

The Effects of RxGenesys,  
**an enhanced Stem Cell skin care system,**  

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on the reduction of facial fine lines,  
facial pore size & complexion quality  

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Study Date: 1/22/14 – 7/15/14

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# ABSTRACT

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Stem cell extracts have been studied for several years and are known to have beneficial effects on the skin's natural collagen and elastin production levels. We theorized that RxGenesys, a new skin care line with stem cell extract components in its formulation, could improve skin quality. In a prospective study, we tested the effectiveness of RxGenesys and its RxGen stem cell technology, on the reduction of facial skin fine lines (rhytids), pore size and the improvement of the appearance of facial complexion. We registered into a study fifty test subjects between the ages of 30 and 85, of all Fitzpatrick skin types and varying ethnicities; then proceeded to record the changes in their skin over a three month period, while subjects applied the RxGenesys skin care system twice per day. Subjects were photographed in a standardized fashion and asked a set of questions before starting the study and then periodically at each new visit, while using the RxGenesys skin care system over a period of 3 months. The patients' photographs and questionnaires were analyzed and then reviewed by a team of plastic surgeons. The data showed a subject and doctor perceived, 83% reduction (improvement) of fine lines, 86% reduction of pore size and 86% complexion improvement of facial skin by the end of the twelfth week of the study. RxGenesys has shown to improve skin quality when studied under standardized conditions, across 50 test subjects.

# INTRODUCTION

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Skin care was first developed as a way to keep skin conditioned, hydrated and moisturized. More recently the process of damaging the skin to begin a healing process, which leads to eventual healed, younger appearing skin, has become a more popular skin care treatment method. This is seen in facial chemical peels, laser treatments and skin care products that damage and strip the skin.

The new horizon in skin care is to stimulate the skin's natural regeneration process. We believe this next major advancement in skin care has already been discovered by the team of scientists who has developed RxGenesys skin care line, using RxGen cellular technology, the process by which RxGenesys is made.

Aging is known to occur when skin stem cells start losing their capacity to regenerate and sustain normal vital levels, hence it is believed that the key to stop or reverse aging is to keep the skin's stem cells regenerative/healing capacities at an optimal level.<sup>[1,2]</sup>

The skin care product RxGenesys is unique because it contains a stem cell matrix which includes the messengers of healing<sup>[3]</sup>. The mechanism of skin and soft tissue healing has been well studied by many, and the process of aging and collagen loss in the skin has also been very well documented<sup>[4]</sup>. When a wound develops, the process of healing includes multiple pathways in which stem cells in the body stimulate, regulate and close the wound to the level of new skin formation. These stem cells produce components which induce new collagen and new capillary formation to heal all wounds<sup>[5,6]</sup>. A new, proposed way to treat the skin is to harness and use this same healing pathway to improve the skins quality, before and as we age.

RxGenesys is a new skin care product that captures this stem cell pathway to renew the skin. The RxGen technology uses adult human stem cells, which are treated in a patented highly technical, complex and multi-step laboratory process to create an active stem cell cytoplasm. These stem cell by-products are then isolated, concentrated and placed into RxGenesys skin care product line.

RxGenesys skin care treatment system consists of four separate products that all have, in differing concentrations, adult stem cell components within them and an active shelf life of two years.

# INTRODUCTION

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The skin care products are used in a twice-a-day regimen with each set of four products, lasting three months. This includes a skin cleanser soap called RxCleanser, a skin moisturizer called RxMoisturizer, a thicker cream, found in this study to reduce pore size and tighten skin, called RxIlluminator, and lastly a treatment serum called RxVital. The serum product carries the greatest concentration of stem cell extracts because of its serum carrying format, allowing greater concentrations of the active component.

**RxCleanser** is used both morning and night to remove dirt, excess oil, and makeup or sun block from the facial skin, without the use of abrasive components. It is specially formulated to be at the skin's natural pH and has a green tea extract known in the medical and medicinal realm to be soothing to the epidermal and dermal layers of the skin<sup>[7,8]</sup>.

**RxMoisturizer** which is used both morning and night, has quick absorptive qualities and hydrates the skin without leaving an oily residue. It is a deep skin layer-penetrating carrier of the stem cell extracts, produced by RxGen technology, that is considered to improve skin elasticity and tone.

**RxIlluminator** is used only in the morning to prepare the skin by tightening the pores for makeup and/or sunblock, which both can damage the skin by intruding into open pores. Also due to its increased viscosity and thickness, it seems to reduce puffiness of fine skin around the eyes and face commonly seen after sleeping.

**RxVital** is thought to be the most important key component of the Rxgenesys skin care system. It is the product with the highest concentration of stem cell factors to treat the delicate facial skin. For this study, it was used once a day at night, as a facial overnight treatment of stem cell components. RxVital is considered, possibly, to have the highest concentration of active stem cell extracts in any skin care serum, currently available in the U.S. market.

We wanted to test this system of four skin care products in a clinical study with a large group of subjects across a set time span. The application of the products was standardized, as well as the subjects' geographical location, exposure to environmental agents, such as humidity, ambient temperature and latitude of ultra-violet ray exposure. The conditions for evaluating the test subjects included lighting, camera exposure time, and computer skin analysis were all kept constant across all subjects. We believed we would find a statistical improvement of the test subjects' skin quality, across multiple skin characteristics based on the standardized use of this stem cell component enhanced product when evaluating our pre-use vs post-use results.

# METHOD

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## **I. Choice of Participants for Study**

The subjects were chosen solely on their willingness to participate in this study and in a randomized fashion. They had variations in their histories of sun exposure, number of sun burns, smoking history, skin care products previously used before RxGenesys and differences in their ethnicities, skin types, ages, gender and regular use of sun block.

## **II. Experimental Design**

- A. Fifty test subjects, who were not currently using RxGenesys and had never had stem cell component treatment of their facial skin before, were enrolled in the study.
- B. During the initial visit in which subjects agreed to participate in the study and test the product, a set of standardized pictures were taken in the same location and optimal lighting at equal distance with a high-resolution digital camera. Pictures in high magnification were also taken 2 cm below the lateral canthus of the right eye and of the pores of the medial right nose using a skin high definition macro-lenses 1.1 digital camera at 100 times normal magnification. These pictures were repeated every 2 weeks for 4 weeks, and then monthly for 2 months.
- C. An initial questionnaire, to document the subjects' age, sex, ethnicity, place of birth, history of sunburns leading to skin blister formation, current use of skin care products, how often they wash their face daily, history of smoking, current use of sunblock and area of their face that concerned them the most, was completed. This was done at the initial visit only.
- D. During all follow up visits the subjects were asked to rate the product's performance over the past two weeks or past month depending on which test visit it was. The test subjects rated the product effects on a one to ten scale for multiple subjective qualities. This included if they notice a reduction in the number of fine lines on their cheek facial skin and the skin around the lateral eyes, and if they saw improvement in pore size, complexion and skin tightening with use of RxGenesys. The patients were asked if they had any adverse reactions, if they used the product as directed twice daily, and if they were willing to use RxGenesys another two weeks or until the next review. They were also asked if they felt they looked younger, where they saw the most skin improvement, and if their makeup lasted less or more after product use.

# METHOD

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- E. At the first follow up visit only, subjects were asked specific questions about the products' quality. We asked if they liked the smell of RxGenesys, and the way it feels and applies to the facial skin. We asked if the product soothed the skin and if they liked the consistency and color of the products. Lastly, we asked if they would recommend the product to a family member or friend.
- F. Once the study was completed all photos were analyzed in comparison to the subject's own skin prior to use of the stem cell enriched product. This was done by a team of unbiased reviewers using computer analysis of photographs of the exact same area of facial skin to measure the number of fine lines, pore size, and reduction of skin pigmented spots. The subjects questionnaires were reviewed and examined for trends and patient satisfaction rates. Also, a close review of opinions of skin quality improvement, as stated by the patients were examined.

### **III. RxGenesys products method of use**

- A. The test subjects were all given the same set of instructions of how to use the set of four products. Verbal personal instruction tutorials were done, allowing for follow up questions and answers with each individual tester to ensure a standard for all subjects. A 24 hot line directly to Dr Gibson, who conducted the study, was provided to all subjects for any concerns or questions that may arise during the study.
- B. The treatment with RxGenesys consisted of four separate products, three used for a morning routine and three used for a night routine. Two of the four products, RxCleanser and RxMoisturizer were used for both morning and night routines so these products were provided in larger quantity bottles. RxIlluminator was used only in the morning routine, for this study RxVital was used only in the night routine. The Rxgenesys skin care premium set is offered to consumers containing two bottles of RxVital serum that are used twice daily for maximum effect morning and night. For this study the RxVital serum was used by test subjects only once a day at night. All products have stem cell extracts within the contents, with the RxVital serum which is used as part of the night treatment, having the highest concentration of stem cell components. The morning routine consists of using RxCleanser to wash and clean the face followed by rinsing. Next the RxMoisturizer is applied evenly to entire face and allowed to penetrate for 30 seconds. Lastly, RxIlluminator, a pore reducer, is applied on the face in a gentle soft touch fashion, following a certain pathway, as show on the

# METHOD

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bottle, to enhance lifting of the facial skin. Once this is completed 30 seconds are allowed for full effect prior to placement of makeup or sunblock.

The night routine consists of using again the RxCleanser, to remove from the facial skin, all environmental contaminants, oils and makeup built up during the day. It also prepares the face, after rinsing, for the RxVital serum night treatment; this serum has the highest potency and skin tightening effects, and it is applied generously to all facial skin. This includes also applying the products to the peri-ocular (around the eyes) areas in a “special RxGenesys instructed application pathway” to help stimulate lifting effects on the facial tissues as the test subject sleeps. The serum is allowed to penetrate for 30 seconds and then a light cover of RxMoisturizer is applied to hydrate the skin. This process was repeated every day for three months. Each set of products was designed to last 90 days. The instructions included with the RxGenesys skin care set, show and explain how many pumps of each product to use with each step of application. This standardized the effects and ensured the product lasted 90 days.

# RESULTS

The changes seen with the use of RxGenesys were significant when compared to the patient's own facial skin prior to use of the product. On average, subjects perceived 83% reduction in fine lines and rhytids around the eyes, cheeks and forehead after 3 months according to 100% of the test subjects. When images were reviewed after ninety days with computer analysis, by a non-biased team, the test subjects' data, also revealed a reduction in pore size and number of blocked pores, in 96% of the patients. The study found a reduction in skin pigment spots and blemishes of 56% as well. Patients did notice major improvements of their skin quality, these improvements increased with length of time of product use during the twelve week study. Within two weeks of use of RxGenesys, all subjects stated they noticed improvement of fine lines around their eyes of 48% and cheeks of 47%. The reduction of cheek and lateral eye fine lines, then improved to 58% and 60% at four weeks, and at 69% and 71% at eight weeks respectively. We saw a final increased result of fine lines reduction of eyes and cheek skin both, at 83% after twelve weeks, across all subjects in the study. (See Diagram #1)

Improvement on fine lines, pore size & complexion  
(0 no improvement - 10 complete reduction)

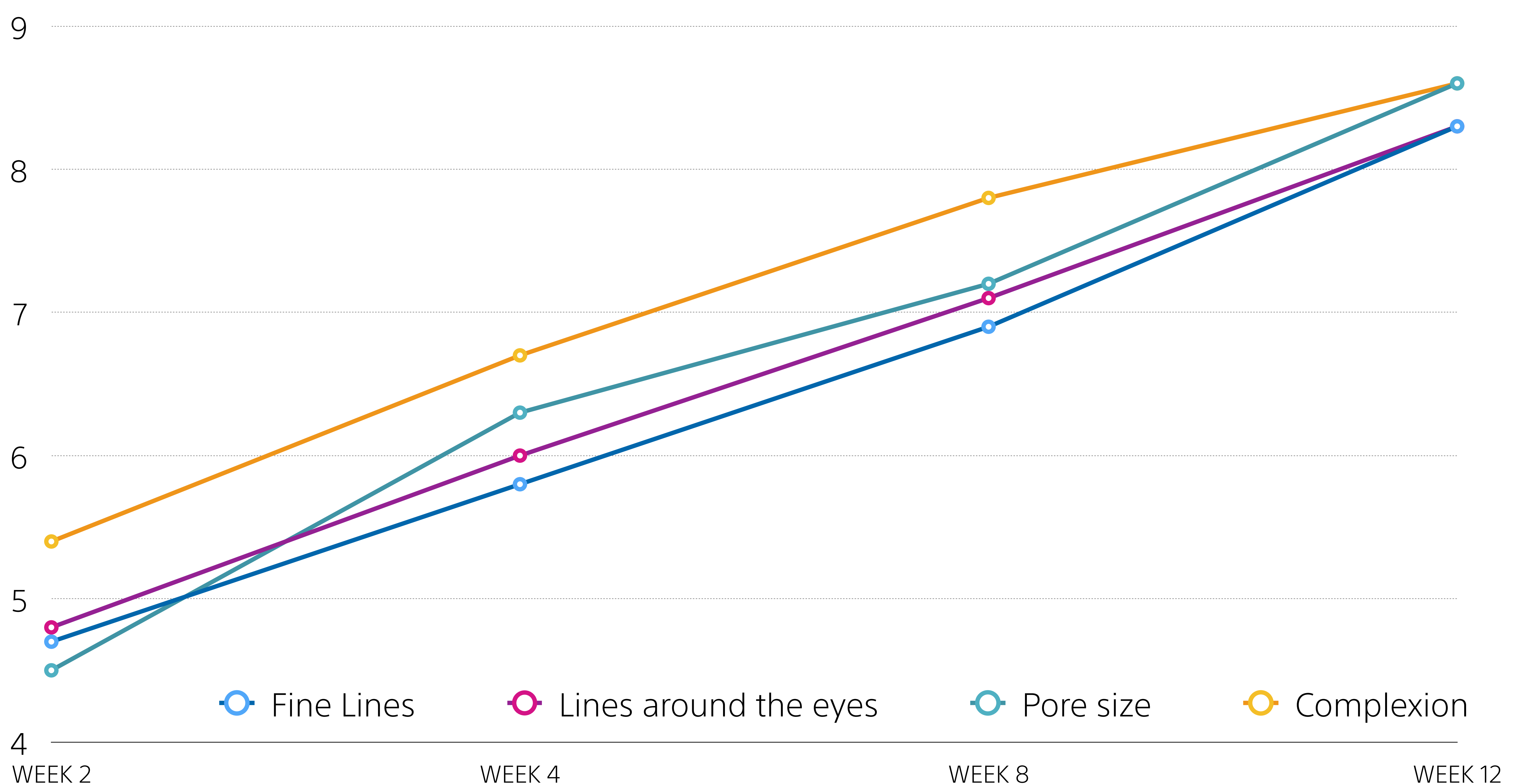


DIAGRAM #1

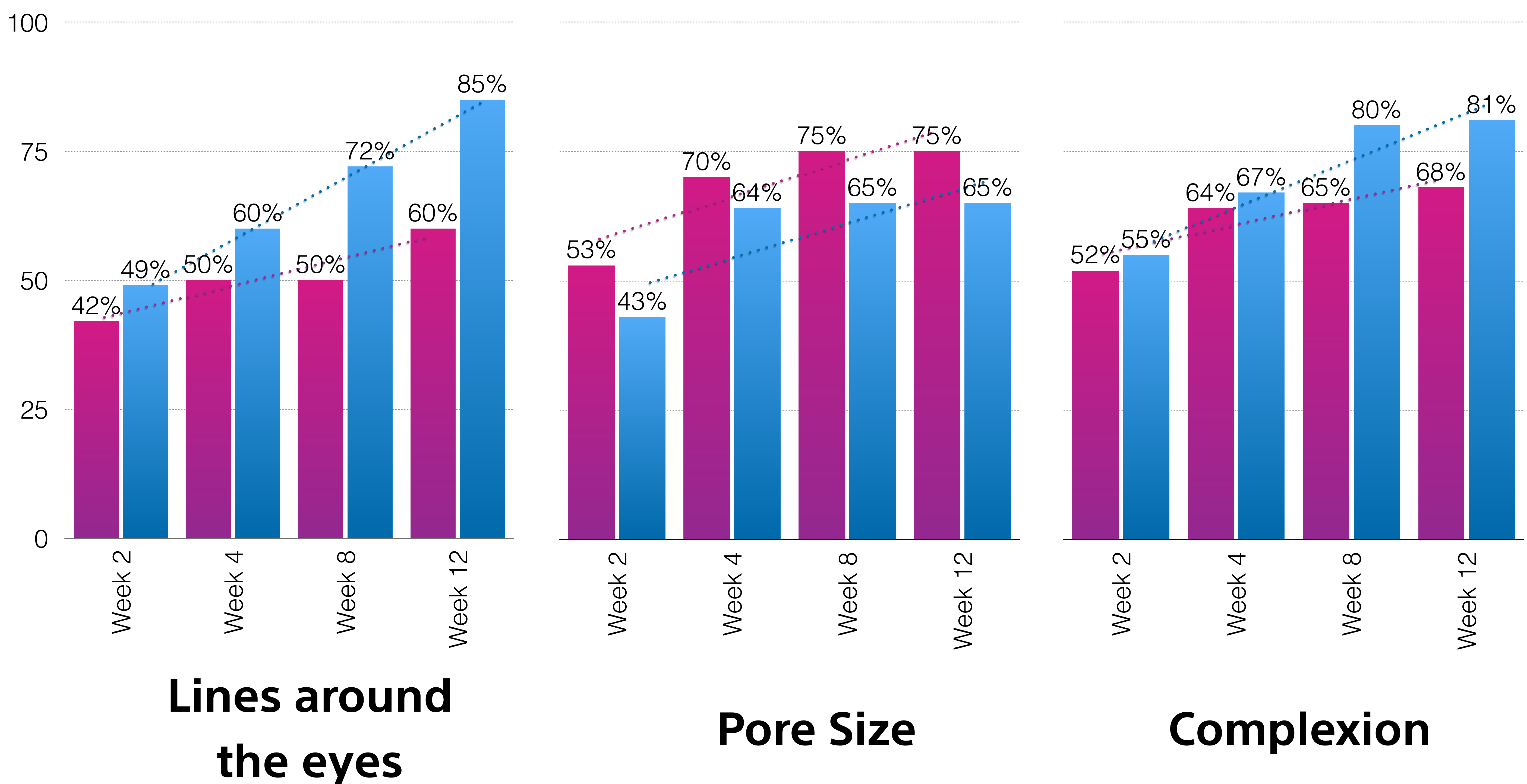


# RESULTS

Further break down of the subject data was done to group patients into ages greater than forty, numbering forty of the fifty testers and younger than forty equaling ten testers. The subjects older than forty perceived greatest improvements of fine line reduction at all follow up visits. This over-forty group saw an amazing 49% reduction in facial fine lines at just two weeks, improved to 60% at four weeks, even 72% at eight weeks and a final incredible improvement of 85% at twelve weeks. Subjects below forty years of age, saw wrinkle reduction also, but at a slightly lower percentage because, naturally they had less fine lines to begin with. Although, the less than forty age group, did perceived a higher improvement of skin quality, believed to be due to a greater pore size reduction. This younger group rated pore diameter decrease at 53% at only two weeks and up to 75% after twelve weeks of RxGenesys use. Improvement in complexion, color and appearance of the skin, was seen at a significant 52% after a short two weeks and 68% at twelve weeks, in this under-forty group also. (See Bar Graph #1)

Improvement on fine lines, pore size & complexion • by age groups  
(0 no improvement - 100 complete reduction)

■ Under 40 ■ Over 40



BAR GRAPH #1

# RESULTS

One hundred percent of subjects liked the product’s smell and ease of application. Most subjects 98% wanted to continue to use the product and would recommend it to family and friends. Two patients out of fifty (4%) developed mild skin acne reaction to the product and stopped its use, while another 6% of subjects developed mild acne, but had complete resolution with continued use of the products; no subject developed adverse residual skin effects. Patients of older age, history of high sun exposure and tobacco use saw the greatest improvement in skin quality as related to decrease in fine lines. Younger patients saw more improvement in pore reduction, and subjective improvement in facial complexion including pinker skin color and skin radiance.

All subjects (100%) who normally wear makeup, noticed that after applying RxGenesys their makeup lasted longer and the amount of makeup needed for intended result decreased, saving the subjects time of makeup application and cost. At the first two-week visit, 93% of the tested subjects perceived facial skin tightening and 71% of the subjects felt they looked younger. By the 8th week, 100% of patients felt their skin appeared increasingly younger. One hundred percent of the subjects’ perceived skin tightening at three months and all subjects (100%) stated they would like to continue using RxGenesys by the end of the study. (See Diagram #2)

## Consumer Perception

Y/N (%)

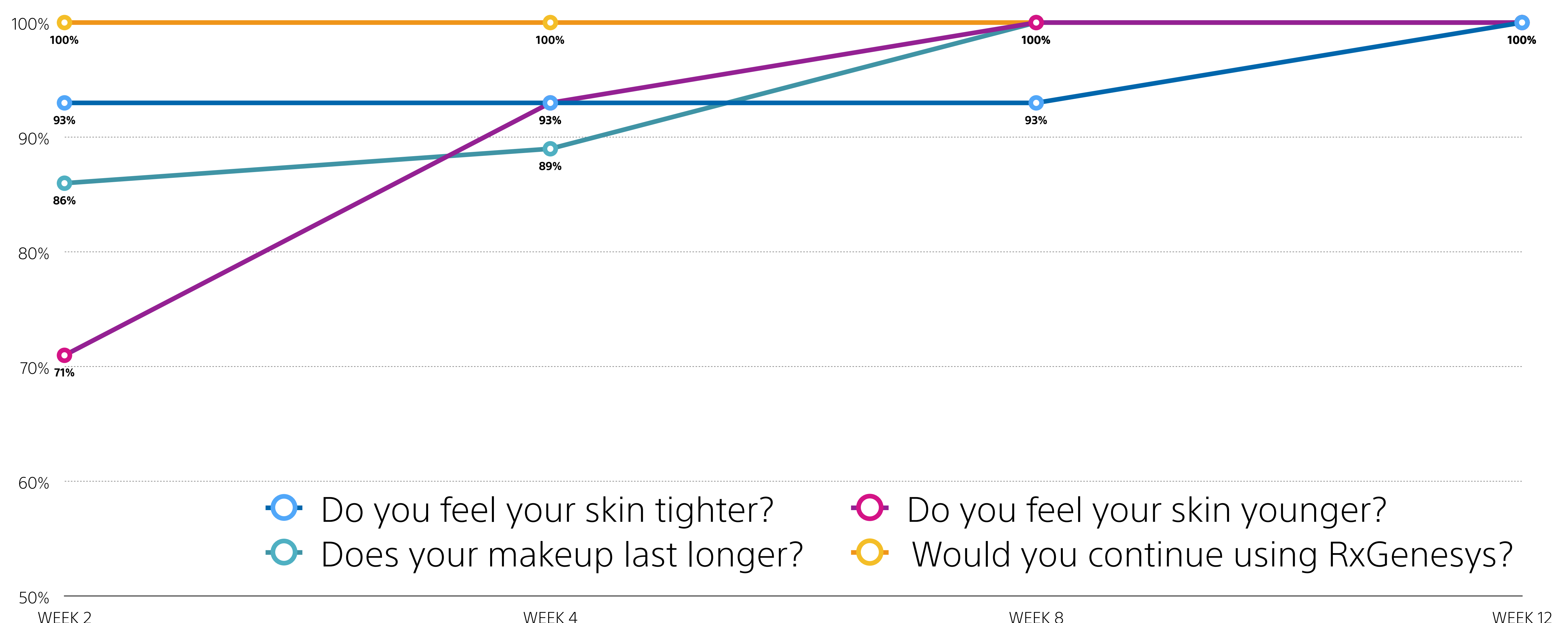


DIAGRAM #2

# RESULTS

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When asked where on their face they saw the most dramatic changes, most subjects 84% stated around the eyes and cheeks; the remaining; 16% either perceived improvement around the lips, the forehead, on the entire face, or significantly softer facial skin.

The data showed facial quality scores improved in a positive trend, the longer the products were used. The improvement was notable when testers rated reduction of facial skin fine lines, including fine lines lateral to the eyes, commonly called (crow's feet), skin pore reduction and improved skin complexion color. We also documented improvement in acne scars, reduction of facial pigments and improved overall appearance of the skin's texture. See before and after pictures. (Figures 1-12)

52 Year old female • 2 weeks of use



BEFORE  
**20** Fine Lines

AFTER  
**2** Fine Lines

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FIGURE 1

# RESULTS

43 Year old female • 2 weeks of use



BEFORE

improved acne scars and complexion

AFTER

FIGURE 2

67 Year old female • 3.5 weeks of use



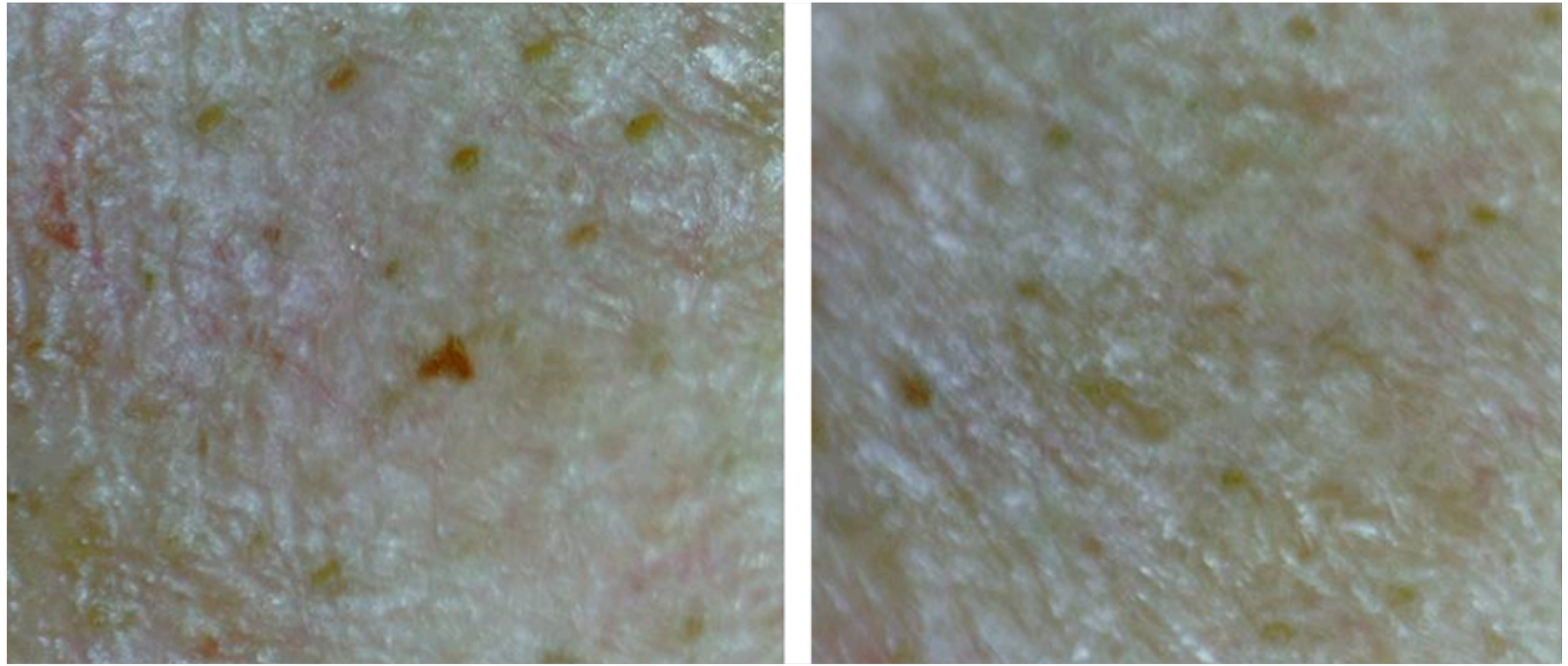
BEFORE • **17** deep lines

**3** soft lines • AFTER

FIGURE 3

# RESULTS

32 Year old male • 4 weeks of use



BEFORE

High Magnification Photo • **50%** pore reduction

AFTER

FIGURE 4

62 Year old female • 4 weeks of use



BEFORE • **11** deep lines

**3** soft lines • AFTER

FIGURE 5

# RESULTS

74 Year old male • 4 weeks of use



BEFORE • **12** deep lines

**5** medium depth lines • AFTER

FIGURE 6

35 Year old female • 5 weeks of use



BEFORE • **5** fine lines

no fine lines • AFTER

FIGURE 7

# RESULTS



50 Year old female • 6 weeks of use



BEFORE • 4 lines - early crows feet

crows feet resolved • AFTER

FIGURE 8

71 Year old female • 8 weeks of use



BEFORE

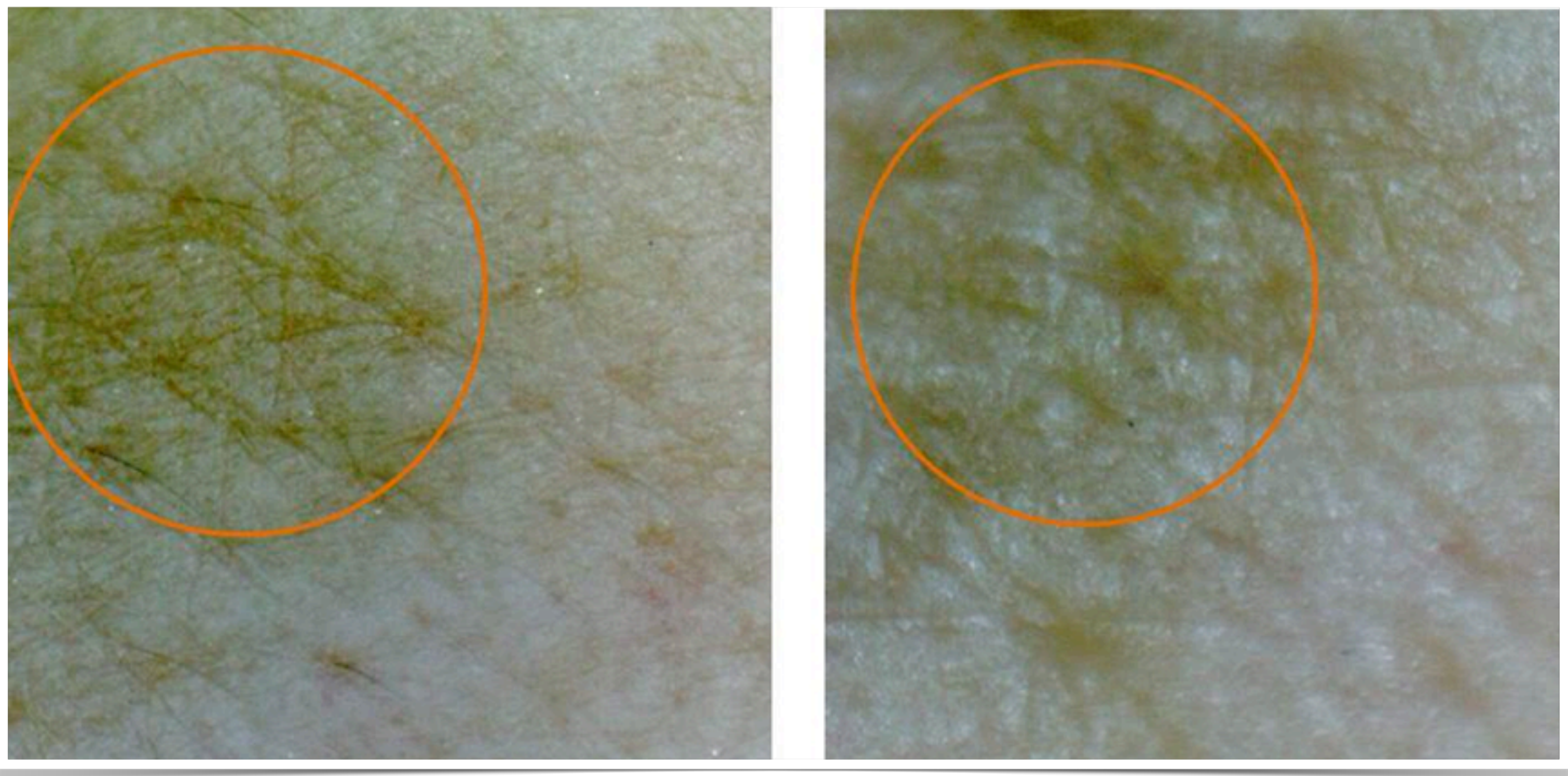
Improved matted cheek skin

AFTER

FIGURE 9

# RESULTS

63 Year old female • 16 weeks of use



BEFORE High Magnification Photo • Lateral eye pigmentation reduced AFTER

FIGURE 10

61 Year old female • 12 weeks of use



BEFORE • **12** deep lines

**3** soft lines • AFTER

FIGURE 11



# RESULTS



65 Year old male • 12 weeks of use



BEFORE

AFTER

FIGURE 12

# DISCUSSION

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The new product line RxGenesys has started a revolution in skin care by adding stabilized stem cell components into its facial skin care products. This study has found that this stem cell enriched system significantly improves facial and peri-ocular skin fine lines within 14 days, of a twice-a day-application routine. These results were measured objectively by comparing the subjects' skin before and after, a topical application of RxGenesys stem cell extract dermal care line. The analysis was done using a controlled photographic and individual patient evaluation of fine lines, deep wrinkles, pore size and facial skin complexion. The results clearly show a positive change towards younger appearing skin of the face starting as early as two weeks after initial use.

Patients who were over forty years old saw greater results of fine line reduction while patients under forty saw greater improvements in complexion and pore reduction. Both groups saw overall improvements in skin quality in all categories with results depending on age, history of sun exposure and skin type, as would be expected. It was very clear from the data, that the longer the product was used the greater the perceived results were. The fact that all patients saw close to a fifty percent reduction in the wrinkles and fine lines in only two weeks was a clear testament to how well this technology works. After twelve weeks the facial fine line reduction peaked at an 82% decrease in all subjects. This is a remarkable and significant result, not seen before, which will most likely change the current ingredients and technology used in the cosmeceutical industry today.

Recent large studies have showed that most people, as they age, are concerned mainly about the appearance of fine lines on the area around their eyes and on the cheeks<sup>[9]</sup>. The FDA just recently approved Botox for use around the peri-ocular area, after a long and costly, approval process by Allergan for this very reason<sup>[10]</sup>. This product, RxGenesys has its greatest effects in this very important area around the eyes and lateral facial skin. Subjects felt that they saw the most dramatic effect in the crow's feet area lateral to the eyes. One patient saw a decrease in peri-ocular lines of seventeen down to three after just three and half weeks of using the RxGenesys skin care system. (See figure #3)

Subjectively patients were extremely positive about the results they saw with the RxGenesys products as well the improvement seen in their skin's quality and the effective return of a youthful looking facial skin. The benefits were seen in all test subjects, and only 10% had any mild short term skin redness with use of the product, which is considered well below industry standards for skin care products<sup>[14]</sup>.

# DISCUSSION

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We believe this product is the first, of a new generation of biotech developed skin care lines, that use the messenger stem cell extracts to improve skin quality and return a pristine like appearance to the delicate facial skin. This improvement is accomplished without damaging or stripping the skin, like most popular skin care products on the market do today. Products such as Retin-A, which chemically burn the skin with use, causing redness, irritation and skin peeling, are thought to injure the skin, to stimulate the healing process which in the end makes skin sometimes appear to improve, after a long recovery phase<sup>[3]</sup>.

This study shows that RxGenesys has the potential to provide even better results than these caustic products. This is achieved without the need to damage the skin first, since it starts the healing process with a direct stem cell component messenger action<sup>[5,13]</sup>. This process of RxGenesys, bypasses the damaging skin step and goes directly to the healing phase of the skin. This gives the skin a younger appearance by reducing wrinkles and pore size.

RxGenesys was found in this study to be a very effective and safe skin care product. Test subjects extremely enjoyed using the skin care line and clearly seemed to admire their skins' significant improvement in texture and appearance.

An incredible 100% of the subjects stated that they felt they looked younger after 12 weeks of using the product; furthermore almost every subject stated they had received comments from family or friends, who had noticed a visible improvement in the appearance of the subject's facial skin.

I would recommend Rxgenesys use without reservation for public and possible medical use in its concentrated version. The stem cell technology incorporated into this product is currently at the cutting edge of stem cell research, it is very limited in its availability and is complex to create; it has taken many years to perfect by a very small group of scientists<sup>[14]</sup>. I believe all major skin care companies will begin to attempt to migrate towards purchasing stem cell components and technology to be used in their products, due to its safe and remarkable results of improved skin quality of all ages and skin types.

# REFERENCES

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1. Liang Y., Zant G., V. 2008. Aging stem cells, latexin, and longevity. *Experimental Cell Research* 314
2. Rao M., S., Mattson M., P. 2001. Stem cells and aging: expanding the possibilities. *Mechanisms of Ageing and Development* 122 (2001) 713-734
3. S. S. Collawn, N. S. Banerjee, J. de la Torre, L. Vasconez, and L. T. Chow, "Adipose-derived stromal cells accelerate wound healing in an organotypic raft culture model," *Annals of Plastic Surgery*, vol. 68, no. 5, pp. 501-504, 2012.
4. H. Jung, H. H. Kim, D. H. Lee, Y. S. Hwang, H. C. Yang, and J. C. Park, "Transforming growth factor- $\beta$  1 in adipose derived stem cells conditioned medium is a dominant paracrine mediator determines hyaluronic acid and collagen expression profile," *Cytotechnology*, vol. 63, no. 1, pp. 57-66, 2011.
5. M. A. Shokrgozar, M. Fattahi, S. Bonakdar, et al., "Healing potential of mesenchymal stem cells cultured on a collagen-based scaffold for skin regeneration," *Iranian Biomedical Journal*, vol. 16, no. 2, pp. 68-76, 2012.
6. Kondo K, Shintani S, Shibata R, Murakami H, Murakami R, Imaizumi T, Kitagawa S, Murohara T. Implantation of adipose-derived regenerative cells enhances ischemia-induced angiogenesis. *Arterioscler Thromb Vasc Biol*, 29, 61-66 (2009)
7. T. Mahmood, N, Akhtar, B. Alian, "Changing Skin Mechanical Properties after long-term application of cream containing green tea extract" *Aging Clinical and Experimental Research*, Oct 2011, Vol 23, Issue 5-6, pp 333-336
8. Appleby NASM-CP1, "The benefit of green tea cream" *Skin Care Reviews*, July 2013
9. A. Groom " Women's top 20 aging worries" Study - 200 Women, Rex Women review, lifestyle, Oct 2012
10. A.L. Chan, A. Z. Jake. "Botox approved to treat Crows Feet" by FDA. *Huffpost Healthy Living*
11. M. J. Zirwas, MD, S. A. Stechschulte, "Moisturizetr Allergy Diagnosis and Management", *The Journal of Clinical and Aesthetic Dermatology*, Nov 2008
12. L. Shan "The effect of Retin-A on the Skin" *Livestrong Liquid Library*, Livestrong Foundation, Jun 2014
13. W. Lu, J. Yu, Y. Zhang et al., "Mixture of fibroblasts and adipose tissue-derived stem cells can improve epidermal morphogenesis of tissue-engineered skin," *Cells Tissues Organs*, vol. 195, no. 3, pp. 197-206, 2011.
14. H. Shimada, Y. Hashimoto, A. Nakada, K. Shigeno, and T. Nakamura, "Accelerated generation of human induced pluripotent stem cells with retroviral transduction and chemical inhibitors under physiological hypoxia," *Biochemical and Biophysical Research Communications*, vol. 417, no. 2, pp. 659-664, 2012.