

# 國立臺灣大學技術行銷表

臺大案號: 12A-100831

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產品/技術名稱	<i>Lactobacillus kefiranofaciens</i> M1 (克弗爾粒分離乳酸菌株之保健功效)
發明人/單位	陳明汝 教授 / 動物科學技術學系
產品/技術說明	<ol style="list-style-type: none"><li>1. <i>L. kefiranofaciens</i> M1 為本研究室自行自克弗爾粒篩選。</li><li>2. <i>L. kefiranofaciens</i> M1 可顯著改善第一型過敏反應(以及氣喘疾病), 調整過敏個體體內上游細胞激素之平衡, 以及降低血清中後續抗體之反應, 如抑制 IgE 與特異性 IgE 之表現, 最終可減緩過敏個體症狀之發生。</li><li>3. <i>L. kefiranofaciens</i> M1 熱失活菌株同樣具有改善第一型過敏反應(以及氣喘疾病)的效果。</li><li>4. <i>L. kefiranofaciens</i> M1 具有保護腸胃道之功能, 可改善腸道發炎與出血之情況。</li></ol>
應用範圍	可製作成菌粉添加於發酵乳製品、食品、寵物飼料及動物飼料。 或直接以膠囊或菌錠做為保健食品。
產品/技術優勢	<ol style="list-style-type: none"><li>1. 已經經由體內體外過敏小鼠及氣喘小鼠試驗, 完整證實其抗過敏與氣喘反應之機能性。並已經釐清可能的機制。</li><li>2. 已經藉由 microarray 分析釐清乳酸菌對於影響腸道免疫系統之基因變化。</li><li>3. 本菌株同時具有保護腸胃道及抗腸道發炎之功效。</li></ol>
產品/技術 智財權保護方式	專利申請中

## Marketing Abstract of NTU's Invention Disclosure

NTU's docket no: 12A-100831

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<b>Title</b>	<i>Lactobacillus kefiranofaciens</i> M1
<b>Inventor (s)</b>	Ming-Ju Chen/Department of Animal Science and Technology, National Taiwan University
<b>Brief Description</b>	<p><i>L. kefiranofaciens</i> M1, isolated and identified from kefir grains in our lab, possesses anti-allergic activities. The mechanism of anti-allergic effects by oral feeding of the M1 is related to suppress IgE production because of up-regulation of the expression of <i>Cd2</i>, <i>Stat4</i>, and <i>Ifnr</i> leading to skewing the Th1/Th2 balance toward Th1 dominance, elevation of the CD4<sup>+</sup>CD25<sup>+</sup> Treg percentage and reduction of activated CD19<sup>+</sup> B cells. The heat inactivated <i>L. kefiranofaciens</i> M1 demonstrates the same anti-allergic effects as live strain.</p> <p>This strain is also able to strengthen the intestinal epithelial barrier <i>in vitro</i> and ameliorate DSS-induced colitis <i>in vivo</i>.</p>
<b>Fields of Application</b>	<p>Health food, such as</p> <ol style="list-style-type: none"> <li>1. Fermented dairy products</li> <li>2. LAB powder or capsule as food supplements</li> </ol>
<b>Advantages</b>	<ol style="list-style-type: none"> <li>1. <i>L. kefiranofaciens</i> M1 is isolated and identified in our lab.</li> <li>2. <i>L. kefiranofaciens</i> M1 is the first kefir strain showing both anti-allergic and anti-colitis effects.</li> <li>3. <i>L. kefiranofaciens</i> M1 demonstrates an anti-allergic effect in both OVA sensitized mice and asthma mice models. The possible anti-allergic effects are also determined.</li> <li>4. <i>L. kefiranofaciens</i> M1 could strengthen IEC barrier function <i>in vitro</i> and ameliorate DSS-induced colitis <i>in vivo</i>.</li> <li>5. The heat inactivated <i>L. kefiranofaciens</i> M1 demonstrates the same anti-allergic effects with live strain.</li> </ol>
<b>IP Right(s)</b>	Patent Pending