



João Nuno Pereira Ferreira

Relatórios de Estágio e Monografia intitulada “Marketing Plan of the UClnova Junior Enterprise” referentes à Unidade Curricular “Estágio”, sob a orientação, respetivamente, da Dra. Liliana Almeida, do Dr. André Pinto, e do Professor Doutor António Donato e apresentados à Faculdade de Farmácia da Universidade de Coimbra, para apreciação na prestação de provas públicas de Mestrado Integrado em Ciências Farmacêuticas

Julho 2017



UNIVERSIDADE DE COIMBRA

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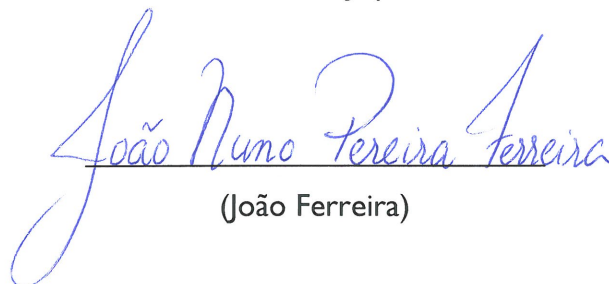


UNIVERSIDADE DE COIMBRA

I, João Nuno Pereira Ferreira, student of the Integrated Master's Degree in Pharmaceutical Sciences, with the number 2012147060, declare that I take full responsibility for the content of the Report of Internship presented to the Faculty of Pharmacy of the University of Coimbra, within the course unit Curricular Internship.

I further declare that this is an original work and that any statement or expression used by me is referenced in the Bibliography of this Internship Report, according to legally established bibliographic criteria, always safeguarding the Copyright, except for my personal opinions.

Coimbra, 17th July 2017

  
(João Ferreira)

## A thanking note

To António Donato for the fantastic insight he provided on his area of expertise,

To Liliana Almeida, Pharm.D and André Pinto, Pharm.D for passionately sharing with me  
their art of Pharmacy,

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João, Nicolas, Paula, Paulo A., Paulo G., Sandra, Sara, Sílvia and Stephanie and Carlos,  
Fernando and Sónia to whom I had the privilege to feel like a colleague,

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To Carolina, because she always knew what to say

To all,

my sincere Thank You.

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*Pharmaceutical Industry*  
*Internship*



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## Abbreviations

GC: Gas Chromatography;

HPLC: High Pressure Liquid Chromatography;

IMDPS: Integrated Master's Degree in Pharmaceutical Sciences;

IPC: In Process Control;

IT: Information Technology;

OOL: Out of Limit;

OOS: Out of Specification;

OOT: Out of Trend;

QA: Quality Assurance;

QC: Quality Control;

RA: Regulatory Affairs;

SWOT: Strengths, Weaknesses, Opportunities and Threats.



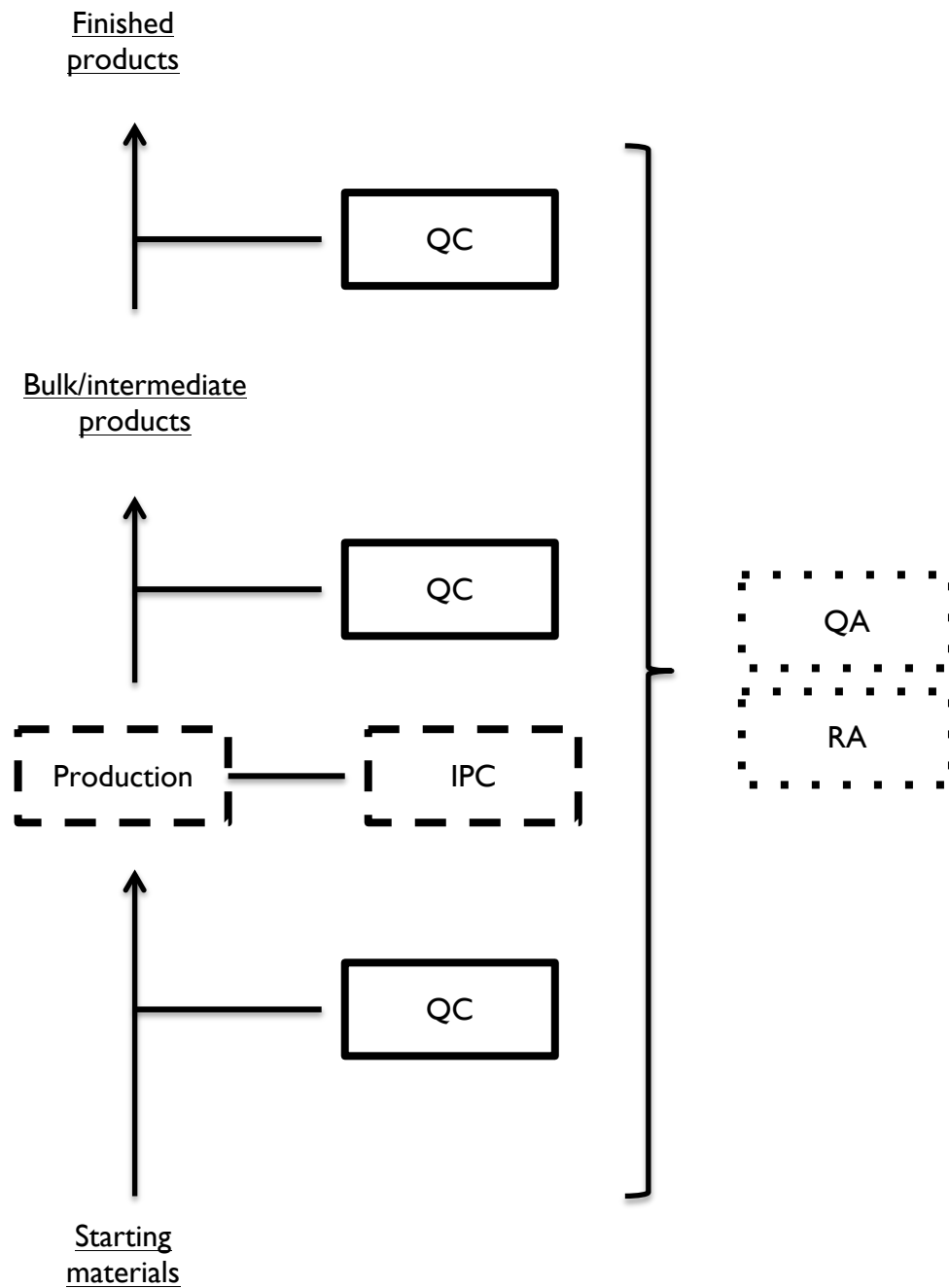
## I. Introduction

As important as it might be for oneself to develop indoors, there comes the time when it is imperative to go out there, breaking the comfort zone and dealing with the real existence of risk, this is in my point of view the best way to grow. During this period of adaptation there should be an emphasis on learning and dealing with mistakes, hence it perfectly fits the concept of a curricular internship.

As soon to be graduated students, we are required to complete an internship in community pharmacy and it is also given to us the chance to accomplish another in hospital or industrial pharmacy. In my case, with the urge I had to take part in the distinctive paradigm of time and resources management that the industry is well known for, the choice was simple and I fortunately could so. The present report refers, therefore, to a curricular internship in the Pharmaceutical Industry, to be more specific in Quality Control that I had performed.

The internship took place from January 9<sup>th</sup> to March 31<sup>th</sup> 2017 and I was fortunate to be mentored by Liliana Almeida, PharmD. Along this experience, I was first given the necessary tools (whether by personal tutoring or bibliography and where to find more information) and trusted to autonomously plan and develop the work I regarded as priority. This trust undoubtedly underpinned all the progress I made and encourage me to go further.

## 2. Scheme of departments I contacted with



**Fig. I:** Diagram of the departments with which I contacted with. The frames distinguish how; dots stand for what I have heard and discussed about with respective professionals, dashes for what I have seen by myself and continuous lines for where I have developed work.

### 3. SWOT analysis

In this report, I will use the SWOT analysis tool to give an overview of how prepared to start a career in industry I assume a student is when he is about to graduate from a Pharmaceutical Sciences Master's Degree and hence to help me assess the way the course is structured in the University of Coimbra.

I find motivation to focus on this insight by the fact that I adamantly believe that in the world of business one should know itself so that he can work a better personal branding.

	<b>POSITIVE ASPECTS</b>	<b>NEGATIVE ASPECTS</b>
<b>INNER ENVIRONMENT</b>	<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Dexterity in laboratory practice;</li> <li>• Associativity spirit;</li> <li>• English contact;</li> <li>• Duration;</li> <li>• Diverse background.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Insufficient familiarization with HPLC and GC;</li> <li>• Lack of exemplification of the industry reality.</li> </ul>
<b>OUTER ENVIRONMENT</b>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Generics market growth;</li> <li>• Shift of pharmacists to industry.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Specialized competition;</li> <li>• Lack of an IT component.</li> </ul>

### 3.1 Strengths

#### Dexterity in laboratory practice;

In this experience I had the chance to work with a vast array of apparatus characteristic of the CQ of medicines. As I handled each one of them and as they would require some dexterity, I always felt up to the task. This comfort in the laboratory led me to focus immediately on other important aspects such as getting accustomed to the interface of the apparatus and analyzing some possible flaws from the use of the same that would affect the results.

I regard this skill mentioned to be the result of a well-established laboratory practice along the IMDPS where there is a concern of getting students to put their hands to work whenever possible.

#### Associativity spirit;

The university is responsible for providing a fair share of hard-skills to his students, however to make the most out of them it is essential to held an equal amount of soft-skills. As I expected, it was clear how progress and success within industry is highly dependent on teamwork and therefore good a leadership spirit. As any other skills, these can be developed and I reckon student's associativity plays a major role if wisely experienced. Thus, I want to signalize how important it is for the faculty and other institutions the necessary trust and support they give to students so they can pursue their projects and ambitions. I can state, after being in a work team within the industry that there are strong resemblances when it comes to working for goals, dealing with failures and assume responsibilities.

#### English contact;

There is from certain professors an effort in challenging us with technical English language. This should, in my opinion, be valued for the following reasons, firstly because not only it gives us useful specific vocabulary and with the global market it is inevitable to contact with it, and I did, secondly because it challenges us to overcome barriers while getting pushed out of the comfort zone.

I may therefore conclude one could only benefit by fomenting these attitudes.

#### Duration;

The chance that is provided to us is, just for existing, a highlight when comparing to the same course in other faculties.

Also, despite the fact that this internship was quite shorter when comparing with the one we do in community pharmacy, I found it lasting enough for an active student to get himself acquainted to the processes and organization in the work place. I for instance, experienced it with the Physics and Chemistry and Microbiological laboratories of the QC, where I learned and fully understood the mechanisms of the assays performed, got familiarized with the management of standards, reagents, samples, documents, materials and waste, how to generate evidence, how to deal with OOL, OOT and OOS results and even discussed in some degree the role of the managers in the laboratories. The progress I felt I made completely surpassed my expectations.

Diverse background;

Over the IMDPS, there is an approach to several distinctive medicine related areas. For instance a student would focus on such contrasting subjects as regulatory affairs and analytic chemistry. I strongly believe that this aspect would make easier to think outside the box by relating different subjects, leading to easiness in seeing all the processes within the industry as a whole. This comprises, from my point of view a great benefit in a work team and must therefore be valued.

### 3.2 Weaknesses

Insufficient familiarization with the HPLC and GC;

I was fortunate to come across these chromatography technics in my internship. In fact I already had great curiosity in their functioning on beforehand and after this experience I would say they were indeed the apparatus with witch I felt least comfortable with.

My worries to this negative aspect lay in the increasing popularity these techniques are gaining in the quality control analysis of products. One way that I was proven this was the effort I witnessed in shifting most assays to an HPLC technic since it displays several advantages.

The root cause of this lack of familiarization is, in my opinion, the approach given to the technic along the IMDPS. I feel like the theory given is too faced towards research, that when it comes to data management and interpretation we are not confronted with realistic scenarios, and furthermore, there is a weak practical component specific with this family of apparatus.

Lack of exemplification of the industry reality;

In several of the classes that comprise the IMDPS I find that the chance of crossing subjects with working reality is not always taken. Even with the idea in mind that University is meant to be the engine of knowledge, I believe that this should not be neglected as industries and other professional organisms tend nowadays towards displaying more complex organization levels.

For instance, an important issue such as the Serialization Program is that intends to revolutionize the pharmaceutical industry over the next years was unknown to me until I began this internship.

### 3.3 Opportunities

Generic Medicines market growth;

The generic drugs market is expected to grow 10.53% from 2016 to 2020<sup>1</sup>.

From my point of view, when considering the European Union, I see the Portuguese industrial paradigm as very attractive to the generic medicine industry. Being a country with a relatively low expense of living makes it fit perfectly to the policy of quality for the best price these companies aim for. I therefore foresee a development of these industries in Portugal over the next years that should deserve a close follow up from pharmacists to make the most out of it.

Shift of the pharmacists to industry;

Over the last few years it was noticeable that for several reasons most pharmacists would end up following a career in community pharmacy drifting away from other medicine's areas. Nowadays, as most of these reasons recently became less evident, there is a clear turning back from pharmacists to these other areas and industry is naturally one of them.

What I expect is that with this new wave, pharmacists would have the chance to prove themselves worthy of a positive recognition and fame.

### 3.4 Threats

Specialized competition;

It is noticeable how other courses make their way in industry careers based on their specialized Master's degree. As far as regulation is concerned it is not expected to the IMDPS to turn back to the existence of specialization by branches, however, after having completed this experience I realized that we should embrace the fact that a pharmacist is

above all, a multidisciplinary professional and that we are capable of catching up on any area we commit to because of our background knowledge. This statement is not an excuse so that we can layback in relax but is rather a strategy that must be worked for in our professional marketing.

Within this topic I would also like to address the fact that as students from the University of Coimbra it is a major advantage the chance we have to apply to extracurricular classes we desire. This could meet the necessities of learning subjects we find absent in the IMDPS and should therefore be applauded.

Lack of an IT component;

As requirements such as data integrity become thriving themes in industry it is expected that IT would give an answer to the necessities underlining it. I currently understood how this area of knowledge represents a weak link in the IMDPS and the fault might as I expect scale-up.

With this in mind I assume that is imperative that some basics of IT should be approached along the IMDPS.

## Final thoughts

When I first arrived in the laboratory, I had a lot of ideas structured of what the practice of a QC laboratory could be but very little opinions of how it might feel to be a part of. As I was kindly welcomed and given all the tools and trust necessary to make my progress, the rest of the experience was only being dependent on me, to the effort I was willing to give from myself, from the regard with which I would treat others with and from how far I wanted to reach within this experience. The fact that it was like this was for me a fortune.

Thus, as my curricular internship went by, all that I was having the chance to learn, turned to be crucial for the enrichment and definition of the professional I aim to be in the future. However, the process of learning was not the only aspect to have a strong impact in me. Since I was living the real scenario with real risks and clear goals I slowly realized of how it feels to add value in the context of the pharmaceutical industry and I could only have done it with the given chance of this internship.

Having completed the internship I can confidently say that it surpassed all of my expectations.



## References:

[1] - <https://www.wiseguyreports.com/reports/global-generic-drugs-market-2016-2020>, accessed in 20-march-2017.

*Community Pharmacy*

*Internship*



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## Abbreviations

OTC: Over the counter (a medicine which does not require a medical prescription to be sold, nevertheless it should not be placed within the range of the costumers);

IMDPC: Integrated Master's Degree in Pharmaceutical Sciences;

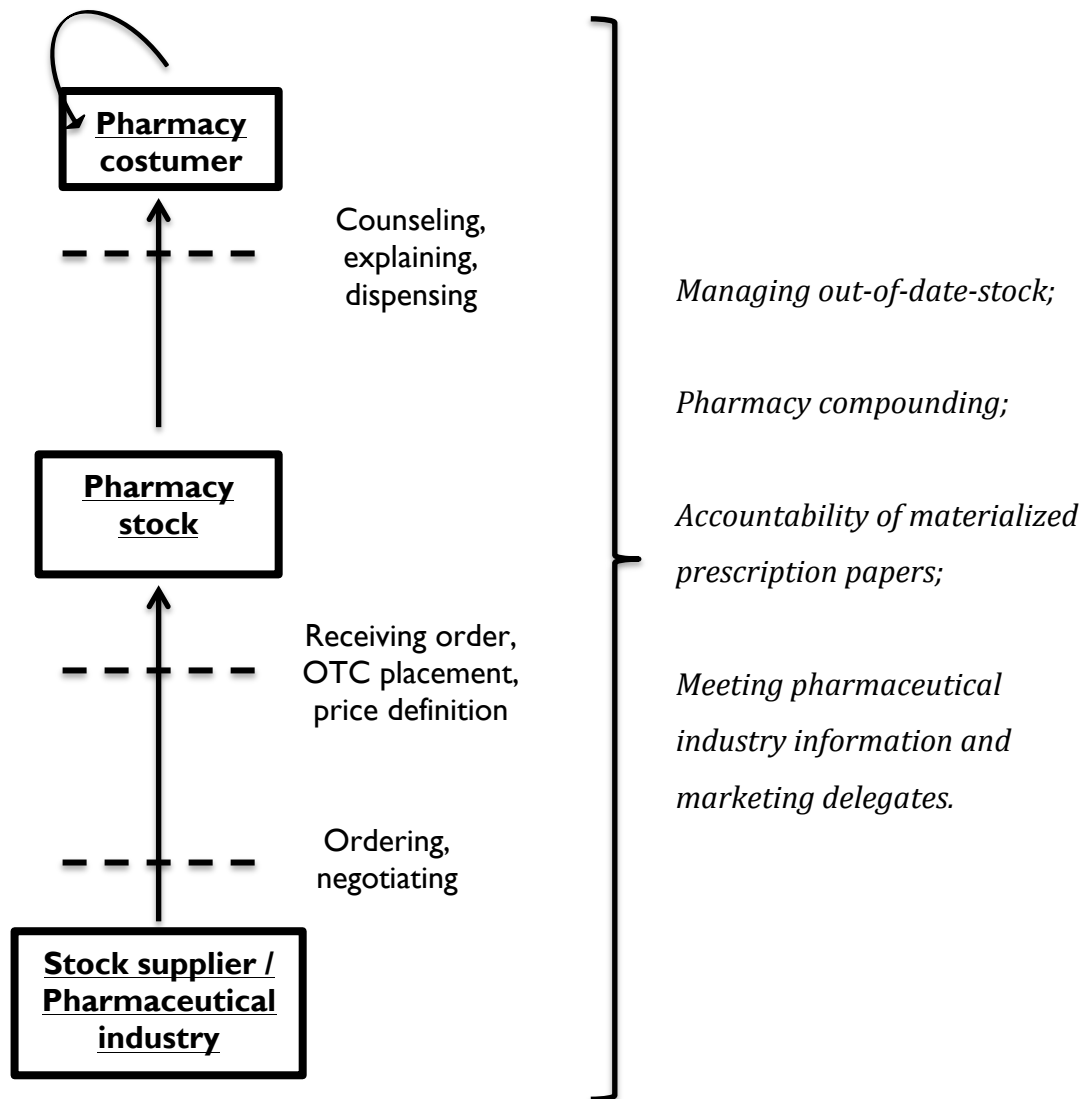
## I. Introduction

At the very end of the IMDPC, students are required to complete a total 810 hours of work in a community pharmacy. This internship is therefore, the last step of learning a student has after graduating as a pharmacist. These professionals should also make an effort to keep on learning, however it is not expected for them to err because of the implications it might have. This means a pharmacist should either make his decisions according to his professional experience or to know how to do some further research in order to solve the issues it will come across. What he should never do is making decisions without having first a solid background. If we think on the competences of an intern, it is natural that he is not used to be confronted with great uncertainties and to take whichever actions necessary to solve them. This is a capacity that can only be learnt by doing, hence an example of the importance the internship has.

With these ideas in my mind, I wanted to make the most out of my final internship. My first concern was with establishing a solid base of pharmacology, this branch of health-sciences is the core of a good professional working at a pharmacy and it is also the aspect that should be worked the most throughout time due to its immensity and tendency to evolve. Nevertheless, I knew it was better not to neglect other areas such as the management aspects of the pharmacy or even the communication skills. This last one was also very important for me. From the experience I had, I believed that people tend to accept what a person in white cloak says the difference is in how it is said. This way, I had a clear set of goals defined when I initiated.

The internship I performed, started on the 1<sup>st</sup> of April and lasted until the 9<sup>th</sup> of June under guidance from André Pinto, PharmD. During this period, my working schedule included extra hours when the pharmacy was on duty and two night shifts in order to get a more complete experience.

## 2. Flow of work within a pharmacy



**Fig. I:** Diagram of work within a pharmacy. The diagram is not fully complete but it shows all the aspects of the pharmacy management and workflow that I have contacted with.

### 3. SWOT analysis

I shall resort the SWOT analysis tool for the sake of helping me to better illustrate my opinions on how I think the degree of Pharmaceutical Sciences in the University of Coimbra is preparing its students to the work performed in community pharmacies in the current Portuguese society.

	<b>POSITIVE ASPECTS</b>	<b>NEGATIVE ASPECTS</b>
<b>INNER ENVIRONMENT</b>	<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Duration of internship;</li> <li>• Veterinary pharmacy;</li> <li>• Clinical Pharmacy.</li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Pharmacotherapeutical groups that are taught;</li> <li>• Skin related conditions and dermopharmacy;</li> <li>• Sifarma 2000® course;</li> <li>• Over-the-counter and herbal medicines;</li> <li>• Medical devices.</li> </ul>
<b>OUTER ENVIRONMENT</b>	<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Preliminary curricular internship;</li> <li>• Handout "Prontuário Terapêutico";</li> <li>• Pharmacist as a member of a health chain.</li> </ul>	<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Adapt to novels in therapeutics;</li> <li>• Dehumanization of the service.</li> </ul>

### 3.1 Strengths

#### Duration of internship;

The time that was determined for a student to spend learning in the pharmacy before plunging into the market world is, from my point of view, certainly enough. During the time I was there, I found myself able to apply my knowledge and to adapt it to the real-life scenario. Despite the fact that I learned valuable lessons each single day until the very end, I felt that I reached a point where my confidence was enough to do my job fully independently.

#### Veterinary pharmacy;

I was taken by surprise on how often I had to counsel on veterinary medicines. Fortunately, I felt well prepared from the curricular unit we have of *Preparações de Uso Veterinário* (Veterinary Used Preparations) and I reckon I was up to the expectations. Hence, I believe that we graduate ready to explore the veterinary area in the pharmacies, which has been undervalued and can mean quite a considerable income.

#### Clinical Pharmacy;

Another surprise I had was with the amount of drugs some people are medicated with even though I already was expecting a very serious polymedication issue within our society. Despite not having the chance to explore some concepts of clinical pharmacy such as medication review; I know that after the curricular unit of *Farmácia Clínica* (Clinical Pharmacy) I am ready to apply such tools in society. This is very important because it allows us to eventually create a positive impact in someone's life by reducing morbidity and mortality.

### 3.2 Weaknesses

#### Pharmacotherapeutical groups that are taught;

The Portuguese record of medicines book (known and from now on mentioned as *Prontuário Terapêutico*), in his version of 2013, states that there are 20 different pharmacotherapeutical groups. Naturally, the ideal would be to fully explore them, however, for obvious reasons, the five years that comprise the course are simply not enough so that we could do so. This way we have to focus on determined groups rather than dispending an equal amount of time in each along the course.



With the time that I had spent at the counter, I got an idea of the most common medicine groups, and in which we could make the biggest difference. I believe we should follow these two primary indicators and rethink what should be taught. For instance, a very commonly discussed drug would be warfarin (mainly due to its strong interaction with a lot of drugs), yet this only rarely was sold. On the other hand, drugs like rivaroxaban or dabigatran were sold on an almost daily basis and they were not given an appropriate attention. Another example, this time concerning some medicines that we can make a difference are antihistamines. There were recurrent cases with allergies, which demanded me to do an immense homework since they were not explored in the course.

#### Skin related conditions and dermopharmacy;

Skin conditions are complex and relatively common. Whether we talk about bruises, burns, allergic reactions, bacterial or fungal infections or other ones, require a trained eye to be correctly diagnosed and I believe this training should start early and be done under the supervision of a professor rather than be done in an autonomous way as I made at home. I believe practical classes should encompass visual interpretation of life-like scenarios.

Also, in my opinion, students could only gain if the several drugs used in dermopharmacy were more extensively studied.

#### Sifarma 2000® course;

Around 90% of the Portuguese pharmacies make use in the present days of the informatic platform Sifarma 2000® developed by Glintt.<sup>1</sup> Therefore it is natural that us students would benefit from a small course before beginning to work at a pharmacy, as we did. However, in the one that existed, the basics were skipped and we plunged right through some of the advanced tools. These could have been very useful if students were more familiar with the system on beforehand. The way it was I felt it was close to nothing.

In my opinion this course should be revised so that we first get acquainted with the basics and only then teach us the mentioned tools.

#### Over-the-counter and herbal medicines;

When at the counter, the biggest difference a pharmacist could do is naturally when he counsels OTC drugs, hence it is not unusual to conclude that this should be one of the strong components of the community pharmacy oriented curricular units throughout the

IMDPC. However, I did not feel that this group of medicines was as extensively explored as it should. The same goes with herbal medicines (although currently not as popular in Portugal as it is in other European countries).

There is, of course, a curricular unit dedicated to this subject, yet these both vast groups of medicines comprise it and I believe this is not the most fruitful approach towards the issue. Also, it is one of the very last curricular units taught in the IMDPC determining that we could not do such a complete community pharmacy internship in earlier years.

I adamantly believe that, ideally, there should exist two different curricular units for both OTC and herbal medicines and they should be tutored in earlier years.

### 3.3 Opportunities

#### Preliminary curricular internship;

The University of Coimbra fortunately encourages extracurricular internships, however, students as the ones from the IMDPC have such a versatility in their field of studies that have to make an exhaustive rentabilization of their time in order to experiment the most work areas as possible. I reckon that given a chance to intercalate a preliminary curricular internship in community pharmacy, students would get a better background in the respective fields of study and probably a better outcomes and of course it is also important to anticipate certain subjects in the IMDPC as stated before.

#### Handout "*Prontuário Terapêutico*";

Although being available in an on-line version, it is not as convenient as if it was handed in its book version to the students who wish so. Since I had the chance to carry around one specimen of the book along the internship I performed, I realized the potential it had. "*Prontuário Terapêutico*" is in fact very well structured technical book and very helpful in particular to those that are just learning, it is such a powerful tool that I believe not to be currently used to its full potential.

#### Pharmacists as members of a health chain;

The government is actively seeking ways to monetize its expends in health and pharmacists are promptly grabbing the chance to show that their services can come out as an investment to a more economic yet of high quality health system.

Prevention, early tracking of serious outcomes and decongestion of hospitals for minor

illnesses are the trumps of our working class. A lot of evidence is still to come and a lot of bridges between other health sciences professionals still have to be built, but if we succeed, we might take part of an even bigger role of society's health.

### 3.4 Threats

Adapt to novels in therapeutics;

There are nowadays numerous cases of chronic illnesses that require constant administration of drugs and most even require more than one kind of medicine. This paradigm of treatment is a perfect fit for the current job a pharmacist currently develops. However, if fields such as gene therapy start to show viability, pharmacists would have to reinvent their role amongst society. I believe that the best place to start an eventual revolution that would face these challenges would be the university since it is, by excellence, the source of cutting edge knowledge.

Dehumanization of the service;

The Portuguese pharmacies were, in the older days, a place for discussion of health, politics, society, etc... There was time to bond with the costumers and to earn their confidence. Nowadays costumers still show the interest to communicate and from my experience, they seem to be more at ease with pharmacists than with any other health science professional. For instance, I got this feeling when I met them in the office in a more private way. What has been changing is that it is harder for a pharmacist to give its attention to the person in front of him and several factors have been leading to it. For example, medicines are getting cheaper and less profitable, therefore more packages have to be sold by time to make up for it; technology is trying to cover every single aspect of the pharmacy, even at the counter a pharmacist is forced to do multiple tasks at the computer turning his face away from the costumer; risk of establishing online shopping as there are in certain countries; tendency to widen the public area with more offer disregarding the space for an intimate meeting between the pharmacist and the costumer. This should not be what pharmacies tend to, otherwise it could be a fully robotized service. Pharmacist should be concerned about personalizing their services and to dispense just enough time to talk and to listen to the ones who are at risk or insecure and need what we can provide — a better life.

#### 4. Final thoughts

Having completed the internship in community pharmacy, I look back and see an immense progress made since the very first day. The most noticeable aspect that comes to my mind right away is the confidence that I now have in myself when at the pharmacy in such a relatively short amount of time. As a matter of fact, I reckon I am now capable of performing a satisfying counseling in a great number of situations or to find a solution if I do not know the answer, I feel comfortable with the mechanism of the selling process (including reservations, credit regularizations, costumer cards, refunds and so on...), with establishing a good communication and with most of the work beyond the costumers eyes that keep the pharmacy functional.

In my opinion, the fast leap I felt in my skills is a merit of the professionals I was surrounded by. First of all, they were not only very committed to constantly keep learning, but they also had very distinctive strong points and completed each other's work. Secondly, they were genuinely concerned about their costumer's welfare and valued a good counseling above all. And finally, their delight in taking their time to explaining me what they knew whenever I had with any doubts.

Another important aspect was the trust that it was placed in me to adjust my rhythm as I felt I should. In fact, thanks to the approach my mentor had towards my internship, I reckon I had a very complete experience, beyond what is most conventional. For instance, the pharmacy, which dated from de 1930's, had a vast estate of antique products and equipment stored which I had the chance to start assembling into a museum inside the pharmacy (Annex I). While I was organizing these pieces I was getting familiar with the roots of the pharmacist profession. In fact, one of the pieces that I came across what an old notebook belonging to the founder of the pharmacy, Luis Torres, Pharm.D, he was keen on developing galenic products and had quite a few listed there. This came out as a plus to me, to have the privilege to learn about some products used in the older days. All this extra work was very rewarding and I did not felt that it set me back on learning what is most expected, but rather enriched my experience and expanded my horizons.

The location of the pharmacy also played a major role in the excellent experience I had. It was located in the city near a place where the town market was held twice a week, this way I felt a considerable contrast in the customer service. On one hand because there was a great variability in the costumer's autonomy requiring me to often adjust my vocabulary and on the other hand because a lot of people sought for veterinary products. Also, the

pharmacy had a few elder usual costumers, which were accustomed to ask the pharmacy for some compounds. Hence I had the opportunity to spend some time at the laboratory practicing its manufacture (Annex 3).

I can therefore assume, having in mind that every pharmacist is in constant learning, that this experience properly prepared me for my future as a health sciences professional, with a very positive and rewarding opinion of how it is to be a pharmacist in a community pharmacy. I had also verified that in the vast majority of cases people like to take some time discussing their issues, so a good pharmacy professional is not only the one that is kind but also the one that makes a personalized costumer service. The internship was therefore the most rewarding way to complete the course.

## 5. References

1. <http://www.glintt.com/pt/o-que-fazemos/ofertas/SoftwareSolutions/Patinas/Sifarma.aspx> — accessed in 4<sup>th</sup> June 2017.
2. <http://www.moreno.pt/JSI7/index.php/en/32-products-en/food-supplements/223-spasmurin> — accessed in 6<sup>th</sup> June 2017.

## Annexes

### I. Real-life situations:

#### Situation n°1

Middle-aged women, enters the pharmacy to buy its usual prescription medicines of 20mg atorvastatin, 1mg alprazolam and 5mg+1,25mg of perindopril+indapamide. After a certain routine chat, she shows concern for waking up without energy and depressed and that it gets better closer to nighttime. I asked her if she had trouble in getting to sleep or to not waking up at the middle of the sleep and she replied she had both of the problems. At this point I excluded sleep-inducer supplements, I gave only some non-pharmacological advices for sleep inducement and suggested her to explain the same way to the doctor and to ask for an adjustment in the anxiolytic therapy. At last, I made her comfortable to return and give news.

Later she returned with a prescription of bromazepam 1,5mg and after a week I had another visit from her saying that she started waking up much more energetic and sometimes would even fall asleep without taking the anxiolytic. In this case she would wake up at around 4 am and take only 0,75mg of bromazepam.

#### Situation n°2

Middle-aged woman comes to the pharmacy hoping to buy 500mg+65mg paracetamol+cafeine and 100mg nitrofurantoin stating she had taken these last pills the last time she had discomfort when urinating. Besides requiring a prescription, nitrofurantoin is an antibiotic and it has therefore the risk of generating resistant bacterial strains, in particular when misused.

I explained why I was not selling her the antibiotic and surprisingly realized how some people are not aware of those risks. Keeping in mind the necessity the customer had in preventing urinary infections, I suggested a supplement of proanthocyanidins with effect on diuresis and bacterial adhesion to the urinary tract<sup>2</sup>.

## II Pharmacy museum:





IV Example of a compounding plan:



Ficha de Preparação de Medicamentos Manipulados

Medicamento: Vaselina salicilada a 5%

Teor em substância(s) activa(s): 100 g (ml ou unidades) contém 5g g (ml) de Ácido salicílico

Forma farmacêutica: Pomada

Data de preparação: 27.05.2017

Número do lote: 002/17

Quantidade a preparar: 300g

Matérias-primas	Lote nº	Origem	Farmacopeia	Quantidade para 100 g (ou ml, ou unidades)	Quantidade calculada	Quantidade pesada	Rubrica do Operador e data	Rubrica do Supervisor e data
<u>Ácido salicílico</u>	<u>RAS167600</u>	<u>Labchem</u>		<u>5</u>	<u>15</u>	<u>15,002</u>	<u>[Signature]</u> <u>27/05/2017</u>	
<u>Vaselina sólida</u>	<u>66416</u>	<u>Labchem</u>		<u>95</u>	<u>285</u>	<u>285,011</u>	<u>[Signature]</u> <u>27/05/2017</u>	

Preparação

Rubrica do Operador

<u>1. Limpar todo o material a utilizar.</u>	<u>[Signature]</u>
<u>2. Pesar a matéria-prima.</u>	<u>[Signature]</u>
<u>3. Adicionar o ácido salicílico à vaselina.</u>	<u>[Signature]</u>
<u>4. Misturar em agitação mecânica.</u>	<u>[Signature]</u>
<u>5. Levantar do material utilizado.</u>	<u>[Signature]</u>
<u>6.</u>	
<u>7.</u>	

Embalagem

Tipo de embalagem: \_\_\_\_\_

Capacidade do recipiente:

Material de embalagem	Nº do lote	Origem
<u>Unguator</u>		<u>Phural</u>

Operador: [Signature]



*Prazo de utilização e Condições de conservação*

Condições de conservação: <i>Conservar à temperatura ambiente</i>	Operador:
Prazo de utilização: <i>6 meses</i>	Operador:

*Verificação*

ENSAIO	ESPECIFICAÇÃO	RESULTADO	Rubrica do Operador
<i>cor</i>	<i>branca</i>	<i>conforme</i>	
<i>odor</i>	<i>inodoro</i>	<i>"</i>	
<i>aspecto</i>	<i>homogeneo</i>	<i>"</i>	
<i>quantidade</i>	<i>300,013 g</i>	<i>"</i>	

Aprovado  Rejeitado

Supervisor: \_\_\_\_\_   11  

*Nome, morada e telefone do doente*

*Nome do prescriptor*

*Anotações*

Cálculo do preço de venda

MATÉRIAS-PRIMAS:								
matérias-primas	embalagem existente em armazém		preço de aquisição de uma dada quantidade unitária (s/IVA)		quantidade a usar	factor multiplicativo	valor da matéria-prima utilizada na preparação	
	quantidade adquirida	preço de aquisição (s/IVA)	quantidade unitária	preço				
Ácido salicílico	100 g	1,34	17	0,0134	x 15	x 2,2	= 0,4422	
Vesicre base	900 g	4,09	17	0,2045	x 285	x 1,9	= 2,43675	
					x	x	=	
					x	x	=	
					x	x	=	
subtotal A								2,87895

HONORÁRIOS DE MANIPULAÇÃO:					
	forma farmacêutica	quantidade	F (€)	factor multiplicativo	valor
valor referente à quantidade base	Pomada	100 g	4,88	x 3	= 14,64
valor adicional		200 g	x 4,88	x 0,01	= 9,76
subtotal B					24,40

MATERIAL DE EMBALAGEM:				
materiais de embalagem	preço de aquisição (s/IVA)	quantidade	factor multiplicativo	valor
<del>Unguento 100/140 ml</del>	<del>1,14</del>	x 1	x 1,2	= <del>1,368</del>
<del>o 200/280 ml</del>	<del>1,52</del>	x 1	x 1,2	= <del>1,824</del>
subtotal C				3,192

PREÇO DE VENDA AO PÚBLICO DO MEDICAMENTO MANIPULADO:

(A + B + C) x 1,3 = 39,6122

+ IVA = 2,3767


D = 41,99 €

DISPOSITIVOS AUXILIARES DE ADMINISTRAÇÃO:			
dispositivo	preço unitário	quantidade	valor

E =

PREÇO FINAL: D+E =

Operador: 

Supervisor: \_\_\_\_\_

Rubrica do Director Técnico	Data
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# *Marketing Plan*



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## I. Sumário Executivo

A UCInova é uma prestes a ser Júnior Empresa a ser edificada por um grupo de estudantes na Faculdade de Farmácia da Universidade de Coimbra. Segundo a JADE, a organização que interliga estas empresas, uma Júnior Empresa é, em termos legais, uma organização sem fins lucrativos composta exclusivamente por estudantes universitários. Estas organizações ambicionam desenvolver e vender os seus produtos, os quais podem ser intangíveis (serviços) ou tangíveis (produtos) sempre relacionados com a respetiva área de estudos. No desenvolvimento da organização, que é muito semelhante ao de uma normal empresa, é sempre tida em conta o superior interesse do desenvolvimento dos *skills* dos membros com o lema "Aprender fazendo".<sup>1</sup> Esta filosofia também significa que os seus colaboradores não podem ser pagos pelo trabalho que desempenham e que todo o lucro é apenas canalizado para este fim consoante as necessidades da empresa. Exemplos são cursos, workshops, congressos, meetings ou quaisquer outras atividades com finalidade a desenvolver os *skills*.

A competição que se sente nas carreiras profissionais do panorama português, neste caso particular do sector farmacêutico, está a impulsionar os estudantes da faculdade mencionada a encontrar formas novas e mais eficazes de se auto-enriquecerem e estabelecerem o máximo de ligações ao mundo profissional o quanto antes. Deste modo, a determinação em nos moldarmos em melhores e mais preparados profissionais é sem dúvida o grande motor por detrás deste projeto.

Portanto, como está a dar os seus primeiros passos no mundo empresarial, a UCInova decidiu primeiro virar-se para um ou mais produtos seus para os colocar no mercado. Nós, os oito membros fundadores sabíamos que não queríamos somente transparecer os elevados níveis de qualidade que pode ser alcançada por estudantes da nossa classe profissional, mas também de colocar alguma da mística da cidade de Coimbra e do nosso curso uma vez que se trata claramente de algo que podemos usar como nossa vantagem.

Como bem se sabe, os antigos farmacêuticos eram conhecidos por produzirem uma vasta gama de medicamentos e outros produtos na maioria das vezes em laboratórios rudimentares. Carregando estas tradições ponderamos se seria possível as trazer ao mesmo tempo que ajustaríamos um humilde sistema de gestão industrial atual, i.e. organizado com um semelhante esquema de departamentos que as indústrias hoje em dia apresentam. Os cosméticos encaixam perfeitamente no conjuntos de produtos que pretendemos desenvolver, eles têm uma forte ligação à profissão farmacêutica, não requerem muitas imposições legais para poderem ser vendidas e alguns podem ser produzidos com as condições que temos à disposição.

Estas ambições guiaram-nos a criar uma nova divisão dentro da Júnior Empresa, *Apotheca*. Esta será a cara que apresentaremos a ambos os nichos de mercado que identificamos, os populares que valorizam o valor da produção manual e os turistas que visitam Coimbra. Se tivermos sucesso, apresentaremos algo sem precedentes e daremos um importante passo para o nosso profissionalismo.



## I. Executive summary:

UCInova is a soon-to-be Junior Enterprise to be established by a group of students in the Faculty of Pharmacy of the University of Coimbra. According to JADE, the organization that bridges these enterprises together, a Junior Enterprise is, in legal terms, a non-profitable organization comprised exclusively by college students. These organizations ought to develop and sell their products, which can be intangible (services) or tangible (products) and always related to their area of studies. In the process of building this organization that is, in fact, very similar to that of a real enterprise, they always bear in mind the higher interest of developing their skills with the motto "Learn by doing".<sup>1</sup> This philosophy also means that its collaborators can not be paid for their work, and all of the profit is channeled instead towards the development of their skills according to what the enterprise might need. This might range from courses, workshops, congresses, meetings or any other activity for skill development.

The competition felt in the professional careers of the Portuguese panorama, in this particular case the pharmaceutical sector, is leading students from the mentioned faculty to find new and more effective ways for self-enrichment and to get as much connections as possible to the business world as early as they can. This way, the determination in shaping ourselves into better, more prepared and competitive professionals is definitely the great engine behind this project.

Hence, as it is about to give its first steps in the business world, UCInova decided to first lean on one or more products of its own to place in the market. We, the eight founding members, knew that we wanted not only to show the high quality standards that can be achieved by students from our professional class but also, to offer some of the mystic from the city of Coimbra and our course as this is something that we can use as our advantage.

As it is well known, ancient pharmacists were known for manufacturing a wide variety of medicines and other products most times at rudimental laboratories. Carrying these traditions in our backs we wondered whether we could bring them back while we adjusted a current industry-like management system, i.e. organized with some of the departments industries have nowadays. Cosmetics are a perfect fit for the products than we wish to develop, they have a strong relation to the pharmacy profession, they do not require many legal impositions to be sold and some of them might be produced with the conditions we have.

These ambitions lead us to come up with a new division within the junior enterprise, *Apotheca*. This is the face we shall introduce to both of the niche markets identified, the

locals who value the traditional manufacturing and the tourists who visit Coimbra. If we succeed, we will present something unprecedented and take an important step towards our professionalism.

Note: to ease up the process, all non-locals inquired in the market study will be addressed as tourists since they have, in most cases, a similar relationship with the city.

## 2. Market environment

### 2.1 External factors

#### 2.1.1 Demography

For logistic reasons, we will restrict our business to the Portuguese city of Coimbra. According to a survey by PORDATA, Coimbra is the most densely populated city of the center region of the country (center being the region between the metropolitan area of Oporto to the north and the metropolitan area of Lisbon and Alto Alentejo to the south expanding from the Atlantic ocean to Spain) with an estimate of 70.775 inhabitants in 2011.<sup>2</sup> Another issue to have in mind is the aging of the population that is clearly noted by the predominance in number of the elder population in the center of the city.

Coimbra is also a quite popular touristic destination. In fact, INE has reported in the previous year a growth of both national and international tourists (respectively 7.9 and 12.3%) in the area of Coimbra and these numbers are expected to keep increasing over the next years.<sup>3</sup> Also, through self-carried research I realized that the flow is currently bigger from April to October, mainly by large groups during the first half and individuals the rest of the time.

#### 2.1.2 Economic factors

The press media is unanimous; after a quick search in the main newspaper website's there is an idea, despite the lack of guarantee for the long run, that Portugal's economy is experiencing a positively evolution to more favorable levels.<sup>4,5</sup> The general population is, therefore, naturally confident with an increase in the purchasing power during the following times. However, a recent study determined that when shopping, the average Portuguese is still valorizing the price over the quality.<sup>6</sup> This way, we can expect a delay in the increase of the sales volume in relation to the economic growth experienced in the country.

There are no predictable economic factors regarding foreign tourists.

### 2.1.3 Legal factors

There are no expected legal influences or imminent laws that could affect the products we intend to develop in relation to the locals.

Nevertheless, if we turn ourselves to the international tourists that might be our customers, assuming they have travelled by plane, they are imposed a maximum allowed volume per container of 100mL.

### 2.1.4 Socio-cultural conditions

The main socio-cultural condition regarding our area of business is naturally the increased awareness there is towards physical appearance. This phenomenon is not specific to any age group in particular and it is increasingly less gender biased according self-research near a beauty products seller.

Products that are natural or traditionally manufactured are experiencing an increasing preference in a time when there is such a strong propaganda against what is considered the opposite. This comes out as a higher perception of value for the consumer, i.e. the customer sees a product that is natural or traditionally made with an increased value resulting in most situations in a valid excuse for a higher price he is willing to pay.

An aspect that should not be neglected is online shopping. When comparing to other developed countries, Portugal registered in early years a delay in this shopping preference. However, a recent study revealed that this is rapidly changing and actually foresees some potential to this market segment. The same study also points the "beauty and health" sector to display the third highest growth on sales, only to be surpassed by the "food and drinks" and the "baby and child products" markets.<sup>7</sup>

In relation to the tourists, it is important to mention how all the business areas turning around them are thriving and are constantly concerned into becoming more competitive and distinguished.

### 2.1.5 Technological changes

There are no expected technological influences that could affect the products we intend to develop since we are turning ourselves to the traditional practices and expect to make a difference that way.

### 2.1.6 Competitive market

In direct confront we face very strong and well-established companies (or brands) with high customer-perceived value. A tremendous amount of the cosmetics in existence have earned loyal customers and have invested greatly in the development of their products.

If we look at our product as a cosmetic that is also a souvenir or as a product that resembles past traditions, we face an entirely new group of competitors whose customers would not have a set of ideas established on beforehand.

### 2.1.7 Political factors

There are no expected political influences that could affect the products we intend to develop.

## 2.2 Internal factors

### 2.2.1 Equipment

UCInova does not display any equipment of its own; the association would have to rely on the will of the faculty to have the necessary equipment borrowed for its activities. There we find the necessary apparatus and excellent facilities for the development, small-scale manufacture and quality control of several types of simple cosmetic products.

### 2.2.2 Technology available

Requiring existing yet not widely disclosed technology; the faculty has the ideal environment to access this kind of information and to allow research towards optimization of processes.

### 2.2.3 Human resources

Despite their lack of experience, UCInova counts on highly motivated members with a good capacity to adapt to instabilities. This capacity perfectly fits the concept of a starting enterprise, which needs to rely on a high flexibility until it can make a stand in the market.

Furthermore, with the predicted status of *alumni*, it is foreseen the establishment of privilege connections between the current members and older ones (*alumni*) which can give an insight of the professional world.

At last, there is also a chance of outsourcing manpower from a social organization in Coimbra that is used to produce some of these cosmetics.

#### 2.2.4 Financial resources

UCInova does not possess any significant financial investment from the beginning; it rather has been focusing on several activities in order to raise funds. A positive aspect is that its members are not remunerated, hence there is a lower risk of developing an economic debt within the enterprise.

One source could be to apply to a fund. To outsource the social organization stated in 2.2.3, would give us better perspectives.

#### 2.2.5 Values

Our values are ambition, compromise and excellence — ACE.

#### 2.2.6 Objectives

To value a multidisciplinary set of skills by seeking beyond borders through diversification, exploration of knowledge from the several pharmaceutical areas and to build bridges to the professional world in a close link between entities and students.

### 2.3 SWOT analysis

#### 2.3.1 Strengths

1. Privileged connection with experienced professionals;
2. Easy development of knowledge;
3. Constant renewal of members, could mean higher flow of ideas and constantly motivated members;
4. Visibility, credibility and contacts by being connected to the faculty;
5. We portrait strong traditions;
6. Appealing prices.

#### 2.3.2 Weaknesses

1. Subjected to students availability;
2. Borrowed equipment and facilities;
3. Little money for investment;
4. Capacity of producing only small-scale batches;
5. We are far from the costumer when he faces the product, giving us a hard time in receiving feedback.

### 2.3.3 Opportunities

1. Coimbra appears to be an emergent touristic city;
2. Increasing awareness in caring for physical appearance;
3. Popularity of hand-made and traditional products.

### 2.3.4 Threats

1. Competition from another faculty disputing our niche with the idea of selling a "product with the spirit of Coimbra";
2. Fidelity of costumers to other brands;
3. Desertification of traditional commerce.

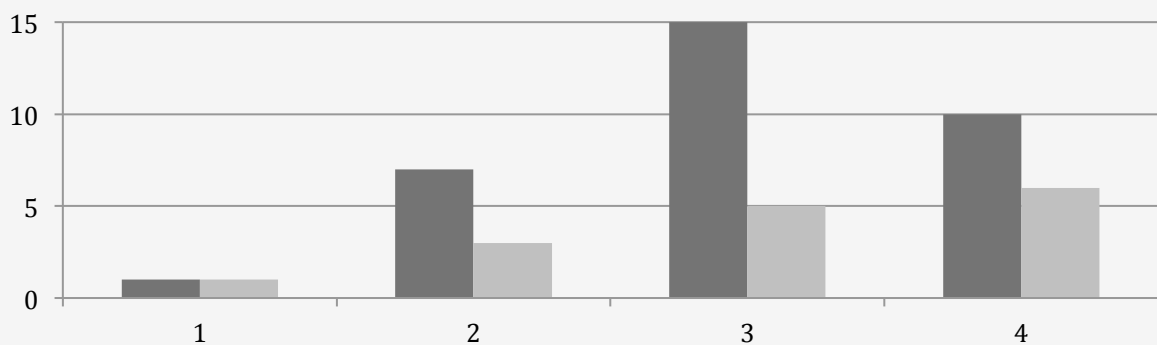
## 3. Buyer persona

As previously stated UCInova will exploit two different target markets in its location of business, one comprised by the locals of Coimbra and the other by its tourists.

### Target market I:

This group of buyers is comprised by people who regularly spend some time around the city center. Most of them are locals, hence the denomination given, and they are also the main costumers of the traditional commerce shops.

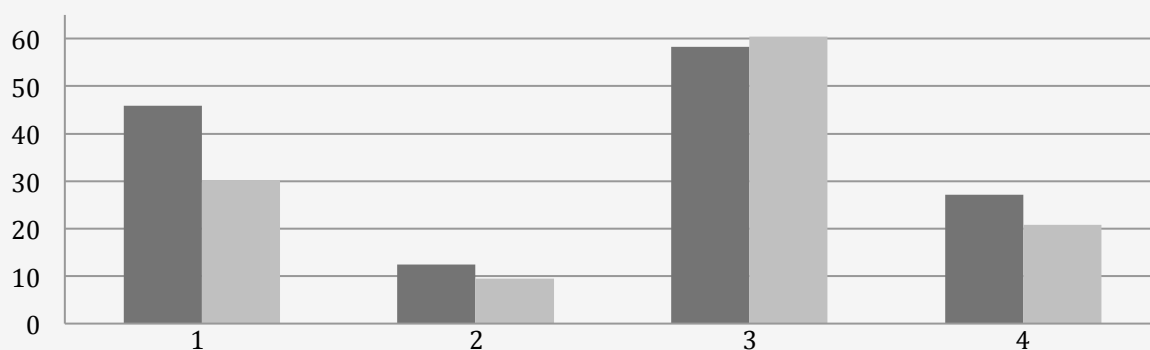
Through the elaboration of a market study in the corresponding area and at different times of the day, we realized that most of the people who can usually be found in these locations are adults and elder as illustrated in the following graphic (Fig.1):



**Fig. 1:** Graphic representation of age and gender distribution of the population found in our area of business. Dark grey for woman and light grey for men. In the y-axis we represent the number of interviewed; the x-axis the relative age group (from 1 to 4 respectively; teenagers, young adults, adults and elders).

When in need to buy cosmetics, people tend to resort in most cases to supermarkets (Fig. 2). This did not come out as a surprise, what was in fact interesting to state, was how pharmacies, which came only in second place to the mind of those who wish to buy these products, registered a preference not much far from the leader (around 45% to 60%). All other shops have shown a relatively lower preference.

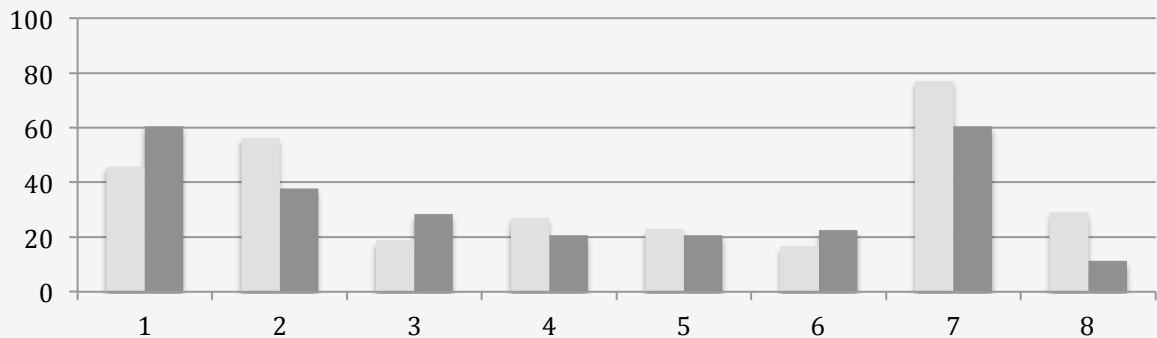
Answers from the tourist's group are also considered in the chart, however they are only considered for the sake of gathering a higher number of feedbacks. As we might see, preferences were similar with the exception of the choice of the pharmacy, which turned out to be less popular for this particular group. Therefore we are led to conclude that people who live in Coimbra might have a particular preference for the pharmacies when they wish to buy cosmetic products.



**Fig. 2:** Graphic representation of the places that came to the mind of the interviewed when asked where they use to buy cosmetic products. In dark grey, people who live in Coimbra (n=48) and in light blue people who claim not to live in the city (n=53). The y axis represents the percentage of interviewed who have mentioned that option; the x axis represents the market places (from 1 to 4 respectively; pharmacies, stores specialized in over the counter drugs, supermarkets and beauty stores. No other options were mentioned.

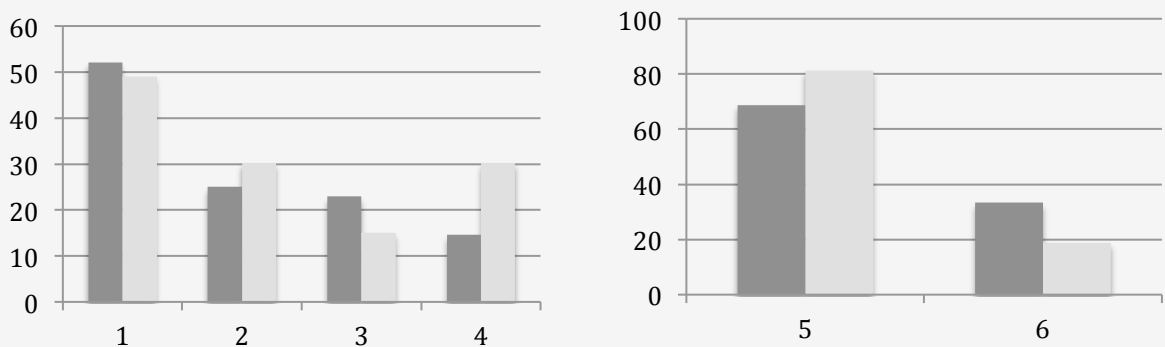
Then, from a group of previously listed cosmetics and related products, we questioned which were the favorite ones (Fig. 3) as well as the favorite scent (Fig. 4).

At first sight two of the products stand out by showing more than 50% of the preference. These are the liquid soap and the hydrant cream with respectively around 58% and 80% of interest. In third place, however not much distanced from other options, we find the soap bar with 42% of the preference. All the other products reached around 20% of the preference of the audience.



**Fig. 3:** Graphic representation of the favorite products from a given list of options. The information from both of the target groups is gathered in a single chart to ease up the analysis. Light grey for locals (n=48) and dark grey for tourists (n=53). The y axis represents the percentage of interviewed who have mentioned that option; the x axis represents the different products (from 1 to 8 respectively; Soap bar, Liquid soap, Lipstick, Lip ointment, Aromatic candle, Aromatic reed diffusers, Hydrant cream, Skin ointment).

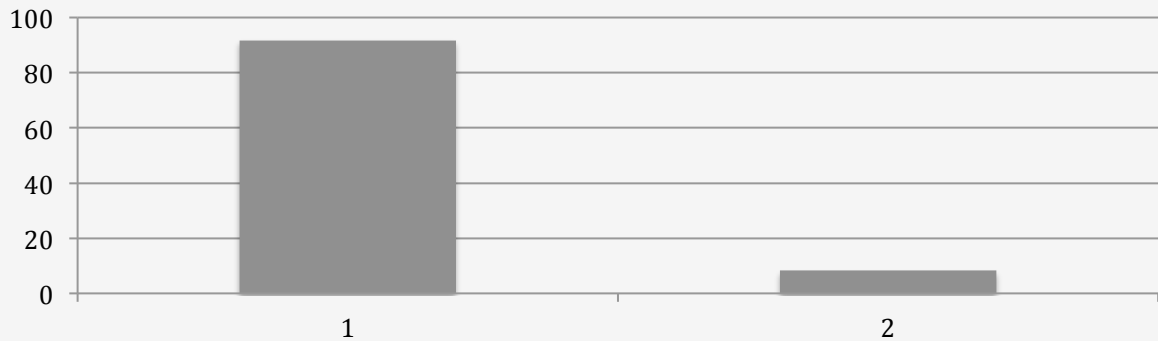
On the other hand, only one scent distinguishes itself from the rest of the options by surpassing 50% of the preferences, this is the floral scent (52%), being followed by the fruity scent (25%). In the strength of the perfume, there is a higher concordance with around 63% of the interviewed choosing the smooth ones.



**Fig. 4:** graphic representations of the favorite types of scents (left chart) and strengths (right chart). Due to the relation of the information, both of the charts were placed side to side. Dark grey for locals (n=48) and light grey for tourists (n=53). The y axis represents the percentage of interviewed who have mentioned that option; the x axis represents the different options (from 1 to 6 respectively; Floral, Fruity, Woody, Citric, Smooth and Strong).

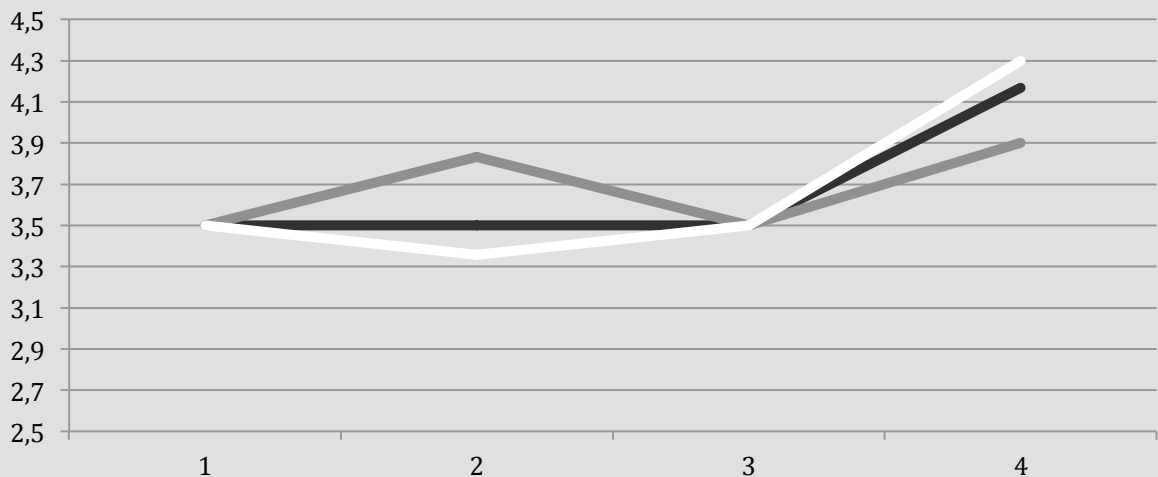


Then we indirectly witnessed the appreciation assigned to a product with the characteristics we can offer, i.e. a hand-made product that portrays some traditions and spirit of the city of Coimbra. When asking whether they would intend to offer one of these products to someone, answers recorded were positive for about 92% of the situations (Fig. 5).



**Fig. 5:** Graphic representation of the local's answers when questioned if they would like to offer a product such as this to someone close. The y-axis represents the relative percentage of answers; the x-axis represents respectively Yes (1) and No (2).

Finally, after making the person comfortable along the interview we asked how much they would be interested to pay for the product. Results are as follows (Fig. 6):



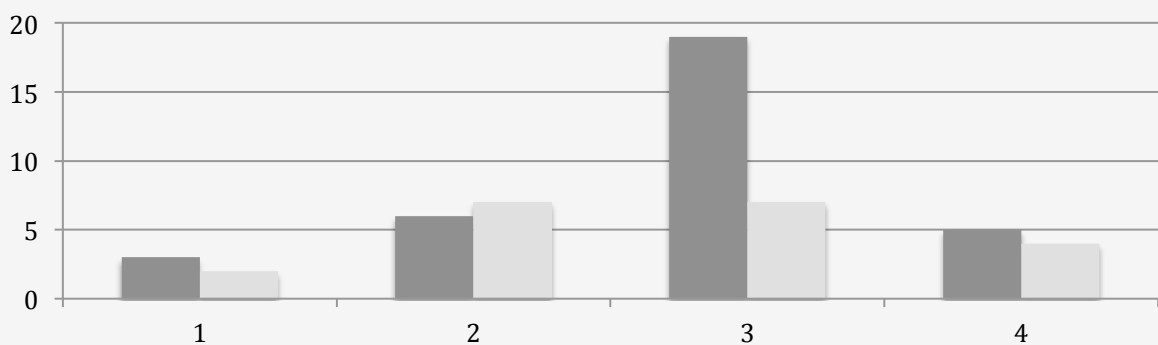
**Fig. 6:** Graphic representation of perceived value for the locals target market; the y-axis represents the perceived value in €; the x-axis represents the age group (from 1 to 4 respectively; teenagers, young adults, adults and elder); ◦ for women, ◐ for men and ◑ for both.

Women assigned a higher perceived value, in particular in the older age group, which showed a great contrast in relation to the male group. The mean value determined for all of the locals was around 3.50€ (exactly 3.72€).

## Target market 2

This group of buyers is comprised by people who see Coimbra as a place to visit and discover. Both Portuguese and foreign people might fit this group since Coimbra is now increasing its popularity as a touristic destination. For this reason we address this group simply as the tourist's. Tourists are generally found around the historic center of the cities however, for obvious reasons they are not found in supermarkets, pharmacies or specialized beauty-products stores. Souvenir stores are the most likely ones to captivate their interest.

We adjusted our market study to this group by simple asking if the interviewed was from Coimbra. This way we estimated the demography as illustrated in the following image (Fig. 7):

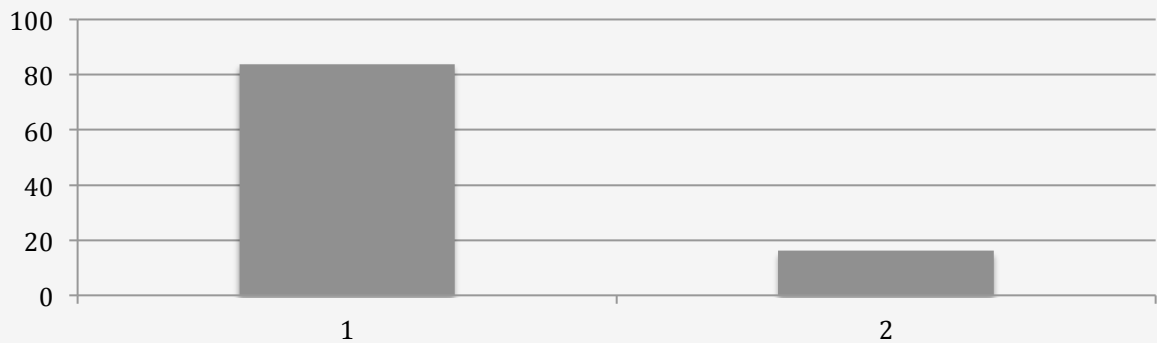


**Fig. 7:** Graphic representation of age and gender distribution of the population found in our area of business. Dark grey for woman and light grey for men. In the y-axis we represent the number of interviewed; the x-axis the relative age group (from 1 to 4 respectively; teenagers, young adults, adults and elders).

Looking at the data we gathered we can see a good distribution between gender and the older three groups with an exception for the male adults, this might be due to the existence of businessmen in Coimbra.

This group's opinion on the product is previously illustrated (figures g and h). The most popular products are the soap bar and the hydrant cream with respectively 61% and 60%. The third most voted product is the liquid soap with about 38%. Fortunately the preference over the scents was similar although not so demarcated for this group.

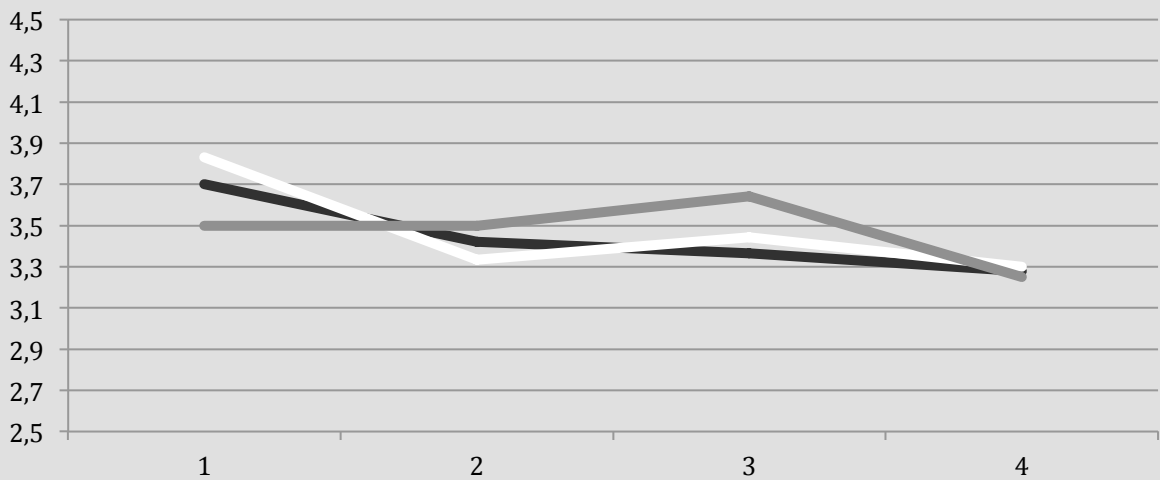
We also determined the indirect interest of this group in the product we attempt to develop by asking the same question "Would you like to offer a product like this to someone?", results are shown bellow (Fig. 8).



**Fig. 8:** Graphic representation of the tourist's answers when questioned if they would like to offer a product such as this to someone close. The y-axis represents the relative percentage of answers; the x-axis represents respectively Yes (1) and No (2).

Results were once again satisfactory and in line with the local's group, with around 83% of the interviewed replying "Yes".

At last, we determined the perceived value (Fig. 9) for this market group.



**Fig. 9:** graphic representation of perceived value for the tourists target market; the y-axis represents the perceived value in €; the x-axis represents the age group (from 1 to 4 respectively; teenagers, young adults, adults and elder); • for women, • for men and • for both.

The first conclusion we made was how the mean value was similar to the previous group (around 3,50€). However, the older group shown a relative lower result in comparison to the average.

#### 4. Market positioning

After determining the three most popular products in our business location, we went outside looking for a different variety of stores that could sell them. There we searched for what our competitors were offering and gathered the following information:

Table 1: Variety of soap bars in the market\*:

Competitors	Medium price	Fragrances available	Quantity	Comments
Continente - glycerin soap	0.45€	Honey/Fruity/Natural	100 g	Simple plastic package, plain bar — "Core product"
Palmolive	0.75€	Honey/Fruity/Herbal	90 g	Paper package
Confiança	1.90€	Sulfur/Tar/Floral	75 g	Paper package, retro style
Confiança - glycerin soap	2.15€	n.a	125 g	Plastic package with inscriptions; plain bar
Klorane	4.95€	Cologne/Sweet Almonds/Lavander	250 g	Paper package
Ach'Brito	3.50€	Floral/Fruity/Goat Milk	90 g	Cardboard package, retro style
Castelbell	8.20€	Fruity/Floral	250 g	Elegant paper package with ribbon

Table 2: Variety of hydrant creams in the market\*:

Competitors	Medium price	Quantity	Comments
é	1.40€	200 ml	Plastic opaque cup with sticker; odorless — "Core product"
Nivea	3.50€	150 ml	Round metallic can; odorless
Johnson's	3.00€	200 ml	Plastic cup; odorless
Barral	7.80€	80 g	Aluminum tube in card box; unknown scent
Le Petit Marseillais	5.00€	250 ml	Plastic colorful cup; sweet scent
Castelbel	11.75€	50 ml	Plastic elegant tube with seal;
L'Oreal Paris	13.00€	50 ml	Acrylic cup with golden lid; blended with essential oils

Table 3: Variety of liquid soaps in the market\*:

Competitors	Medium price	Fragrance	Quantity	Comments
é	1.10€	Neutral	500 ml	Transparent plastic — "Core product"
Palmolive	2.50€	Honey/Fruity	300 ml	Transparent plastic
Nivea	3.00€	Neutral	250 ml	Opaque white with blue dispenser
Dove	3.50€	Neutral/Cucumber	250 ml	Opaque white with color dispenser
Castelbel	12.70€	Secret	300 ml	Opaque with seal

On one hand, we have brands that belong to big commercial stores, like "é" or "Continente", people that are going to buy cosmetics look for these brands when they wish for the most economic product available. Despite the fact that it is widely known that generic brands are cheaper, the respective products are also minimalistic and reinforce this idea.

On the other hand, for the ones who care for a special product, Castelbel is a cosmetic manufacturer providing a wide variety of products. Unlike traditional manufacturers, it displays a product that most times has a connection to something that is the source for inspiration of its distinctive packages. Furthermore, it sells them only in selected places.

To sum up, we could perceive that the most expensive products are offering a more aesthetic packaging (only in rare cases these can be reusable) and more elaborated scents. Essentially for the ones who value a symbolic product with history, Apotheca opens a window to the past by reproducing ancient cosmetics with the full essence of tradition.

Table 4: Variety of souvenirs found\*\*:

Competitors	Approximate price	Quantity	Eternal	Symbolism	Observation
Tee herbs	10€	30 g	Partially	Yes	Metallic box with symbols
Aromatic candle	7€	180 g	Partially	Yes	Painted glass cup; weak scent
Soap bar	5.5€	150 g	No	Yes	Cardboard box with picture

Amongst a wide variety of products, we selected the most related ones. These products tend to display a higher price and they all naturally share some references from the city of Coimbra. What also should not go unnoticed is the fact that most of these products are eternal or have some part that is eternal.

We also noticed how these products did not emphasize much on their brands even though they mentioned them. This occurs naturally once these products are meant to impact a customer once unless they are presented in several different touristic spots such as "Hard Rock Cafe" t-shirts.

\*Data was collected from a pharmacy, a specialized shop and a supermarket; the price value is the average cost when applicable.

\*\*Data collected from the main souvenir shop in the university.

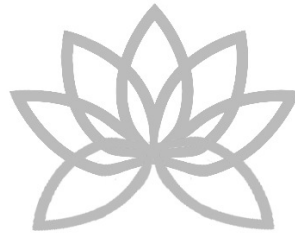
## 5. Brand definition

UCInova does not intend to stick solely to the manufacturing of cosmetics during its lifetime, neither this is by itself a reliable core business activity. In the future we expect to expand to other business areas and perhaps develop some services in our expertise area, therefore it is justifiable to define a new brand for our cosmetic line. Nevertheless, according to our low budget and philosophy of workers, the following terms were agreed as a result of a brainstorming exercise amongst the members instead of resorting to specialized help.

5.1 Name: We wished for a single name that could suit both of our target markets, so it had to sound familiar for the foreign and suitable for the regular Portuguese speaker. Other desired characteristics were to be a name that would resemble the product and easy to memorize.

Hence we came out with the name "Apotheca". This is a variation from a group of similar words that many European countries use as a synonym to Pharmacy, being *Botica* the Portuguese equivalent.

5.2 Symbol: To cross the idea of beauty and simplicity with the so popular from Coimbra shape of the teardrop, we decided to inspire ourselves in lotus flowers. The following symbol was created:



5.3 Slogan: By the book a slogan should preferably be short, catchy and deliver a powerful message. In our brainstorm exercise we came up with the following:

*"Uma peça de Coimbra" — "A piece of Coimbra"*

## 6. Marketing goals

We present below the goals we propose ourselves to accomplish for the following academic year of 2017/2018.

- Establish a business partnership with a souvenir store within the first three months.
- Have a local newspaper to cover our history within the first three months of business.
- Establish a business partnership with more than two pharmacies within the first four months.
- Recover our investment by January.
- Establish a business partnership with a hotel until February.
- Reach 75 evaluations by April on a touristic attraction website such as [www.tripadvisor.com](http://www.tripadvisor.com).
- Have gathered feedback from 50 costumers half year after starting business.
- Reach 25% of awareness of our business amongst the locals by the first year of business.
- Reach more than 1000 followers in our social media page by the first year.
- Reach 25% of awareness of our business amongst the locals by the first year of business.

## 7. Marketing strategy

### 7.1 Marketing mix

#### 7.1.1 Product

As discussed in the next section "Price" (7.1.2) we shall develop products with a slightly higher price when comparing with their most cheap competitors. For this reason, we are more comfortable to present the audience with an augmented product rather than just selling the cosmetic product alone. This will hopefully both justify the customer to pay a higher price and also help promoting it.

Our product's most important factor is the symbology behind their manufacture; hence it is key to invest in a differentiated package, one that can grab the customer's eye, transmit our strong points and if possible, give something to the buyer that can be reusable.

One of the competitors we face, Castelbel, has a similar strategy of selling their products with a greatly aesthetic package and practices the most expensive prices in the market. However, in our market search we could not find a seller for this brand in the city of Coimbra.

Our study also revealed that the most desired products from the array we could develop were soaps (both liquid and in bar) and hydrant cream. If we cross this information with iconic cosmetic products from the past of the pharmaceutical profession, we are driven to an antique product, the *Milk of Roses*.

*Milk of Roses* was since the XIX century one of the most popular lotions amongst high-class women. Despite not being a hydrant cream, this product is very similar as it claimed to cleanse the skin making it delicate and beautiful and also effective in removing sunburns, freckles and redness of the skin.<sup>8</sup> The constitution of this cosmetic is as follows:

Table 5: Constitution of Milk of Roses. Sweet Almond oil was described in an antique recipe's book of a pharmacy<sup>9</sup>:

Water of Roses	2 L
Sweet Almond oil	1 tea spoon
Almonds	45 g
Icing sugar	5g
Water	1 kg
Tartar oil	XV drops



The glycerin soap is not as exquisite or exclusive as the previous cosmetic, however it is still a very popular product according to a survey we did to students that had done internships in pharmacies in the area. This type of soap is also relatively easy to produce and has the possibility to display a wide variety of vibrant colors and to incorporate some botanicals if we wish. This cosmetic's constitution is as follows:

Table 6: Constitution of Glycerin Soap as described in an antique recipe's book of a pharmacy:

Glycerin base	~1 kg
Lard or tallow	400 g
Coconut oil	150 g
Castor oil	225 g
Sunflower oil	20 g
Sodium hydroxide (high purity)	110 g
Purified water	140 g
Essential oils	X drops/ 100g

At last, due to the high popularity it reached in older years we consider an extra product in our portfolio, Vicks. This topical ointment distinguishes apart from the other products by not being a cosmetic, it is instead a natural medicine. The following chart describes its constitution:

Table 7: Constitution of Vicks as described in an antique recipe's book of a pharmacy:

Menthol essential oil	4 g
Camphor essential oil	6 g
Gomenol essential oil	2 g
Thyme essential oil	2 g
Nutmeg essential oil	2 g
Wild pine essential oil	2 g
Eucalyptol	2 g
Vaseline	80 g

Aside from all of this, we should make plans for a smaller version of our products. This would be important so that we can add exclusivity and at the same time make it more affordable and convenient to offer, both of these are good arguments when selling to a hotel.

### 7.1.2 Price

Rather than opting to practice unbeatably low prices similarly to the ones that large industries, which produce and sell in vast amounts do (our research determined approximate prices of 1.10; 0.50 and 1.40€ respectively for liquid and solid soap and hydrant cream), we decided to take advantage of the symbolism we can provide to define a slightly higher price.

In fact, data from the market study we performed, supports our intentions since we determined a medium perceived value of 3.50€ for a product like this and for both of our target markets.

The product cost is still to determine, afterwards we shall determine our ideal price.

Furthermore, since it is likely that we enter the market with more than one product, a discount in the cheaper cosmetic might be applied when two are bought to incentivize costumers to try two products at once.

### 7.1.3 Placement

The Faculty of Pharmacy of the University of Coimbra is located in a health sciences campus crowded mostly by people related to the faculties of pharmacy and medicine. Our collaborators devote themselves to this project from time to time according to their studies and other scholar activities. For these reasons, it would not be conceivable to sell directly to the audience on a regular basis, only of course on specific festive days when a great amount of tourists gather in Coimbra. In this case would be conceivable to make an effort in setting up a stand and to sell directly. Apart from this, we should channel our products through another merchants.

From time to time, in the traditional festivities the city of Coimbra gathers in fact, hundreds of people that could fit our group "tourists" because most of them are not from Coimbra and the majority is driven there because of the traditions of the University. For this reason, we should make the most out of the chance we have and establish stands. Not only there is a higher awareness on the university's traditions these days and a tendency to buy souvenirs but also we can have a privilege connection to the costumers and acquire some valuable feedback.

Day to day we have to focus on two different approaches that are our target markets.

To reach the tourists our best bet would be the souvenir shops. These are becoming quite common in Coimbra and have been suffering a reasonable differentiation of products and services due to the increase of the city's popularity as a touristic destination. Also, we came up of the idea of establishing a partnership with a hotel to sell miniature versions of our products. Reaching to this duo of both hotels and souvenir shops will place us in the two main fronts of market regarding the tourists.

In relation to the locals, we are aware that we are presenting them a product with sentimental value and not so much of a product that is worth for its function, however the places where these are searched are not as linear. For this reason, in our market study we had to consider it as a functional product (in which places do you think we you need cosmetics). The study revealed that the highest share of market for cosmetics was the supermarket, however we foresee that it might be a challenge to enter this market. The second preference were the pharmacies which came out very convenient for us because besides the logical connection they have to our products, they have also shown to have a relatively big flow of costumers who are comfortable with buying products in a pharmacy that are not drugs.

At last, we turn ourselves to the most promising way of shopping, the online shopping. Even though it might not be close to the buyer personas we have determined, we decided we must take part into this. On one hand it would not require that much efforts and on the other hand it would at least guarantee another mean of advertisement.

#### 7.1.4 Promotion

Since our products are still to be released in the market and therefore to get acquainted by the costumers, we expect a natural slow rate of sales during the first times of their life until certain popularity is reach. In order to speed things up, we should channel most of our initial efforts towards the best advertising we can. Also, a good promotion or a plan for a good one might give us enough credibility to convince our direct buyers and ultimately create some synergy with their business. We need therefore, to generate evidence of this advertising.

As expressed before, we intend to invest in the packaging of our product to make it grab more of the costumer's attention. This would be one of our trumps and we expect it to play an important role in the marketing of the same mostly by fomenting impulse-driven purchases, as it is associated with products of sentimental value.

Despite our intention of selling our products in an online website, we need to lead costumers there. Our proposal is in making the most of the informatic tools we have in

disposition, i.e. the social media and the touristic websites. One way is through hype followed by a regular activity. The first target will be the students, they do not fit the best in our target groups, however we have chosen them because they are easily reached in large number; because other young entrepreneur initiatives have shown to caught high curiosity from them and the situation is ideal so that we can perfect our communication strategies before reaching to other groups.

Nevertheless, our strongest point should be the symbolism of the product. It is not enough that we place handcrafted products in the market, they need to tell a story about Coimbra or its students. Only after we can really offer what we aim to "a piece of Coimbra". So far, our research has not glimpsed us yet with an iconic and almost exclusive cosmetic product of Coimbra, this would be our *Ex Libris*. It has however shown us some products that used to be manufactured by pharmacists and conquered at their time a high popularity. Two of them are the *Milk of Roses* and *Vicks*.

*Milk of Roses*, an antique hydrant lotion, gained an important part of its success at the time from the marketing of being a product of Paris.<sup>10</sup> Nowadays, what we can do is to claim to manufacture this product exactly as it was in the past and give it a touch of Coimbra by connecting it to the famous Coimbra's legend of the *Miracle of the roses*. For instance, this could be its name, accompanied of course also by the respective translation to Portuguese "*Milagre das Rosas*". Furthermore, its package should be decorated in a way to resemble this classic tale.

*Vicks* is comprised of a base of vaseline with several essential oils. According to the same recipe book where its composition was taken, this ointment has cough, cold and flu relieving properties thanks to its botanic substances. Hence, there is an advantage in releasing this product later, after learning something from our pioneer products.

At last, the glycerin soaps. This product is not exclusive to Coimbra, neither it is hard to find in the market. However it appeared to grab some interest in the market study and it is conceivable to produce with the means we have. To give this product the extra promoting factor, we should associate a soap to each of the eight existent faculties in the University of Coimbra. This strategy often creates some empathy with the costumer and it is as easily as coloring the soap with the respective color and perhaps adding some matching botanicals to the bar. For an elegant visual impact we might add a colored ribbon wrapping the package.

To better expose our products some visual marketing material such as posters or exhibiting boxes should be developed. It is necessary to keep on deepening our historic research and conceive both an appealing and accurate advertisement.

## 8. Marketing implementation

Develop products in the laboratory	█										
Negotiate material's pricing	█	█									
Determine an aesthetical package	█	█	█								
Evaluate outsourcing of production		█	█								
Presentation document			█	█							
Publicity material			█	█							
Website online			█	█							
Brand registration				█	█						
Buy mail domain				█	█						
Business with souvenir shop				█	█	█					
Business with hotel				█	█	█	█				
Business with pharmacies				█	█	█					
Stand on the <i>Latada</i>				█	█						
Advertising program				█	█	█	█	█	█	█	█
Get feedback and review marketing plan						█	█				█
Higher attention towards tourist advertising								█	█	█	█
Stand on <i>Queima das fitas</i>											█

Jul. Aug. Sept. Oct. Nov. Dec. Jan. Fev. Mar. Apr. May

## 9. Evaluation and control

- A narrow relation with our direct buyers is encouraged. This way we can control such factors as number of sales on a regular basis and better determine the impact of our actions.
- Monthly assessment of goals accomplished and strategy evaluation;
- Monthly assessment of profit and spending on advertisement;
- Trimestral evaluation of the relation advertisement-number of sales;
- Evaluation of satisfaction or new market studies should be performed in order to analyze our product's success or promote awareness towards them.

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II. Attachements



JÚNIOR INICIATIVA DA FACULDADE DE  
FARMÁCIA DA UNIVERSIDADE DE COIMBRA  
Estudo de Mercado

**ANEXO II**

Faculdade de Farmácia da  
Universidade de Coimbra  
Pólo das Ciências da Saúde  
Azinhaga de Santa Comba  
3000-548 Coimbra  
ucinova.geral@gmail.com

Preencher pelo entrevistador:

1	É de Coimbra?	Sim																	
		Não																	
2	Para comprar produtos de higiene/cosmética, em que sítios pensa? *não dar logo hipóteses	Farmácia																	
		Parafarmácia																	
		Supermercado																	
		Perfumarias/ Lojas de Cosmética																	
		<b>Outro:</b>																	
		1.Sabonete barra																	
3	Dos seguintes produtos, alguns lhe chamam mais à atenção?	2.Sabonete líquido																	
		3.Batom																	
		4.Bálsamo lábios																	
		5.Vela aromática																	
		6.Ambientador																	

Anexo II

1





