



# GENAERA

## Liquidating Trust

### Update to Unit Holders (former stockholders of Genaera Corporation)

July 2010

By late June 2010, the Trust held just over \$2.8 million in cash, 80% of which was distributed to the unit holders at the rate of 13 cents per unit (share). The remaining assets, less liabilities, contingencies and expenses will be distributed at the point the Trust can file a final tax return, ideally during 2010. Barring unforeseen events, the final distribution will likely be 2 to 3 cents per unit. The remaining work is minimal and is being largely handled by the Trust administrator.

With the liquidation process nearly completed, an overview of the Trust's activities is in order. This report is divided into three parts:

- A. Summary Overview: The state of Genaera Corporation (the "Company") when the Trust took over and the Trustee's actions are summarized on pages 1 and 2 below.
- B. Detailed Report: The Trust's activities are reported in chronological order from June 13, 2009 to present on pages 2 through 9.
- C. End Note on IL-9 License Valuation: The terms of the 2001 license between the Company and MedImmune LLC, as well as the underlying sub-license from the Ludwig Institute for Cancer Research, remain confidential, as do most of the negotiations and names of some parties who negotiated with the Trust. Some former stockholders have expressed a desire to for more information regarding the difference in that purported valuation of the license of \$33 million in 2007 and the \$2.75 million paid by Ligand Pharmaceuticals and Biotechnology Value Fund in May 2010. Using only publicly available information, we will reconcile those two valuations on pages 10 through 12.

#### **A. Summary Overview**

On June 12, 2009 Argyce LLC was named Trustee of the Trust effective upon the filing of the Company's Certificate of Dissolution. At that moment all the Company's assets and liabilities were transferred to the Trust. Under Delaware law the Trust became the successor in interest to the Company's contractual and regulatory obligations.

The Proxy Statement for the June 4, 2009 Special Meeting of Stockholders projected "Estimated Distribution to Stockholders" the "High" estimate of which was less than two cents per share. The "Low" estimate was one fifth of one cent per share.

#### ***The Situation***

- \$1.2 MM cash/liquid assets; \$0.9 MM liabilities (Net cash: \$0.015-\$0.02/share)
  - Largest asset: Out-licensed phase 2 program (IL-9 antibody) then on "clinical hold"
  - One development program: Phase 1 anti-obesity aminosterol (MSI-1436).

- Out-licensed topical antimicrobial (pexiganan): licensee/partner had ceased development.
- Management had approached 90+ prospective partners and the Company's advisors approached 43 potential purchasers/partners without closing a deal.
- All valuable equipment previously sold; \$50,000+/month building lease plus equipment leases and unbudgeted patent annuities.

### ***Trustee's Actions***

- Secured assets, particularly building, servers and documentation; organized electronic and physical records for marketing and sale of program assets, regulatory compliance and removal.
- Three layers of value generation:
  - Triaged assets: Assets to sell quickly vs. assets to market and negotiate.
  - Managed liabilities: rejected/settled disputed claims, paid creditors.
  - Reduced run-rate: Quickly settled real estate and equipment leases cutting facilities costs from \$52,000/month to less than \$2,000/month; hired local professional firms instead of national firms for some professional services and used Argyce personnel.
- Legal/Compliance/Regulatory: Satisfied securities law and market regulations, obligations to employees, building decommissioning requirements and interacted with regulatory entities including, but not limited to: SEC, NASDAQ, FINRA, IRS, FDA, EPA, DEP, NRC, DEA, local government, OLAW, township government; a criminal subpoena (unrelated to management, Company or Trust), US Customs and a state pharmaceuticals regulator.
- Completed outstanding tax filings for Company and 401K plan; fulfilled Trust's Federal and State tax obligations for valuation, beneficiary information and filings.
- Provided communications to unit holders regarding the liquidation, specific tax preparation and filing information, as well as updates via mail and on the website.
- Marketed and ultimately sold licensor's interest in Interleukin-9 ("IL-9") antibody in development at MedImmune LLC for asthma (phase 2b): developed new market estimates, valuation models and marketing materials; marketed to royalty investors, alternative investment specialists; conducted lengthy on-again, off-again negotiations with multiple parties, addressed sub-licensor parameters; closed the sale to two parties, a hedge fund and a public biotechnology company.
- Completed interim distribution to former stockholders of 13 cents per unit (per share); final distribution of 2 to 3 cents per unit anticipated.

## **B. Detailed Report**

### ***1. June, 2009 and Initial Findings and State-of-Play at Trust Formation***

On June 12, 2009 the Trust took over cash, other assets and liabilities amounting to initial cash of \$250,000 to \$300,000. On the one hand, the Company's books included some disputed liabilities that provided opportunities to increase available cash. On the other hand, impending annuities to maintain patents were significantly larger than projected. A few claims came out of the woodwork relating to leased equipment issues, a local tax dispute, etc. Several pending small equipment sales initiated by management required our immediate attention. These were restructured or rescinded to provide better outcomes for the Trust. The vast majority of the Company's physical assets were sold prior to dissolution of the Company. As such, the proceeds of those sales were already reflected in the cash received by the Trust on June 12<sup>th</sup>.

The Company's remaining drug development assets consisted of:

- a) the abovementioned family of aminosterol compounds, of which MSI-1436 for obesity had been a principle area of focus of the Company in recent years and squalamine (MSI-1256), a compound previously advanced to early phase 2 studies in oncology and to phase 3 studies for wet macular degeneration, before development efforts were abandoned;
- b) the licensor's interest in an IL-9 antibody for asthma being developed by AstraZeneca subsidiary MedImmune (the "License") – advanced to phase 2 studies but placed on "clinical hold" in August 2008; and
- c) the licensor's interest in pexiganan, an anti-microbial topical treatment that the Company had advanced through two phase 3 studies in 1999 without receiving marketing approval and which the Company had outlicensed for further development in October 2007.

The IL-9 asset constituted virtually the entire value of the Company's drug development portfolio. It was also the only asset that could increase in value in the hands of a new buyer without the buyer incurring substantial development costs. Maintaining the IL-9 licensed patents required relatively small annual payments. The best hope for generating a distribution for former stockholders was to sustain the Trust at minimal cost until a sale of the IL-9 could be completed.

As the Company's dissolution was being finalized, Company management was approached by Ohr Pharmaceuticals to buy certain drug development assets, particularly the family of aminosterol compounds that included both squalamine, which was of particular interest to Ohr, and MSI-1436.

The Company's offices and laboratories were housed in a single building, the lease for which continued through November 2009 (at ~\$50,000/month) by its terms. A settlement was reached with the landlord for a cash payment plus the completion of major HVAC repairs, numerous repairs and clean up as required under the lease. The Trust agreed to vacate the premises in August 2009. The net savings realized for the Trust amounted to approximately \$100,000. While a great deal of work had been done to clear the building, decommission it and address administrative issues by management, a great deal of work remained to be completed.

## **2. *July-August 2009***

On July 6, 2009, we terminated the Company's existing agreements with strategic advisors who had been retained to sell certain of the Company's drug development assets. Those agreements permitted termination without cause.

### ***Sale of Aminosterols***

From the Ohr proposals, the Trust negotiated and executed a term sheet on July 8, 2009 to sell the aminosterols for \$200,000 and received a \$50,000 deposit at that time. Closing the sale quickly eliminated \$100,000 to \$150,000 in near-term annuity and prosecution costs for the aminosterol patents and relieved us of near-term decisions as to which patents to keep and how to pay for them.

Given the previous hopes for development of MSI-1436, the Trust's diligence included evaluating the Ohr sale against starting a new marketing effort for the asset. We reviewed records as to the 40+ firms contacted (which did not include Ohr) by the Company's financial advisors seeking potential partners or buyers. We also reviewed the Company's contact list from the 90+ firms the Company had contacted. We chose between 15 and 20 leads the Company had designated as promising and wrote to each of them about the available assets. We received no positive responses. No buyers or inquiring parties surfaced who were willing to execute a binding term sheet with a \$50,000 deposit as Ohr had provided. The sale to Ohr closed on August 21, 2009. It is our understanding that Ohr is developing a treatment for wet AMD that uses squalamine in conjunction with a new proprietary technology.

### ***Administrative and Facility Matters***

The settlement with the landlord was finalized in August. All of the Trust's obligations, including utilities, insurance and maintenance terminated on August 31 when we vacated the building. Our administrator arranged for the proper disposal of hazardous chemicals still in the building, facilitated completion of the radiation decommissioning, supervised contractors completing necessary repairs to the building and substantial HVAC work required by the lease.

Over a six week period, we segregated drug development assets for sale and organized all significant remaining paper documentation (400+ boxes) and the Company's servers containing its electronic information in advance of the move to temporary Trust offices. We relocated to space in Southampton, PA that the Trust rents for ~\$1,000 per month. During this time, we also addressed finance and accounting matters including all insurance issues, termination of the 401k plan, open issues relating to compliance with COBRA, transfer of the books into liquidation GAAP, a required mailing to all unit holders, a revision of the website to be a communications vehicle for the unit holders, completion of the Geniera tax return, mailing of 1099s and closing out all accounting matters for the Company.

### ***3. September – December 2009***

As the IL-9 license interest was the Company's largest asset, we focused on sustaining the Trust until the IL-9 license interest could be sold. Clinical hold was lifted in mid-July without any public announcement. MedImmune announced a new phase 2b clinical study at the end of August 2009. We established communications with MedImmune who provided us with confidential updates as to clinical information, planned publications and the like, as per the communications provisions of the License.

### ***Preparing to Sell IL-9***

With clinical hold lifted we undertook three sets of actions:

- 1) review and understand the history of discussions between prior management and prospective buyers who seemed most seriously interested in the asset;
- 2) prepare non-confidential and confidential marketing packages including credible estimates of the potential market for the IL-9 antibody as an approved product and update related financial modeling; and
- 3) offer the asset to new, prospective purchasers and improve our negotiating position with parties previously interested in the asset.

1) History of Geniera management's discussion with prospective purchasers

In the preceding three years the Company's management received proposals to acquire all or part of the IL-9 asset from two parties one of whom presented multiple proposals. For the sake of confidentiality we will refer to them as "PB-1" (for Prospective Buyer 1) and "PB-2". PB-1 contacted the Trust in September 2009. We also opened communications with PB-2 in September 2009.

In 2007, PB-1 had signed a confidentiality agreement and proposed a deal structure involving purchase of a fraction of the IL-9 asset but also including purchase of securities, a secured loan and other features leading adding up to a significant total investment. After that proposal fell through, discussions started and stopped again ending in May of 2009.

PB-1's interaction with the Trust began with reference to and discussion about all of the prior negotiations. The Trust had on again-off again negotiations with PB-1 throughout the remainder of 2009 involved numerous iterations of financial models developed as described in subsection 2 below and as rebuttals to PB-1's own modeling.

Every valuation of the IL-9 asset in the Company's records relied on sales assumptions from a September 2007 Rodman and Renshaw analyst report ("R&R Report") initiating coverage. The R&R Report assumed a product launch in 2010 based on input from the Company management and valued the IL-9 asset at \$33 million. We reverse engineered the numbers behind PB-1's complex 2007 proposal to find that it reconciled to the R&R Report valuation of \$33 million. That valuation, like PB-1's initial proposal, was based only on publicly available information using estimates as to agreement terms and as such assumed inaccurate royalties, inaccurate milestones and approval in 2-1/2 years. At the end of 2009, MedImmune had just started a 320 patient phase 2b study. This indicated a much longer period will be required to complete phase 2 and 3 studies, a Biologics License Application (BLA) and FDA review, placing the possible approval date between 2015 and 2020 in our estimates.

PB-2 responded indifferently to the Trust's overtures. As described in subsection 3 below, we were actively offering the asset to a variety of other parties. Interactions with PB-2 and preparations for those interactions were both important and time consuming, but none of those details can be disclosed publicly.

2) Preparing marketing materials and market estimates

In September, we set out to prepare non-confidential and confidential executive summaries for IL-9. We combed the Company's servers for marketing materials and for credible estimates of the potential asthma and penetration for the IL-9 antibody but found nothing suitable. We felt the modeling in the R&R Report needed substantial updating for a variety of reasons. *[However, see the End Note on IL-9 license valuation to better appreciate the R&R Report methodology.]*

We briefly retained a pharmaceutical industry consultant who had access to the appropriate data to provide us credible market data and also direct us to usable sales projections for Xolair™ as a reference product. We then did extensive modeling leading to marketing materials with credible

estimates of the asthma market for an IL-9 antibody and 10-year projected sales of Xolair. The modeling allowed us to make some headway in terms of value in negotiations. The non-confidential version of those marketing materials is still available on the Genaera website.

The largest upside for the IL-9 antibody, as described in our marketing materials, originates from the perceived role of IL-9 in the asthma inflammatory cascade. Xolair, a hugely successful drug, is approved for moderate to severe asthmatics only, who meet screening levels of IgE, which may be as little as half of that patient population. If the IL-9 antibody works for asthma, it should not have that limitation. At least one MedImmune press release from earlier years quoted an executive in MedImmune's clinical group, forcefully and eloquently explaining this point.

Nevertheless, parties with whom we negotiated, cited similar authorities for the premise that an IL-9 antibody would only work on a subset of Xolair users, based on the proposition that the antibody would have other mechanistic limitations as to some portion of prospective users.

When negotiations were focused on modeling, as opposed to haggling over the price, the probability of approval became a critical point of dispute. Citing published sources for averages of outcomes from clinical trials, one can credibly argue that the probability of approval for the IL-9 asset is about 28% (60% probability of phase 2b success times 60% probability of phase 3 success times 80% of approval thereafter). [*See End Note on IL-9 valuation.*]

### 3) Discussions with the prospective purchasers

Early on we approached knowledgeable, friendly investors who, though unlikely to buy IL-9, would provide constructive feedback as to how the asset would be perceived in the investment community. We then proceeded to a broader marketing effort. By mid-December we had approached all of the investment firms we could find with a history of buying royalty streams. We spoke to senior people, and in some cases founders of the funds, who attempted to provide us with other potential contacts after they deemed the asset too small and too early for their own funds. We also spoke with the alternative investments group at a major US investment bank who forwarded our materials to prospective investors. We approached a number of hedge funds and made presentations to the few parties who would entertain the discussion. From all our efforts, only a handful of firms went so far as to sign a non-disclosure agreement with the Trust.

The Trust's vulnerabilities included the perception of a near-term need to sell at any price. Against that perception we posted a report on the website in August 2009 explaining the IL-9 asset to the extent of public knowledge and postulating a scenario of the Trust continuing indefinitely to collect royalties and other revenue. However, we were also keenly aware innumerable small biotechs have collapsed holding out too long for a deal that never comes. As a back-up plan, we made initial contacts to sell an interest in the asset for a small amount of cash to sustain the Trust until the IL-9 antibody entered phase 3 studies and could be offered for sale at a higher value – or had failed completely. We ultimately received a term sheet from PB-1 for a sale with an up front payment and capped contingent future payments. While the total price, including future contingent payments, was significantly higher, once the payments were adjusted for time, probabilities (even very optimistic ones) and cost of continuing the Trust, the current value was only ~\$2 million. The costs of waiting, the probability adjusted value of the phase 3

start milestone and an absence of assets to distribute to unit holders near term made this option unappealing though feasible.

By December 2009, we concluded that PB-1 and PB-2 still did not exhibit sufficient momentum to run an auction-like process and no other significant interest had emerged. We resolved to offer both IL-9 and pexiganan for sale in a press release in January 2010 around the time of the JP Morgan Healthcare Conference.

In the meantime, we also prepared a non-confidential executive summary for pexiganan, a copy of which is still on the website. We discreetly started soliciting interest in that asset even though it was not conveyed to the Trust until the last week of December 2009.

### ***Taking Back Pexiganan***

By the terms of the License Agreement between the Company and MacroChem Corporation executed October 1, 2007, the Company's rights to pexiganan should have been conveyed to the Trust and all assets returned on October 1, 2009 by Access Pharmaceuticals, the Company that had acquired MacroChem. We began the process of recovering pexiganan in September 2009. The Trust regained control of the pexiganan assets and took delivery of all the physical records and materials at the end of December 2009.

### ***Other Administrative Matters***

We utilized the services of a local accounting firm, as opposed to a national accounting firm for tax advice and tax return preparation to reduce the Trust's costs. We also procured a third party valuation to create the Trust's opening balance sheet for tax purposes. A valuation above the Company's market cap (\$4.2 million) on June 11, the last day the stock traded was not appropriate and did nothing for unitholders. A lower valuation, though justified, might attract IRS scrutiny. Thus the valuation amounted to an allocation of value among intellectual property, \$3.7 million of which was allocated to the IL-9 asset. The appraiser used the optimistic license revenue streams believed by the market and discounted that larger number for the compound being on clinical hold.

A long shot but low cost plan to expand patent life and coverage relating to IL-9 had begun at the Company in 2008. We continued those efforts in response to optimistic feedback from patent counsel, locating and providing historical data to counsel to support those efforts. In early 2010, after office actions in several countries, outside counsel's optimism faded and we discontinued those efforts.

We wrapped up a variety of pending matters relating to materials stored at third party locations, open insurance issues, including some refunds and a variety of similar matters. We co-located the servers and outsourced IT services with a view that the servers can be maintained at minimal cost through whatever twilight period of the Trust's existence remains and sold from that location.

#### **4. *January – May 2010***

On January 11, 2010 the Trust issued a press release offering IL-9 and pexiganan for sale. We had some inquiries, principally for pexiganan but little new activity on IL-9. The ostensible end date of the offering in the press release was February 12, 2010.

##### ***Selling Pexiganan***

Networking and the press release generated interest in pexiganan from a few small specialty pharma companies and entrepreneurs, several of which signed confidentiality agreements. In the end, the only serious bidder to emerge was Dipexium LLC under the leadership of Robert DeLuccia, formerly of MacroChem Corporation, who had prior experience with the compound. We received a \$50,000 down payment from Dipexium plus a future milestone and royalties, with an option for Dipexium to buy out the license from the Trust between now and 2012. In the course of sale asset, we found the level of due diligence and investigation required was simply too challenging an undertaking for parties new to the compound.

##### ***Selling IL-9***

In February 2010 we received a term sheet from an interested party we had spoken with in 2009 and began intense negotiations. We used our financial models to push the value from their models up in increments based on points they agreed to be true during negotiations. In March we entered into an exclusive negotiation with another party we had spoken with in 2009 based on a more appealing proposal. That bidder did not come to the point of closing when exclusivity expired on March 31, 2010. April 2010 began with a new and superior term sheet from our initial interested party. It was exclusive for eight to 10 days at a time throughout April, but complications prevented closing. In late April, the second interested party indicated they wanted to close the transaction as we proposed it to them in early March. The process in May began with additional iterations, an additional party and simultaneous discussions with multiple parties. On May 18, the asset was sold to Ligand Pharmaceuticals and Biotechnology Value Fund upon receipt of a \$2.75 million wire transfer.

##### ***Additional Administrative Matters***

In 2010 we completed tax returns, distributed tax return information to all unit holders, and continue to answer unit holder questions regarding tax information resulting both from their prior ownership of the Company stock and their unit holder status in the Trust. In June, the Pharmacia Biotech Prep Scale HPLC system, an asset left over from early pexiganan production, was sold.

#### **5. *Distribution and Wind-Down***

By now, unit holders have received the 13 cent per unit interim distribution. We plan to prepay to keep the website up through tax return preparation season but hope to close the Trust during 2010. We are currently ascertaining our records retention and other requirements.

Unlike a liquidating trust in bankruptcy, which is definitely terminated by a court order, there is a twilight period during which activities are quite limited but relatively minor issues will need to be closed out in an orderly fashion rather than simply cut off. Barring disclosure of a meaningful

claim or issue, we hope to distribute the vast majority of the remaining assets when the final tax return has been prepared and filed.

As things stand, we anticipate keeping the Trust office and the servers running at least through September, the monthly cost of the office/storage space and the out-sourced IT being ~ \$2,500/month.

### **Conclusion**

Looking back on the liquidation process, we note the following:

- Working with minimal cash and an incomplete estimate of funds needed for the liquidation process, Argyce was able to minimize costs and deal with multiple unanticipated issues.
- Argyce divested the assets and grossed proceeds of nearly \$3 million, the vast majority of which will find its way to the unit holders.

It has been our privilege to serve as the Trustee for the Genaera Liquidating Trust. We would like to extend our sincere thanks to the former Board of Directors and to the unit holders for their patience during this period of transition.

The Genaera Liquidating Trust  
By: Argyce LLC

\_\_\_\_\_/s/\_\_\_\_\_  
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**See End Note on Next Page**

### **C. End Note on IL-9 License Valuation**

#### **Background**

In April 2001, Genaera Corporation (“the Company”) entered into a collaboration agreement with MedImmune, Inc. (“MedImmune”) to develop and commercialize therapies related to the Company’s IL-9 program. The intellectual property licensed to MedImmune under the collaboration agreement includes patents, know-how and materials owned by the Company or licensed by the Company from the Ludwig Institute for Cancer Research (“LICR”). Since April of 2001, MedImmune has utilized those materials, know how and patents to develop a drug candidate it refers to as “MEDI-528” as a therapy for asthma. In doing so MedImmune developed patents, know how and materials of its own. MedImmune, which is now a subsidiary of AstraZeneca, had progressed MEDI 528 into phase 2 clinical studies. In August 2008, MedImmune voluntarily suspended its three phase 2 clinical studies. The studies and underlying IND had been placed on clinical hold, and remained so until July 2009.

In spite of the clinical hold status, conversations with knowledgeable people in the pharmaceutical and investment communities in May and June of 2009 indicated that this program was far and away the most valuable of the Company’s programs. In late 2009, MedImmune commenced a 320 subject phase 2b study.

The collaboration agreement provides that its financial terms may not be publicly disclosed. As the Company’s successor in interest, the Trust is also bound by those terms. Similarly, amounts payable to the sublicensor, LICR, remain confidential. In recent years, the Company typically referred to “up to \$54 million in milestones, plus royalties.” This phrasing originated from a joint press release in April 2001 referencing \$55 million in milestones \$1.0 million of which was subsequently received. The Company’s only public disclosure of royalty rates indicated that the license included provisions for “high single digit and low double digit royalties”. While we can not state any other numbers from the collaboration agreement we can provide insight into the factors affecting valuation of this asset using public information.

A redacted version of the collaboration agreement was filed with the SEC in April 2001. It can be viewed at <http://www.sec.gov/Archives/edgar/data/880431/000103605001500576/dex104.txt>. Most numbers and some key provisions are replaced with “\*\*\*”. Section 6 sets forth three potential royalty rates applicable to sales in any individual country of the world depending on the level of sales in that country if the product is covered by a patent controlled by the Company. A fourth and minimum royalty applies if no claim of a patent controlled by the Company covers the product in a specific country in question at the time of the product sales.

A number of patents are licensed under the collaboration agreement, but one Genaera patent provides broad coverage of IL-9 antibody therapy. That patent expires August 23, 2016 with, as referenced above, corresponding impact on the level of revenue payable pursuant to the licensor. Additionally, royalty rates are adjusted if MedImmune owes royalties to any third party on the final product or if the product is sold in combination with a product not covered by the collaboration agreement. Section 6.10 of the collaboration agreement lists 13 milestones, two of which have occurred. The events, the payment amounts and a key overarching condition to each payment have been redacted.

The agreement terms described above and resulting variability are typical of drug candidate licenses. Of course the largest single determinant of the program's value is whether or not MEDI-528 progresses through phase 2 and 3 studies and becomes approved for sale by the FDA. Thus variables driving the value of the licensor's interest in the collaboration agreement include:

- Successful completion of phase 2 and 3 studies;
  - Timing of completion of phase 2 and 3 studies;
  - Approval by the FDA and by counterparts in the EU, Japan and other countries;
  - The date each approval occurs;
  - Rate of sales growth in each country;
  - Volume of sales at the peak level in each country and subsequent rates of sales decline;
  - Competition in each country approved;
  - Patent coverage end date in each country;
  - The discount rate used to compute present value of future payments (i.e. cost of capital); and
- Other issues that can not be publicly disclosed.

For a prospective purchaser, valuation of the Company's interest in the collaboration agreement starts by modeling assumptions for all these variables in combination with actual royalty rates and milestones. Whether the modeling is a spreadsheet of probability adjusted present values of possible royalties and milestones (what the Trust and our prospective buyers did) or something more sophisticated like a Monte Carlo simulation or a real option model, the idea is to compute a risk adjusted single value for an almost infinite number of scenarios generated by multiple probabilities and numerous variables.

### **Valuation**

For all of the variables identified above, in the Trust's discussions with prospective purchasers, the dominant factors were probability of FDA approval and the projected sales potential for an IL-9 antibody as an approved product.

We cannot disclose details of negotiation given to us in confidence, but we can describe the sorts of probability figures typically used in these sorts of valuations and cited in discussions. Statistics from an often quoted Nature article can be used to justify an 18% probability of approval computed as follows: 40% (phase 2 success probability) times 60% (phase 3 success probability) times 77% (probability of approval) equals 18.5%. If the odds for phase 2 are raised to 50/50, the probability of approval rises to 23%, raising the probability adjusted value of a phase 3 start milestone by ~ 25% and the probability adjusted value of the entire royalty stream by nearly 30%. In the course of discussions in which the 40% phase 2 probability was cited to the Trust, we pointed out that drug candidates typically need more than one phase 2 study and a 40% total probability equates to two studies with individual probabilities of 63% (square root of 40%). In fact, some of the best information we could gather including conversations with very experienced pharmaceutical experts suggested a 60% average probability for a phase 2b study amounting to a 28% overall probability (.6 times .6 times .8).

The presence of milestones mitigates some of the licensor's risk e.g. a 60% probability of phase 2 success equates to a 60% probability of receiving a phase 3 start milestone and recovering part of the investment. By the same logic an NDA filing milestone has a 36% probability, still higher than the probability for the royalty stream but also farther into the future and at higher risk.

In reality, anyone evaluating the expenditure of future development dollars on a drug candidate or any investor considering purchasing such a program (or indeed a company whose principal value includes such programs) will attempt to apply scientific and clinical judgments to better evaluate these probabilities. The firms that bought the IL-9 interest and most of the firms with whom the Trust spoke possess the experience and sophistication to evaluate and appropriately price a high risk high return drug development asset. All the probability figures cited above are averages or estimates from historical evidence. Price negotiation included assertions from both sides as to why the probabilities should be deemed higher or lower than “average” for this asset.

An even larger factor to valuation of the IL-9 licensor’s interest may be the estimated portion of moderate to severe asthma sufferers who could be treated with an IL-9 antibody. Because of IL-9’s role in asthma, the potential population of patients actually could be nearly twice the number of patients for which Xolair is appropriate. HOWEVER, other mechanisms of asthma may compensate for IL-9 and once the potential for patients developing resistance to the therapy is better understood (potentially the effects of other cytokines increase to compensate for the down-regulation of IL-9) the population of potential patients could turn out to be much smaller than Xolair. This was obviously a key point of contention by prospective acquirers of the IL-9 licensor interest.

The recurring refrain from prospective purchasers was that MedImmune would have the best access to information to evaluate the drug’s sales potential led prospective purchasers to make their best guess as to how MedImmune/AstraZeneca might value the Company’s licensor interest and keep their bidding within striking distance of that number. To the extent anyone can estimate the potential limitation of an IL-9 antibody, MedImmune has the best information to do so – information that may not be fully discernable from public information until phase 3 studies are well along, if then.

In the preceding detailed report, we described valuation prepared by Rodman and Renshaw in September 2007 (the “R&R Report”) that used only publicly available information, non-confidential guidance from the Company management and estimates of the moderate to severe asthma population to prepare a valuation of the Company’s licensor interest in the IL-9 antibody program. The R&R Report projected sales and corresponding Genaera licensing revenue from royalties and milestones over a 10 year period commencing from product launch. That valuation resulted in a value of \$33 million in September 2007 assuming, among other things, a launch in late 2010.

The R&R Report did not specifically estimate probability of approval. Instead the analyst estimated Genaera’s license revenue in the year sales were projected to peak (some eight years after the product launch), multiplied it by five and discounted that amount back to a present value using a 40% discount rate (p. 31 of the R&R Report, published 9/4/07). After the sale of the IL-9 license interest closed, we repeated this calculation using the R&R Report estimates for sales, market size and penetration and applied the actual royalty rates, actual milestones, adjustments for other provisions in the license and assumed a product launch one year earlier than the last projection provided to the Company in confidence. That calculation came out to \$2.51 million, or 90% of the actual price received. However, in this calculation with actual numbers and better timeline estimates, altering the peak year sales or launch year assumption by a single year would change the resulting value by 25% to 50%. We felt this made the methodology too volatile to be persuasive on its own, though the methodology (when infused with accurate assumptions) proved nearly 90% accurate after all.