdermal delivery of large and small molecule products
- Prodrug Development for Product Lifecycle Extension
- Optimized Microneedle Formulations
- Abuse-Resistant Patches

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