



MEMORANDUM

To: Julio Frenk
University President

From: Linda L. Neider
Chair, Faculty Senate

A handwritten signature in blue ink, appearing to read 'L. Neider', is written over the 'From:' field.

Date: October 1, 2021

Subject: Faculty Senate Legislation #2021-12(B) – Creation of an Online Master of Science (M.S.) in Skin Biology and Dermatological Sciences, Department of Dermatology and Cutaneous Surgery, Miller School of Medicine

The Faculty Senate, at its September 29, 2021, meeting, had no objections to the creation of an online Master of Science in Skin Biology and Dermatological Sciences, Department of Dermatology and Cutaneous Surgery. This program is a repackaging of exiting courses that are currently offered in a hybrid program, to provide an online version of the program..

The proposal is enclosed for your reference.

This legislation is now forwarded to you for your action.

LLN/rh

Enclosure

cc: Jeffrey Duerk, Executive Vice President and Provost
Henri Ford, Dean, Miller School of Medicine
Jie Li, Associate Professor, Program Director, Miller School of Medicine

CAPSULE: Faculty Senate Legislation #2021-12(B) – Creation of an Online Master of Science (M.S.) in Skin Biology and Dermatological Sciences, Department of Dermatology and Cutaneous Surgery, Miller School of Medicine

PRESIDENT'S RESPONSE

APPROVED:  DATE: 10/15/21
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: Henri Ford, Dean, Miller School of Medicine

EFFECTIVE DATE OF LEGISLATION: IMMEDIATELY
(pending any additional approval by the Board of Trustees)

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED): _____

NEW: MASTER OF SCIENCE IN SKIN BIOLOGY & DERMATOLOGICAL SCIENCES (ONLINE)

In Workflow

1. PG Initial Review (pxm491@miami.edu)
2. PG University Accreditation (pxm491@miami.edu)
3. PG GR School (t.plantan@miami.edu; gprado@miami.edu; amas@miami.edu; jlopez4@miami.edu)
4. PG Graduate Council (amas@miami.edu; t.plantan@miami.edu; gprado@miami.edu; jlopez4@miami.edu)
5. PG GR Dean (gprado@miami.edu)
6. PG FS Office for GWC (rhardeman@miami.edu; yvaldes1@miami.edu; leslie.leonard@miami.edu)
7. PG FS GWC (rhardeman@miami.edu; yvaldes1@miami.edu; leslie.leonard@miami.edu)
8. PG Faculty Senate (rhardeman@miami.edu; yvaldes1@miami.edu; leslie.leonard@miami.edu)
9. PG FS for President (rhardeman@miami.edu; yvaldes1@miami.edu; leslie.leonard@miami.edu)
10. PG FS President Approved (rhardeman@miami.edu; yvaldes1@miami.edu; leslie.leonard@miami.edu)
11. PG Notify SACSCOC (pxm491@miami.edu)
12. PG Registrar (j.zwanziger@miami.edu; kbeckett@miami.edu; pquiles@miami.edu)

Approval Path

1. Thu, 08 Apr 2021 19:41:45 GMT
Patty Murphy (pxm491): Rollback to Initiator
2. Thu, 22 Apr 2021 18:56:22 GMT
Jenny Vargas (j.zwanziger): Rollback to Initiator
3. Mon, 02 Aug 2021 20:07:33 GMT
Patty Murphy (pxm491): Approved for PG Initial Review
4. Mon, 02 Aug 2021 20:13:12 GMT
Patty Murphy (pxm491): Approved for PG University Accreditation
5. Tue, 10 Aug 2021 15:12:13 GMT
Tiffany Plantan (tplantan): Approved for PG GR School
6. Fri, 20 Aug 2021 20:21:28 GMT
Tiffany Plantan (tplantan): Approved for PG Graduate Council
7. Sat, 21 Aug 2021 23:37:18 GMT
Guillermo Prado (gprado): Approved for PG GR Dean

New Program Proposal

Date Submitted: Fri, 23 Apr 2021 00:07:50 GMT

Viewing: Master of Science in Skin Biology & Dermatological Sciences (Online) : NEW

Last edit: Wed, 28 Jul 2021 00:01:37 GMT

Changes proposed by: Jie Li (j.li)

Date Entered in CaneLink

Date Entered in CaneLink

Please list the authors of this proposal including name, rank/title, program/department, and school.

Proposer(s) Name

Jie Li, MD, PhD, Associate Professor
Graduate Program Director
Master of Science in Skin Biology and Dermatological Sciences
Department of Dermatology and Cutaneous Surgery
Miller School of Medicine

Effective Term

Fall 2022

First Term Valid

Fall 2022

Career

Graduate

Academic Structure

School/ College	Department
Miller School of Medicine	Dermatology and Cutaneous Surgery

Plan Type

Major and/or Degree

Degree Type

Master's

Degree Name

Master of Science

Proposed Plan Code

SBDS-MS

Proposed CIP Code

26.9999 - Biological and Biomedical Sciences, Other.

Plan Name

Master of Science in Skin Biology & Dermatological Sciences (Online)

Will there be any subcomponents within the program such as concentrations, specializations, thesis/non-thesis options, or tracks?

No

Program Instruction Mode

Online-Both

Where is the program offered?

Location	Please provide the % of instruction at each location.
Online	100%

Program Length (Years)

1-2

Total Credits

30

To Be Published in the Academic Bulletin

Program Overview

Program Overview

The online Master of Science in Skin Biology and Dermatological Sciences (SBDS-MS) program prepares students for careers and leadership in skin science and industry. The curriculum covers basic science and laboratory research techniques, as well as management skills, grant & regulatory issues, enterprise issues, and clinical problems.

The Master of Science in Skin Biology and Dermatological Sciences program is unique in its depth and breadth because it covers basic science in skin biology and laboratory research techniques. In addition, the degree considers a variety of additional skills to help students succeed in industry and academia, for it considers management skills, grant writing, regulatory issues, enterprise issues, and clinical problems.

Skin biology includes many biological processes: development, perpetual differentiation and barrier maintenance, stem cell biology, tissue repair and regeneration, neogenesis, native and adapted immunity, and genetic disorders just to name a few. The areas represented in our research base include skin biochemistry, genomics, immunology, microbiology, inflammation, pharmacology, cell and stem cell biology as well as clinical research using areas of a variety of skin disorders, aging, aesthetics, cancer, and wounds as a clinical touchpoint.

Training in all these aspects is currently not provided by any single program in the United States. Thus, a Master's degree in Skin Biology and Dermatological Sciences will impart a unique skill set and research background. There is a growing need for knowledgeable healthcare professionals. Healthcare providers, policy makers, research scientists, academic practices in the US and in the rest of the world, as well as makers of skin and skincare products from devices, drugs and cosmeceuticals and their

workers need trained personnel. The coursework in this degree program will offer essential scientific knowledge, management, and administrative skills that will be helpful for individuals desiring a skin sciences oriented career.

Contact

Jie Li, MD, PhD, Graduate Program Director
 Andrea Jimenez, Graduate Program Manager
 MS in Skin Biology and Dermatological Sciences
 305 243 6875

Program Mission and Goals

Mission

Our mission is to foster future generations of skin scientists, physician scientists and industrial leaders in skin care as well as skin related drug and device development.

Goals

In alignment with the university's strategic vision, the goals of the program are:

- Train Master's students in a focused knowledge area of Skin Biology and Dermatologic Science; and
- Train Master's students in requisite research and research management skills.

Student Learning Outcomes

Effective programs focus on the design and improvement of educational experiences to enhance student learning. Expected student learning outcomes specify the knowledge, skills, values, and attitudes students are expected to attain in the program. Please include an educational mission statement for the program, educational goals/objectives for the program, and specific student learning outcomes that you will use to assess the program. Student learning outcomes should start with "Students will be able to..." or "Students will demonstrate..." or similar phrasing.

Student Learning Outcomes

- Students will demonstrate advanced knowledge of the fundamentals of skin biology.
- Students will demonstrate advanced knowledge of dermatological science and skin disorders.
- Students will demonstrate advanced knowledge of innovation, technology and regulations in the field of skin biology and dermatological sciences.

Curriculum Requirements

Curriculum Requirements

Code	Title	Credit Hours
DER 601	Introduction to Dermatology - COURSE PROPOSAL IN PROGRESS	1
DER 603	Skin Biology and Pathophysiology	3
DER 605	Microbiology and Immunology of the Skin	3
DER 606	Dermato-epidemiology	2
DER 607	Dermatopharmacology	2
DER 608	Photobiology and Photomedicine	1
DER 609	Skin Carcinogenesis	2
DER 610	Clinical Skin Diseases	2
DER 611	Visualizing the Skin	2
DER 612	Grant Writing - COURSE PROPOSAL IN PROGRESS	1
DER 613	Techniques in Skin Research	1
DER 614	Innovation in Dermatology	1
DER 615	Dermatology Health Care Delivery	1
DER 622	Introduction to Dermatopathology - COURSE PROPOSAL IN PROGRESS	1
DER 623	Techniques in Skin Research- II	1
DER 631	Advances in Dermatology	1
DER 632	Advances in Dermatology	1
DER 633	Advances in Dermatology	1
DER 641	Frontiers in Sciences	1
DER 642	Frontiers in Sciences	1

DER 643	Frontiers in Sciences	1
Total Credit Hours		30

Plan of Study

Sample Plan of Study

Year One		Credit Hours
Fall		
DER 601	Introduction to Dermatology	1
DER 603	Skin Biology and Pathophysiology	3
DER 605	Microbiology and Immunology of the Skin	3
DER 606	Dermato-epidemiology	2
DER 631	Advances in Dermatology	1
DER 641	Frontiers in Sciences	1
Credit Hours		11
Spring		
DER 607	Dermatopharmacology	2
DER 608	Photobiology and Photomedicine	1
DER 609	Skin Carcinogenesis	2
DER 610	Clinical Skin Diseases	2
DER 613	Techniques in Skin Research	1
DER 622	Introduction to Dermatopathology	1
DER 632	Advances in Dermatology	1
DER 642	Frontiers in Sciences	1
Credit Hours		11
Summer		
DER 611	Visualizing the Skin	2
DER 612	Grant Writing	1
DER 614	Innovation in Dermatology	1
DER 615	Dermatology Health Care Delivery	1
DER 623	Techniques in Skin Research- II	1
DER 633	Advances in Dermatology	1
DER 643	Frontiers in Sciences	1
Credit Hours		8
Total Credit Hours		30

Admission Requirements

Admission Requirements

1. A bachelor's degree from an accredited institution must be conferred before the intended start date.
2. A cumulative grade point average (GPA) of 3.0 or above is required for candidates with bachelor's or Master's degrees. GPA is not required for candidates with MD or PhD degree.
3. A GRE general test or MCAT score is highly recommended but not required. The test will be waived for candidates with MD or PhD degree.
4. English proficiency requirement: Test of English as a *Foreign Language* (TOEFL) score of 80 for internet based test (iBT), 550 for paper based test (PBT) or 215 for computer based test (CBT) is required for those candidates who graduated from foreign institutes.
5. A personal statement, including past experience and future career goals, is required as part of the application.
6. Three to five letters of recommendations from research or clinical mentors or teachers.

Rationale

Rationale

The proposed new program is an online version of the existing Master of Science in Skin Biology and Dermatological Sciences (SBDS-MS) program in the Department of Dermatology and Cutaneous Surgery. The program prepares students for careers and leadership in skin science and industry. The curriculum covers basic science and laboratory techniques, as well as management skills, grant & regulatory issues, enterprise issues, and clinical problems.

Skin biology includes many biological processes: development, perpetual differentiation and barrier maintenance, tissue repair and regeneration, neogenesis, native and adapted immunity, and genetic disorders just to name a few. The areas represented in our

research base include biochemistry, genomics, immunology, microbiology, inflammation, pharmacology, stem cell biology as well as clinical research using areas of a variety of skin disorders, aging, aesthetics, cancer, and wounds as a clinical touchpoint.

There is a growing need for knowledgeable healthcare professionals. Healthcare providers, policy makers, research scientists, academic practices in the US and in the rest of the world, as well as makers of skin and skincare products from devices, drugs and cosmeceuticals and their workers need trained personnel. The training in all these aspects is currently not provided by any other single program in the United States.

Master of Science in Skin Biology and Dermatological Sciences (SBDS-MS) program is the first of its kind in the United States. It serves as a formal training mechanism for those individuals and fulfills an unmet need in skin biology and dermatological sciences. Since the launch of the program in 2017 the program has grown each year with three classes and a total of 30 students have been successfully graduated and 16 more students are expected to graduate in 2021.

The SBDS-MS program is currently delivered as a hybrid model (both online and in person). The addition of an online version will offer unique opportunity to those who have full-time jobs and otherwise may not be able to pursue the degree due to the limit of on-campus in person attendance requirement.

The proposed online program will be offered 100% online. Our current program is delivered as a hybrid model and offers two tracks, Non-Thesis Track and Thesis Track. For Non-Thesis Track, students are required to complete 30-credit core lecture courses, which are offered 50% online via Blackboard Ultra platform and 50% on-campus in person. For Thesis Track, in addition to the 30-credit core courses, 1-3 Research Rotations and additional 1-year focused Thesis Research are required. All benchmark research activities are on campus in person. The research rotation is optional for Non-Thesis Track students.

Note: currently almost all our lectures are delivered online or virtual due to the covid-19 pandemic following the University's guideline. For past year, only 2 lectures with hands-on components were offered on campus in person, about half of students opted in and half took the classes virtual.

Course requirements for the proposed online program will be the same as for the Non-Thesis Track of current hybrid program, students are required to complete 30-credit core lecture courses. However, all lectures will be delivered online via Blackboard Ultra platform or virtual. Most of the lectures (more than 90%) will be given using synchronous format to encourage interactions between instructors and students. No research rotation or thesis research benchmark will be required.

The online program is specially designed for those full-time professionals who otherwise may not be able to pursue the degree due to the limit of in person attendance requirement for the 50% courses. We will provide the same high-quality education to the online students as the Non-Thesis Track. The same courses will be taught by the same team of experienced faculty instructors and the same standards will be used for the online program.

The admission requirements for the proposed online program will be the same as for the Non-Thesis Tracks. In alignment with other online graduate degrees, the degree for the online program will be the same as the Non-Thesis Track, Master of Science in Skin Biology & Dermatological Sciences (SBDS-MS).

With the addition of the online program, students will have the choices of three options, Non-Thesis Track, Thesis Track and online program. During the application, each applicant will be asked to select the program or track of his/her choice. We will have detailed descriptions for each program online. We will also provide individual or group information sessions during the application period and after their admissions. Students will have the opportunity to change their program or track selection before the class starts.

Recent fast development in internet and information technology has dramatically changed our lives in every aspect including medicine, education and learning process. The proposed new program is an online version of the existing Master of Science in Skin Biology and Dermatological Sciences (SBDS-MS) degree program, which is **the first of its kind in the United States**. Currently, no other formal mechanism exists to accommodate comprehensive science-based, non-clinical training in skin science, skin diseases, skincare products and skin related research.

The SBDS-MS program is currently delivered as a hybrid model (both online and in person). The addition of an online program will offer unique opportunity to those full-time professionals who otherwise may not be able to pursue the degree due to the limit of on-campus in person attendance requirement.

Job Market Demand and Outlook

Demand for Master level trained personnel exists in skincare industry, among policy makers and in regulatory bodies, in philanthropic missions/non-profit bodies, and in academic research and clinical practice settings. Individuals who are interested in a Master degree program in skin biology and dermatological sciences can be categorized as the following:

1. Pharmaceutical, drug, device and cosmeceutical and skincare related company employees: Our department faculty are frequently sought for the advice on product design, development, clinical trials and evaluations. We have performed due diligence about job prospects. We have made inquiries in large established skin care pharmaceutical companies such as "3M", "Johnson & Johnson", "Procter & Gamble", "The LVMH Group", "Smith & Nephew", as well as smaller companies such as "HS Pharmaceuticals" and "Keraplast Technologies".

Skincare product companies seek personnel with special training in skin biology, skin related research knowledge (basic, translational and clinical) including trial design and management. The training program will fill a void for industry jobs that require training higher than at the undergraduate level and will be suitable for someone at the Master's level. Usually in industry, this results in recruitment of doctoral-trained personnel who are over-trained in some aspects but lack of comprehensive grasp for these kinds of jobs.

2. Venture capitals and other funds: these groups are interested in recruiting personnel with training in grants, business, regulatory and management issues, and accordingly "problem-based learning" modules have been incorporated in the course curriculum.

3. Philanthropic or non-profit organizations are in need of trained individuals as officers for their organizations. Currently, such personnel are not available with the appropriate field specific training.

4. Non-terminal degree students. College and Master degree graduates seeking to pursue knowledge and advanced training with the purpose of pursuing skin related careers.
5. Pre- and post-residency medical graduates. Those seeking to advanced training with the purpose of pursuing a career in dermatology.
6. Non-Dermatology and Dermatology Physicians (from abroad) who wish to pursue an academic career in dermatology related healthcare. A great deal of interest exists from foreign countries in training their clinicians and medical graduates to improve their knowledge of basic skin biology as well as dermatologic science, and enabling them to pursue research and become future leaders in their home countries after training.

Relationship to Other UM Academic Programs

The SBDS-MS program has core courses in skin anatomy and histology, skin biology, dermato-epidemiology, microbiology, immunology, dermatopharmacology, as well as dermatology health care delivery, etc. Students will also be exposed to the clinical problems and diseases, undertake courses in state of art technologies and management skills, innovation and intellectual properties, animal use and protection, human subjects and regulatory issues. Guest faculty will be invited from other departments in the related fields in Cell Biology, Microbiology and Immunology, Biochemistry and Molecular Biology, Human Genetics, and Epidemiology and Public Health. In addition, guest faculty will be invited from the UM School of Business Administration.

Many graduate faculty members from the Department of Dermatology and Cutaneous Surgery currently participate in teaching courses in the Graduate Program in Biomedical Sciences (PIBS) as well as in Medical School's curriculum providing lectures focused on biology of skin and its diseases. Due to multi-disciplinary nature of the faculty in our department, students come from a variety of programs, including Molecular and Cell Pharmacology, Human Genetics and Genomics, Cancer Biology, Biochemistry and Molecular Biology, Epidemiology and Public Health, Microbiology and Immunology, Molecular Cell and Developmental Biology. The participation by different graduate departments will also enable expanding course offerings.

The pathway exists for participation in the undergraduate and professional programs:

1. Supplying prerequisites to our students: The Departments of Biology and Chemistry and the School of Business Administration provide courses that may serve as prerequisite to our programs.
2. Interdepartmental collaborations/interactions: Existing programs, such as the PIBS program and medical (MD) program, may include courses offered by our program or may desire joint teaching of some portions of the courses for their students.

No undergraduate courses in skin biology and dermatological science currently exist at University of Miami. There are courses taught for medical students, residents and graduate students in biochemistry and biology which may have some common elements, but the SBDS-MS courses will be advanced and specialized in skin and related fields.

Library, Facilities, Equipment and Other Resources Available and Needed to Support the Program

Students will have full access including online access to all resources including PubMed through Calder Medical Library at the University of Miami Miller School of Medicine. The Calder Library will suffice for reading material and library support (an assessment from the library was sought which has indicated the sufficient reading material exists in the Calder Library, see attached list of skin-related journals and books).

Computer and Online Infrastructure

1. University Blackboard Collaborate Ultra: the courses will be offered through university Blackboard Collaborate Ultra platform. Our current hybrid program offers most of the courses online via Blackboard system due to the covid-19 pandemic. We are equipped and experienced with the Blackboard platform teaching and learning. Our Dermatology Library and Conference Room are connected with internet and Blackboard system.
2. Dermatology Library (George Ioannides, M.D., Dermatology Library): Our newly renovated library, located on the 2nd floor of Rosenstiel Medical Science Building (RMSB), room 2090, is 909 square feet in size, and has two newly installed 90 inch LED TV screens, a new desktop computer and live video and auto-recording system.
3. Dermatology Conference Room: located in the RMSB building room 2023A near the Dermatology Library, the conference room is about 318 square feet, usually holds faculty meeting, lab meeting and group meeting or small conferences. It has a newly installed 75 inch LED TV screen and a new computer and will also be used for the MS program.

Curriculum

Program Curriculum

The same 30-credit core curriculum listed above, currently offered to the hybrid program, will be offered to the online program. The program core requirements will be delivered in **three semesters** in one academic year **with 15 individual courses and 2 common courses**. 15 individual courses will be offered 4 in the Fall semester, 6 in the Spring and 5 in the Summer, respectively. The courses will be didactic lectures, some of them will have group activities and hands-on practices. 2 common courses of Advances in Dermatology (Grand Rounds) and Frontiers in Sciences (Journal Club) will be offered throughout the year.

Fall 2022 (total 11 credits)

This first semester will focus more on the fundamentals of cutaneous biology. The courses will cover the basics of skin biology and pathophysiology, microbiology and immunology, and skin epidemiology. In addition, the basic concepts of skin disorders will be introduced.

DER 601 Introduction to Dermatology (1 credit): The aim of the course is to familiarize participants with the basic subject of dermatology and the most common terminology. Students will be introduced to the subject of dermatology, subspecialties in

dermatology, structure of the skin (basic anatomy and physiology), terminology (primary and secondary cutaneous lesions), and examples of the most common dermatological conditions.

DER 603 Skin Biology and Pathophysiology (3 credits): This course is to help students to understand the fundamental concepts on and connection between structure and function of the skin. The course will include biology of major skin cell types of keratinocytes, fibroblasts, endothelial cells, melanocytes and Langerhans cells. It will cover biology of skin metabolism, skin appendages, skin matrix, cutaneous vasculature, neuroendocrine system and major processes required for cutaneous barrier function during normal and pathophysiological states. Molecular and cellular mechanisms of cutaneous wound healing, matrix remodeling, tissue regeneration and skin ageing will also be included into coursework.

DER 605 Microbiology and Immunology of the Skin (3 credits): This course will cover skin microbiota and immune component of the skin in healthy and disordered states. The microbiology will cover bacterial species that cause most common skin infections such as *Staphylococcus aureus* (folliculitis, impetigo, abscesses, pyoderma, toxic-shock syndrome, staphylococcal scalded skin syndrome, wound infections), *Streptococcus pyogenes* (impetigo, erysipelas, cellulitis, necrotizing fasciitis, rheumatic fever, scarlet fever, wound infections), and *Corynebacterium* spp. (wound infections), etc. The bacterial biofilms and their importance in skin infections will also be addressed. The skin hosts the same immunocompetent cell types found throughout the body - T cells, B cells, macrophages, eosinophils, neutrophils, etc. - as well as its own skin-specific subpopulations - Langerhans cells, keratinocytes, and dermal dendrocytes. The second part of the course will cover the biology of immunology of the skin in normal functioning and underlying both intradermal allergic reactions and skin-specific autoimmune disorders (alopecia areata, vitiligo, psoriasis), as well as the standard treatments for each. Further, this module will address unique immune environments within the skin, such as the immune privilege of the hair follicle and wound infection.

DER 606 Dermatoepidemiology (2 credits): Students will be introduced to the emerging discipline in skin epidemiology or Dermato-epidemiology, to obtain an overview of incidence rates and time trends of skin disorders in the US and in the world, learn biostatistical tools in data analysis including descriptive statistics, hypothesis testing, analysis of variance, and regression analysis. Students gain an appreciation for disparity in the disease outcomes among populations and various barriers contributing to current disparity. Students will also learn about various state and national registries for skin cancer and some other skin disorders available for database research.

Common Courses:

DER 631 Advances in Dermatology (1 credit): This hour-long seminar course is held in conjunction with Departmental Grand Rounds, which will be the basis of this course. The purpose is to help students to keep up to date in advances in dermatological research and patient care. The lectures are delivered by Dermatology full time faculty, voluntary faculty, visiting dermatologists/investigators, and physicians and investigators from related disciplines at the University of Miami and outside. This series covers various aspects of skin biology, dermatology, and related disciplines. The course will continue for the spring semester as **DER 632** and summer semester as **DER 633**.

DER 641 Frontiers in Sciences (1 credit): This course will be in conjunction with Dermatology Journal Clubs. Students will participate in the presentation, discussion and critiques of the publications in peer-reviewed journals in both basic sciences and clinical aspects, not limited in the field of dermatology, with emphasis in translational research and research applications. In addition, this course will be run in conjunction with Dermatology Research Conferences. It will provide the most recent updates on various aspects of dermatologic sciences ranging from molecular mechanisms of normal skin regeneration and repair to pathologies such as impaired healing disorders and skin cancer. Faculty, fellows and students from research laboratories will present their research discoveries. Each MS thesis path student will be required to present their own research projects during their thesis period. The course will continue for the spring semester as **DER 642** and summer semester as **DER 643**.

Students will be required to attend weekly grand rounds or seminars, participate in the discussions of biweekly journal clubs, and present papers or research in research conferences as part of common courses. Students will learn advances and updates in sciences and clinical practices, critical thinking, problem solving, as well as the skills in data collections, data presentation and publications. Students will also have options to attend local and national meetings organized by our department of quarterly meetings of Miami Society of Dermatology and Cutaneous Surgery, spring dermatological science and training courses of South Beach Symposium and annual national meeting of Symposium on Advanced Wound Care.

Spring 2023 (total 11 credits)

This semester will focus more on the clinical basic aspects of skin disorders including photomedicine, melanoma and non-melanoma skin cancers, common skin diseases, therapeutic principles as well as histopathologic features of common skin disorders. Research techniques in skin research will also be introduced in this semester.

DER 607 Dermatopharmacology (2 credits): This course familiarizes students with the mechanisms of drug action, FDA-indications, off-label uses, safety and efficacy, side effects and necessary monitoring and important drug interactions relevant to topical and systemic medications used in dermatology. The course covers skin barrier and transdermal drug delivery (structure of the skin barrier, factors affecting the skin barrier, strategies to enhance transdermal drug delivery), major drugs used in dermatology including glucocorticosteroids, retinoids, antimicrobials, immunomodulators, agents used in skin oncology, hormonal therapy, other systemic medications (antimalarials, colchicine, dapsone, leukotriene inhibitors, antihistamines, thalidomide) and topic medications.

DER 608 Photobiology and Photomedicine (1 credit): This course will include basic concepts on photobiology and phototherapy with Ultraviolet light (UV) B, Excimer Laser, UVA, PUVA (psoralen + UVA), Photopheresis, and Photodynamic therapy. The course will cover photobiology, photochemistry and mechanisms of actions. Treatment protocols with clearing phase and maintenance phase, indications, adverse effects and complications, practice and techniques and future directions will be also included into coursework.

DER 609 Skin Carcinogenesis (2 credits): Skin cancer is by far the most common type of cancer affecting the humans. More than 50% of all the cancers combined are skin cancers. One in 5 Americans develop skin cancer during their lifetime. The most common type of skin cancer is Basal Cell Carcinoma (BCC). The second most common type is Squamous Cell Carcinoma (SCC). One of the

most serious form of skin malignancy is Melanoma. In this course, the etiology, pathophysiology, epidemiology, types, prognosis and various treatments of the most common types of skin cancers will be discussed.

DER 610 Clinical Skin Diseases (2 credits): The aim of this course is to give students a clinical overview of the common skin disorders encountered by society. It will discuss the most common skin diseases such as acne, seborrheic dermatitis, and xerosis, with an emphasis on pathogenesis and current research in these conditions. Older treatments will be compared to newer treatments with respect to efficacy as well as cost to patients.

DER 613 Techniques in Skin Research-I (1 credit): This course will cover several different areas of research techniques employed in studying skin biology/pathophysiology that span from in vitro cell based assays, ex vivo skin tissue models and reconstructed skin equivalents to in vivo animal models, and will integrate various molecular, cellular and tissue based methods. The course will balance multiple teaching methods from traditional didactics to individual and group "hands-on" laboratory experience and training. Its main approach will be using skin specimen (human or animal) as a major source and starting point. It will follow progression from simple methods (cell-based) to more complex (organotypic and tissue-based techniques) to in vivo animal models in pre-clinical trials. The course will also cover high throughput approaches in skin genomics, genetics and proteomics, and use and analysis of big data as well.

DER 622 Introduction to Dermatopathology (1 Credit): The aim of the course is to give students a general introduction to clinical histopathology in common skin disorders. The course will familiarize students with basic terms of histopathological changes in skin tissue, basic characteristic pattern recognitions, clinic-pathologic correlations, and histopathologic features of common skin diseases.

Common Courses:

DER 632 Advances in Dermatology (1 credit): see DER 631

DER 641 Frontiers in Sciences (1 credit): see DER 641

Summer 2023 (total 8 credits)

This semester will cover basic tools to investigate skin related problems and care delivery, innovations and patents, research grant applications, as well as general policies including ethics and regulations. In addition, research models and design in skin research and clinical trial will be taught.

DER 611 Visualizing the Skin (2 credits): This course covers basic and advanced techniques of visual examination and digital photography of the skin and hair. Topics include macrophotography of the skin and scalp, dermatoscopy, processing of biopsies for histology, routine and special histological staining, microscopy with regular and special lights, immunohistochemistry and immunofluorescence, and recent advances of non-invasive methods of visualizing the skin in depth such as optical coherence tomography and in vivo confocal microscopy;

DER 612 Grant Writing (1 credit): The course will present issues in some major grant applications including government funding from National Institute of Health such as Research grants (R) for academia and industrial Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants) and grants from Department of Defense. Major sources, tools and policies for grant application and management will be discussed. This course will integrate the available resources at the University of Miami, such as Grant Writing Workshops, led by Dr. Mary Lou King, Professor of Cell Biology, from the Master of Science in Clinical and Translational Investigation (MSCTI) program;

DER 614 Innovation in Dermatology (1 credit): Innovation drives the modern enterprise and medicine. The aim of this course is to familiarize the participants with the tools of innovation. It will cover the strategic processes of how to ideate, formulate, innovate and push through new ideas—from concept to implementation. This course will also cover the issues related to patent and invention and how to protect the intellectual property. Dr. Bin Yan, Director of Office of Technique Transfer, will be invited to give lectures about patent and technique transfer.

DER 615 Dermatology Health Care Delivery (1 credit): This course prepares students for positions of leadership in skin care and skin health-related industrials and organizations. The course focuses on the educational needs of professionals already fully employed in the health care industry, as well as those aspiring to careers in the field. The course teaches practical administrative skills as well as broad strategic and theoretical perspectives to students who wish to expand their knowledge of management and administration as applied to the skincare industry, with emphasizes in the development of business, technical, administrative, and leadership concepts as they apply to the clinical practice and skincare industry. TeleHealth and TeleDermatology and Clinical Outreach will be discussed. The course will also cover the topics of ethic challenges and patient protection. Students will be required to attend a course in responsible conduct of research and research ethics (also available online through Collaborative Institutional Training Initiative (<https://www.citiprogram.org/>) (CITI) website). Courses will be designed in a fashion that does not need IRB approval. If a student research project needs IRB approval, this will be the responsibility of the student and his/her research mentor.

This course will involve multiple collaborations between departments and schools. Several faculty from other departments in the medical school will be invited to give lectures: Dr. Kenneth Goodman, Director of Institute for Bioethics and Health Policy, will lecture on Ethical Challenges in a Shifting Healthcare Context; Dr. Antonio Martos from Surgical Critical Care and Trauma Surgery will lecture on Telehealth and TeleTrauma; Dr. Karen Koffler, Department of Family Medicine, will lecture on Delivering Integrative Medicine; Dr. Jeffrey Brosco, Developmental-Behavioral Pediatrics, will speak on delivering healthcare to people with delayed development; Dr. Lisa Gwynn, Director of Pediatric Mobile Clinic, Department of Pediatrics and Public Health Sciences, will give a lecture on Innovative Pediatric Healthcare Delivery; Joanna Lombard, professor of Public Health and School of Architecture, a founding member of the Built-Environment Behavior & Health Research Group, will introduce the Hospital Architecture; and Dr. Hansel Tookes, Division of Infectious Diseases in Medicine, will give a lecture on The Infectious Disease Elimination Act (IDEA Exchange): Reducing the Spread of HIV and Hepatitis C Through Harm Reduction and Dermatological Care and Safety. Dr. Steven Ullmann, Director of Executive MBA program in Health Sector Management & Policy, School of Business, will be invited to teach the topics on the Development of Business, Financing, Technical, Administrative and Leadership Concepts as they apply to the healthcare industry. In the School of Business, MGT454 Business Planning for Entrepreneurs, taught by faculty from Department of Management. Elements will be drawn

from these courses for specific problems. In addition, two guest speakers from outside will be invited to give lectures: Glen Stein, JD, Chief Financial Officer of My Derm Group, will give a lecture on The Business of Dermatology from the Point of Independent Practice. Yotam Polizar, Global CEO of IsraAID Headquarters, will give a lecture on Delivering Healthcare in A Disaster.

DER 623 Techniques in Skin Research-II (1 Credit): This course is the continuation of the course DER 613 Techniques in Skin Research-I. It will teach students how to approach and solve research problems with different strategies and methods. Various research models specific to skin research will be discussed including aging, angiogenesis, cancer, endocrinology, hair, itching and sensation, wound repair and tissue regeneration, therapeutic research in drug transdermal deliveries, and clinical skin disease research and therapeutic trials as well. In addition, students will be taught issues pertaining to animal use and protection and human subject in research, and regulatory requirements.

Common Courses:

DER 633 Advances in Dermatology (1 credit): see DER 631

DER 643 Frontiers in Sciences (1 credit): see DER 641

Year 1

Fall

DER 601 Introduction to Dermatology, 1 credit

Hadar Lev-Tov, MD, Course Director, 16 hrs

DER 603 Skin Biology and Pathophysiology, 3 credits

Jie Li, MD/PhD, Course Director, 14 hrs

Paolo Romanelli, MD, Course Co-Director, 10 hrs

Tongyu Cao Wikramanayake, PhD, 2 hrs

Katleïn Franca, MD, PhD, 1 hr

Mariya Miteva, MD, 4 hrs

Leigh Nattkemper, PhD, 2 hrs

Irena Pastar, PhD, 7 hrs

Ralf Paus, MD, 2 hrs

Antonella Tosti, MD, 4 hrs

DER 605 Skin Immunology and Microbiology, 3 credits

Dragana Ajdic, PhD, Course Co-Director, 20 hrs

Joaquin Jimenez, MD, Course Co-Director, 20 hrs

Tasuku Akiyama, PhD, 4 hrs

Stephen Davis, 2 hrs

Irena Pastar, PhD, 2 hrs

DER 606 Dermato-epidemiology, 2 credits

Robert Kirsner, MD/PhD, Course Director, 22 hrs

Shasa Hu, MD, 10 hrs

DER 631 Advances in Dermatology (Seminar), 1 credit

Tongyu Cao Wikramanayake, PhD, Course Director, 16 hrs

DER 641 Frontiers in Sciences (Journal club), 1 credit

Irena Pastar, PhD, Course Director, 16 hrs

Spring

DER 607 Dermatopharmacology, 2 credits

Jonette Keri, MD/PhD, Course Director, 10 hrs

Natalia Jaimes, MD, 2 hrs

Andrea Maderal, MD, 4 hrs

Brian Morrison, MD, 3 hrs

Jennifer Tang, MD, 3 hrs

Gil Yosipovitch, MD, 2 hrs

Patrick Zito, MD, 8 hrs

DER 608 Photobiology and Photomedicine, 1 credit

Paolo Romanelli, MD, Course Director, 9 hrs

Fabrizio Galimberti, MD/PhD, 3 hrs

Andrea Maderal, MD, 4 hrs

DER 609 Skin Carcinogenesis, 2 credits

Keyvan Nouri, MD, Course Director, 12 hrs

Barbara Bedogni, PhD, 6 hrs

Natalia Jaimes, MD, 8 hrs

Jennifer Tang, MD, 6 hrs

DER 610 Clinical Skin Diseases, 2 credits

Jonette Keri, MD/PhD, Course Director, 26 hrs

Fernanda Bellodi Schmidt, MD, 2 hrs

Lawrence Schachner, MD, 2 hrs

Antonella Tosti, MD, 2 hrs

DER 613 Tech in Skin Research, 1 credit

Jie Li, MD/PhD, Course Director, 10 hrs

Tongyu Cao Wikramanayake, PhD, 2 hrs

Stephen Davis, BS, 2 hrs

Ralf Paus, MD, 2 hrs

DER 622 Introduction to Dermatopathology, 1 credit

Paolo Romanelli, MD, Course Director, 10 hrs

Mariya Miteva, MD, 6 hrs

DER 632 Advances in Dermatology (Seminar), 1 credit

Tongyu Cao Wikramanayake, PhD, Course Director, 16 hrs

DER 642 Frontiers in Sciences (Journal club), 1 credit

Irena Pastar, PhD, Course Director, 16 hrs

Summer

DER 611 Visualizing the Skin, 2 credits

Tongyu Cao Wikramanayake, PhD, Course Director, 11 hrs

Tasuku Akiyama, PhD, 2 hrs

Barbara Bedogni, PhD, 2 hrs

Natalia Jaimes, MD, 3 hrs

Ivan Jozic, PhD, 3 hrs

Hadar Lev-Tov, MD, 1 hr

Mariya Miteva, MD, 2 hrs

Hideki Mochizuki, PhD, 2 hrs

Leigh Nattkemper, PhD, 2 hrs

Keyvan Nouri, MD, 2 hrs

Jennifer Tang, MD, 2 hrs

DER 612 Grant Writing, 1 credit

Marjana Tomic Canic, PhD, Course Director, 16 hrs

DER 614 Innovation in Dermatology, 1 credit

Gil Yosipovitch, MD, Course Director, 6 hrs

Andrea Maderal, MD, 2 hrs

Brian Morrison, MD, 1 hr

Leigh Nattkemper, PhD, 2 hrs

Jennifer Tang, MD, 2 hrs

David Lebo, PhD, 1 hr

Bin Yan, PhD, JD, 2 hrs

DER 615 Dermatology Health Care Delivery, 1 credit

Hadar Lev-Tov, MD, Course Director, 1 hr

Jeffrey Brosco, MD, PhD, 1 hr

Kenneth Goodman, PhD, 1 hr

Lisa Gwynn, DO/MBA, 1 hr

Karen Koffler, MD, 1 hr

Joanna Lombard, AIA, 1 hr

Antonio Marttos, MD, 1 hr

Yotam Polizer, 1 hr

Glen Stein, JD, 1 hr
Hansel Tookes, MD, 1 hr
Steven Ullman, PhD, 5 hrs

DER 623 Techniques in Skin Research-II, 1 credit

Jie Li, MD/PhD, Course Director, 6 hrs
Tasuku Akiyama, PhD, 2 hrs
Robert Kirsner, MD/PhD, 2 hrs
Hideki Mochizuki, PhD, 2 hrs
Ralf Paus, MD, 2 hrs
Rivka Stone, MD/PhD, 2 hrs

DER 633 Advances in Dermatology (Seminar), 1 credit

Tongyu Cao Wikramanayake, PhD, Course Director, 16 hrs

DER 643 Frontiers in Sciences (Journal club), 1 credit

Irena Pastar, PhD, Course Director, 14 hrs
Leigh Nattkemper, PhD, 2 hrs

Year 2 and Year 3 are expected to be the same as Year 1

Proposed Schedule of Course Offerings for the First Three Years

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Faculty

Program Directors

Dr. Jie Li, MD, PhD, a tenured Associate Professor of Dermatology and Cutaneous Surgery, will devote 20% effort to the program. Dr. Li has a broad background in both clinical dermatology and basic research and education. Dr. Li worked on the program development and has served as Program Director since the launch of the hybrid program in 2017. Also, Dr. Li has been a member of UM PIBS Graduate Faculty in Cancer Biology program, served as a member or Chair on PhD dissertation committees. In addition, Dr. Li served on the Honors Program in Medical Education (HPME) committee and a faculty member for dermatology resident selection and research training for dermatology residency program. Dr. Li will be responsible for the overall planning, curriculum and program development, and administration.

Upload CV(s)

jli_cv_UMformat0321.doc

Program Faculty

Biographies of full-time core graduate faculty

Dragana Ajdic, PhD, is an Associate Professor of Dermatology and Immunology and Microbiology. Dr. Ajdic's research focuses on microbial infection especially streptococcal biofilms. Her recent NIH R01 award is focusing on studies of *S. mutant* virulence factors in biofilm communities, including arbohydate transport and metabolism. Her important discoveries include new transport systems specific for biofilms and novel regulatory mechanisms controlling and coordinating expression of sugar transporters that will potentially lead to new strategies to manipulate carbohydrate metabolism to alter *S. mutans* persistence and virulence. She is also collaborating with Dr. Pastar in understanding biofilm formation in chronic wounds.

Tasuku Akiyama, PhD, Associate Professor. He received his PhD from the Toyama University under the mentorship of Prof. Kuraishi who is a pioneer of pre-clinical animal models of itch. Dr. Akiyama was a post-doctoral fellow in the Department of Neurobiology, Physiology and Behavior at UC Davis from 2008 to 2012, where he conducted research on the peripheral and spinal mechanisms of itch and pain sensations. His laboratory works on mechanisms that drive chronic itch at the systemical, cellular, and molecular levels. Dr. Akiyama also focuses on brain circuits underlying itch processing. He serves on the section editor for *Acta Dermato-Venereologica*. He published more than 35 peer-reviewed articles in international journals, 6 of these as corresponding author and 27 as first author.

Evangelos Badiavas MD, PhD, is a Professor at the Department of Dermatology and Cutaneous Surgery, University of Miami. His NIH R01 funded research focuses on autologous stem cells in human chronic wounds, whereas his two DOD recent awards are developing laser-assisted delivery systems for burn wounds. In addition, Dr. Badiavas has an active clinical practice and dermatopathology consulting practice. He serves on grant review sessions for NIH, Department of Defense and is a member of Interdisciplinary Stem Cell Institute. He has been actively involved in bone marrow stem cells, dermatology and translational research for more than 20 years and was among the first to describe the trafficking and engraftment of bone marrow cells to wounded skin and the conversion of bone marrow cells to skin structures. He was the first to describe the delivery of fresh bone marrow aspirate and cultured bone marrow cells to the chronic wounds. Having worked in this area for years, he is very well versed in all recent regulatory aspects of cell-based therapeutics. He has worked on, published and presented these findings in several preclinical studies for wounds including rodent and pig models.

Barbara Bedogni, PhD, Associate Professor. Dr. Bedogni received her PhD in 2004 at the Catholic University of Rome, Italy. She then landed a position in the laboratory of Dr. Amato Giaccia in the Department of Radiation Oncology at Stanford University. In 2009

she obtained an assistant professor position in the department of biochemistry at Case Western Reserve University in Cleveland, Ohio. She was tenured in 2017 and moved soon after to the University of Miami. Dr. Bedogni's lab studies mechanisms involved in the development and metastatic dissemination of melanoma. Research in her lab has identified Notch1 as a key embryonic developmental pathway involved in the genesis and progression of melanoma. Her lab has designed a novel anti Notch1 selective inhibitor whose efficacy is currently being tested in melanoma models of disease. The lab has also identified a key role of stromal collagen in triggering survival cues to melanoma cells. The specific targeting of the interface between melanoma cells and the stroma to counteract therapy resistance is an ongoing investigation in the lab. Overall, several projects are being addressed in the Bedogni lab all geared towards identifying the mechanisms that lead to melanoma development and progression as a prerequisite for the development of new, more effective, therapies.

Professor Stephen Davis, is Research Professor at the Department of Dermatology & Cutaneous Surgery, UMMSM. Over the past 25 years Prof. Davis has studied the efficacy of various dressings, growth factors, antimicrobial agents and physical devices on reducing bacterial loads and/or wound healing using porcine models. Several of the research and development that he performed with companies include numerous products that are on the market today. Prof. Davis's laboratory has established in vivo porcine wound model, and has extensive expertise in the wound microbiology, quantification of bacteria from wounds as well as the evaluation of the wound healing process using histological and molecular analysis. Prof. Davis has published more than 70 peer-reviewed papers and chapters, has been continuously funded by grants from the NIH, Department of Defense and pharmaceutical companies.

George Elgart, MD, is a Professor of Dermatology, the Vice-Chair for Education, Director of Dermatology Residency Education Program and the Director of Dermatopathology Service at the Department of Dermatology & Cutaneous Surgery, University of Miami. A NIH trained dermatologist, Dr. Elgart's research and expertise are in the fields of cutaneous oncology and wound healing. He is an author on over 80 peer reviewed articles. A world renowned dermatopathologist, he directs training of students and fellows in histology, immunohistochemistry and dermatopathology. Dr. Elgart increasingly contributes on the National Dermatology Education, the Accreditation Council of Graduate Medical Education (ACGME), the American Board of Dermatology (ABD) and Resident Review Committee (RRC) to assure high quality training is provided, not only at UM but throughout the US.

Katlein Franca, MD, PhD, Clinical Assistant Professor at the Department of Dermatology & Cutaneous Surgery and the Department of Psychiatry & Behavioral Sciences, University of Miami Miller School of Medicine. Dr. Franca did a fellowship in General Dermatology in UM's Department of Dermatology and Cutaneous Surgery (2011), an Observership in Cosmetic Medicine in the Department of Otorhinolaryngology (2012), a research fellowship in Dermatologic Surgery & Laser in the Department of Dermatology and Cutaneous Surgery (2013), a Ph.D. in Social Psychology at the University Argentina John F. Kennedy (2016) and a post-doctorate in International Healthcare and Ethics at UM's Institute for Bioethics and Health Policy (2018). She has published more than 150 scientific papers, over 100 them are peer-reviewed. She is the editor and author of seven dermatology textbooks: Her main research interests are Psychodermatology, Integrative Dermatology and Cutaneous Allergy.

Fabrizio Galimberti, MD, PhD, Assistant Professor of Dermatology. Dr. Galimberti completed his medical training at Cleveland Clinic Lerner College of Medicine-Case Western Reserve University, received his doctorate degree from Dartmouth College and his residency at the Jackson Memorial Hospital-University of Miami Miller School of Medicine where he also served as chief resident. Dr. Galimberti has a special interest in laser devices and rejuvenation and served as liaison for the American Society for Laser Medicine and Surgery. Dr. Galimberti's research interests include oncodermatology, cutaneous T-cell lymphoma, and autoimmune connective tissue diseases. He has published numerous articles in prestigious journals as well as presented his work at international conferences. Dr. Galimberti is experienced in complex medical, surgical, and cosmetic dermatology.

Shasha Hu, MD, Associate Professor of Dermatology. Dr. Hu serves as an example of successful research training provided by our Resident Research Program. Dr. Hu developed interest in melanoma prevention and disparity of melanoma among minority populations during her training as a resident at our Department. The project she started as resident and developed as junior faculty resulted in more than 30 publications in peer-reviewed journals, received funding from the Dermatology Foundation (Career Development Award) and was recently submitted her first ROI application to NIH.

Natalia Jaimes, MD, Dr. Jaimes is an Assistant Professor at the Department of Dermatology & Cutaneous surgery and Sylvester Comprehensive Cancer Center at University of Miami. Her clinical practice and research has been dedicated to skin cancer, in particular melanoma. Dr. Jaimes clinical practice is devoted to high-risk patients, patients with melanoma and non-melanoma skin cancer, nevi and dysplastic nevi. She is also committed to research and education. Dr. Jaimes training and research experience has provided her with an excellent background in multiple areas including prevention, early detection, diagnosis and treatment of skin cancer. She has been involved and collaborated in different projects and initiatives related to skin cancer, including melanoma.

Joaquin Jimenez, MD, is a Research Professor of Dermatology and Cutaneous Surgery and a member of the PIBS Graduate Faculty of Biochemistry and Molecular Biology program at UMMSM. Dr. Jimenez has a long-standing track record in working with bone marrow-derived cells. Dr. Jimenez was the first to make the observation on the rat model of Chemotherapy-Induced Alopecia. During that work he realized the similarities between the pilosebaceous unit and the hematopoietic system. In addition, he has extensive experience in working with hematopoietic cells and fluorescent antibodies and was the first to publish on Thrombotic Thrombocytopenic Purpura and fluorescent micro-particles from endothelial cells. Dr. Jimenez's work resulted in more than 70 publications.

Ivan Jozic, PhD, Research Assistant Professor. Dr. Jozic utilizes in vitro (human and mouse tissue culture, organotypic skin equivalent cultures), ex vivo (human skin and hair follicle cultures), in vivo (mouse models) approaches as well as human biopsy specimens (from chronic wounds and human scalp) to understand the role caveolins in various aspects of cutaneous physiology and pathophysiology. These include but are not limited to: acute and chronic wound healing, hair follicle physiology and scarring forms of alopecia, skin aging, pathogen colonization and inflammatory skin conditions.

Jonette E. Keri, MD, PhD, Associate Professor of Dermatology and Chief of Dermatology Services at Miami Hospital of US Department of Veterans Affairs (http://www.va.gov/landing2_vetsrv.htm). Dr. Keri, former NIH research trainee, has authored more than 40 publications in peer-reviewed journals and books, is currently funded by the Department of Defense and industry sources for leading multiple clinical trials. Her main research interests are development and treatment of acne and rosacea.

Robert S. Kirsner MD, PhD, is the Chairman and Harvey Blank Professor, the Department of Dermatology and Cutaneous Surgery, Professor of Epidemiology and Public Health, and a Chief of Dermatology and Director of Wound Care at the University of Miami Hospital (UMH). Dr. Kirsner has extensive expertise in clinical trials, clinical trial design (with a PhD in epidemiology), and treatment protocols and running multiple large programs in wound healing. He has been an investigator of several NIH research grants including a U award, a K25 award, and four R01 awards. Most of Dr. Kirsner's research are focused on the understanding of pathogenesis and treatment of chronic cutaneous wounds, he has also studied the prevention of skin cancer, and is a member of the Cancer Center at the UMMSM. He has published more than 300 original research manuscripts, editorials, or book chapters. Dr. Kirsner is founding board member and past president of the Association for the Advancement of Wound Care (AAWC), and is currently a board member of the Wound Healing Society. He is on the editorial boards for several major journals in dermatology such as Journal of the American Academy of Dermatology, Journal of Investigative Dermatology, Archives of Dermatology, Dermatologic Surgery, and Wounds. Dr. Kirsner has been a leader of major clinical, education, service and research projects. As an example, he directs and organizes the largest wound healing meeting- the Symposium on Advanced Wound Care (nearly 4000 attendees) in the United States annually for the past 20 years, directs the national journal club for the Journal of Investigative Dermatology, and directed an immensely successfully multi-organization and international wound care relief effort in Haiti.

Hadar Lev-Tov, MD, MAS, Assistant Professor, Director of the Wound Healing Fellowship Program. Dr. Lev-Tov recently joined our faculty after completing his residency at Albert Einstein College of Medicine. During his residency, he was awarded the highly competitive Cochrane Scholarship by American Academy of Dermatology, and the Resident of Distinction Award by the National Society for Cutaneous Medicine. These prestigious accolades recognize residents who have conducted particularly outstanding research. Dr. Lev-Tov's research interests include comparative of dermatological applications, the use of low-level light therapy to treat scars and other proliferative skin diseases, evaluation of diabetic foot ulcer therapies, and the use of topical beta-blockers for chronic venous leg ulcers. More recently, Dr. Lev-Tov and Dr. Kirsner published an article describing evidence-based treatments for diabetic foot ulcers.

Jie Li, MD, PhD, Associate Professor, the Department of Dermatology and Cutaneous Surgery and Sylvester Comprehensive Cancer Center, UMMSM. Dr. Li serves as Graduate Program Director of Skin Biology and Dermatological Sciences and a PIBS Graduate Faculty of Cancer Biology Program. Dr. Li received her MD degree and dermatology residency training at Nanjing Medical University, China and MS degree and fellowship in dermatopathology at Peking Union Medical College, China. In the following three years she served as a faculty member in the Department of Dermatopathology, Institute of Dermatology/Hospital of Dermatology, Chinese Academy of Medical Sciences, China. Dr. Li then obtained her PhD degree in Pathobiology and Molecular Medicine at the University of Cincinnati, performed postdoctoral fellowships in epithelial biology and extracellular matrix in the Department of Dermatology, Harvard Medical School /Massachusetts General Hospital and Stanford Medical School, respectively. Since joining the faculty of University of Miami in 2000, Dr. Li has established a translational research program in skin biology and diseases, with major focuses on extracellular matrix and microenvironmental regulation in angiogenesis, skin cancer, wound healing and tissue regeneration. Dr. Li's lab uses cellular and molecular approaches to understand pathogenesis and mechanisms of skin disorders and seeks to improve skin health with molecular therapeutics. Dr. Li has received multiple research grant awards including grants from National Institute of Health, Department of Defense, American Association of Cancer Research, Wound Healing Society and Florida Department of Health Research Program.

Andrea Maderal, MD, is currently an Assistant Professor with the Department of Dermatology and Cutaneous Surgery at the University of Miami Miller School of Medicine. Dr. Maderal is originally from Miami, Florida. She performed her undergraduate education at the University of Pennsylvania before returning to Miami for both her medical school education and residency training at the University of Miami. There, she developed an interest in complex medical dermatology, with a specific focus in autoimmune connective tissue diseases. During her final year of residency, she served as Chief Resident, focusing on resident education, and, together with the Chair, Dr. Robert Kirsner, started the department's first Autoimmune Connective Tissue Disease Clinic, specializing in patients with these complex disorders. Currently she continues to focus on managing complex dermatology cases as Director of the Autoimmune Connective Tissue Disease Clinic, serves as Chief of the Jackson Memorial Hospital Inpatient Consult service, and Director of the Hansen's Disease Program. She also continues to focus on education as the Director of Dermatology Medical Student Education.

Mariya Miteva, MD, is currently an Associate Professor at the Department of Dermatology and Cutaneous Surgery, University of Miami. She holds international board certifications in Dermatology and Venerology and Dermatopathology. Dr. Miteva's research interests include hair loss and hair pathology. Her primary objectives are centered on: 1) identifying new findings/patterns in scalp biopsies which help to increase the diagnostic yield and improve management; 2) implementing hair pathology as a mediator between the clinical practice and the bench hair research to improve understating of the pathogenesis; 3) studying the correlation between dermatoscopic findings of the scalp and the corresponding pathologic patterns. Dr. Miteva has authored more than 60 peer reviewed articles in dermatologic journals, 30 on the topic of alopecia, 8 book chapters and 1 textbook chapter and presents her research as an invited speaker in national and international forums. She is a member of the NAHRS (North American Hair Research Society) and serves as a member of the Executive Committee of the International Society of Dermatopathology.

Hideki Mochizuki, PhD, is a Research Assistant Professor at the Phillip Frost Department of Dermatology and Cutaneous Surgery, and a Director of the Brain Imaging Unit of the Miami Itch Center. He received his Ph.D. from Tohoku University, School of Medicine. Dr. Mochizuki was a postdoc at the National Center of Neurology and Psychiatry (2004-2007), the National Institute for Physiological Sciences (2007-2009), and Heidelberg University (2009-2011). He was an assistant professor at National Institute for Physiological Science (2011-2013) and Temple university (2013-2017). His research has been funded by multiple research grants in Japan, Germany and U.S. His research interest is brain-skin communication. In particular, he has conducted human brain imaging studies to better understand the brain mechanisms of itch, scratching and chronic itch.

Brian W. Morrison, MD, Assistant Professor. Dr. Morrison was born and raised in Miami, Florida. He received his undergraduate degree in Microbiology and Cell Science at the University of Florida. After college, he pursued a Master's degree in Nutrition at Columbia University and a medical degree at New York University School of Medicine in New York. He enthusiastically moved back home to Miami to complete his medical education as a dermatology resident at the University of Miami/Jackson Memorial Hospital. After his residency he joined our faculty as an Assistant Professor. He currently acts as the associate residency director, co-director of

resident aesthetic education and director of Jackson Memorial Hospital outpatient dermatology services. Over the past 7 years, he has worked closely with his Haitian dermatology colleagues to educate physicians and help provide care to patients throughout Haiti. Most recently, he led a Haitian-government-supported public health campaign for patients with oculocutaneous albinism. He is also an author of a number of peer-reviewed publications encompassing basic science research, epidemiological data and clinical cases in dermatology.

Leigh Nattkemper, PhD, Research Assistant Professor, earned her Bachelor of Science in Microbiology and her Masters of Science in Molecular Medicine from the University of South Florida. She earned a Doctor of Philosophy degree in Biomedical Sciences with a concentration in Neuroscience from Temple University. Dr. Nattkemper's research interests involve the investigation of the neuroanatomy and neurophysiology of chronic pruritus. She works alongside Dr. Gil Yosipovitch in clinical trial program in skin innovation and itch.

Anna Nichols, MD, PhD, Assistant Professor. Dr. Nichols completed her residency in our prestigious residency-training program and joined our faculty at the University of Miami with the Department of Dermatology & Cutaneous Surgery. As a resident, she became a member of the Institutional Review Board. Dr. Nichols completed dual degrees in Medicine and Neuroscience & Physiology at State University of New York, Upstate Medical University. Her dissertation research revealed that an extracellular protein known as Reelin, which is important during early cortical development, promotes cellular orientation and dendritic growth, not migration as the prevailing studies had suggested. More recently, Dr. Nichols has begun research on the effect of human papillomavirus vaccination on the development of keratinocyte carcinomas, which comprise the most common human malignancies. She is also involved in clinical trials on psoriasis, atopic dermatitis, epidermolysis bullosa and wound healing.

Keyvan Nouri, MD, is a Professor of Clinical Dermatology, Louis C. Skinner, Jr., M.D. Endowed Chair in Dermatology, Richard Helfman Professor of Dermatologic Surgery, Chief of Dermatology Services at Sylvester Comprehensive Cancer Center/University of Miami Hospital and Clinics, Director of Mohs, Dermatologic & Laser Surgery Center, Director of Cutaneous Surgical Training and Director of the Dermatology Graduate Education Specialty Training (GEST) Program. His research and expertise are in the fields of cutaneous oncology, lasers, dermatologic surgery, and acute wound healing. He is an author on nearly 200 peer reviewed articles and over 60 book chapters. He is currently funded by industry. Dr. Nouri's research interests involved in identification of molecular pathways common to basal cell carcinoma and squamous cell carcinoma and chronic ulcers.

Irena Pastar, PhD, is a Research Associate Professor of Dermatology. Trained as molecular microbiologist and a recipient of young investigator award her research is focused on host-response to polymicrobial infections in skin and epithelia. She has extensive research experience in molecular and cell biology of wound healing and is recent recipient of the Pilot grant to study regulation of epidermal microRNAs by *Staphylococcus aureus* virulence factors and is co- investigator on another funded project to study host response to diabetic foot ulcer microbiome. Dr. Irena Pastar was an invited speaker and wound infection session chair at the Wound Healing Society Meeting. Dr. Pastar provides academic leadership for the Departmental monthly research conference.

Ralf Paus, MD, Research Professor. After training as a dermatologist and a junior faculty position at the Charité University Hospital, Berlin, Germany, Dr. Paus has worked as Vice-Chair of the Department of Dermatology, University of Hamburg (1999-2004) and then focused entirely on translational skin and hair research since 2005 as Head, Experimental Dermatology Unit, University of Lübeck, Germany (2005-2013) and as Professor of Cutaneous Medicine, University of Manchester (since 2008). He is Editor of Experimental Dermatology (since 2007) and Founder & CEO of a skin and hair research company in Germany. Dr. Paus has joined our Department in 2018 as Research Professor of Dermatology and Director of the Dermatology Academic Training Program. His main research interests are the biology and pathology of hair follicles (with a clinical focus on alopecia areata and scarring alopecias), sebaceous gland biology, epithelial skin stem cells, mast cells, as well as cutaneous neuroendocrinology and neurobiology, with emphasis on neuroendocrine stress mediators and chemosensation.

Paolo Romanelli, MD, is a Professor of Dermatology at the UMMSM. Dr. Romanelli has extensive background knowledge and qualifications in General Pathology, Dermatology and Dermatopathology. He serves as a dermatopathologist, and the director of the ACGME accredited UM Dermatopathology Fellowship Program. He is particularly interested in studying new special stains that can be utilized as immunohistochemical markers. Dr. Romanelli has developed a wound pathology service that has hundreds of specimens derived from chronic wounds of various etiologies sent to him from more than fifty different wound centers throughout the country. He published more than 90 papers related to wound healing, and pathology of diverse skin diseases

Lawrence A. Schachner, MD, is Chairman Emeritus of the Department of Dermatology and Cutaneous Surgery at the University of Miami Miller School of Medicine. A member of the Miller School of Medicine faculty since 1978, he is also professor of pediatrics and director of the Division of Pediatric Dermatology. Dr. Schachner has written more than 200 scientific publications. He is the lead author of the Schachner & Hansen textbook, Pediatric Dermatology edition I (1988), edition II (1995), edition III (2003), and edition IV (on-going), as well as co-author of eight other books. In 2004, Dr. Schachner was named "Practitioner of the Year" by the Florida Society of Dermatology and Dermatologic Surgery. Dr. Schachner's research interests have included bioengineered skin in pediatric wounds, skin infections and infestations in children, sun protection in childhood, cutaneous signs of child and sexual abuse, and new therapeutic modalities for acne, eczema, and epidermolysis bullosa. Dr. Schachner has also held several leadership positions internationally, nationally, and at the University as well as in his field. He is the past president of the Society for Pediatric Dermatology, past vice president of the International Society of Pediatric Dermatology, and past chair of the American Academy of Pediatrics Section on Pediatric Dermatology. Dr. Schachner has also directed the annual Masters of Pediatrics and Masters of Pediatric Dermatology meetings from 1992 to the present.

Fernanda Bellodi Schmidt, MD, Assistant Professor of Dermatology. Dr. Bellodi Schmidt provides care to infants, children and adolescents with all skin conditions and her areas of interest include ichthyoses and other disorders of keratinization and melanocytic lesions, among others. Dr. Bellodi Schmidt completed her medical school and residency training in dermatology at the Universidade Estadual de Campinas in Brazil in 2007 and 2012, respectively, where she identified a special interest in pediatric dermatology. She sought additional training in pediatric dermatology in the United States, completing a pediatric dermatology fellowship at Cincinnati Children's Hospital in 2014. In order to further expand her training in complex pediatric medical care, she then completed a rigorous internship in general pediatrics at Cincinnati Children's Hospital in 2015.

Rivka Stone, MD, PhD, joined the faculty as an assistant professor in 2019. Her research focuses on utilizing bioinformatics to elucidate the mechanisms of skin disease. Her work incorporates personalized medicine approaches in analyzing patient-derived genomic datasets with the goal of identifying novel prognostic biomarkers, therapeutic targets, and treatment endpoints. She is specifically interested in studying the contribution of inflammatory pathways to chronic wounds, skin fibrosis, and other dermatologic conditions with unmet needs.

Jennifer C. Tang, MD, is an Assistant Professor with a clinical practice focused in cutaneous oncology, namely Mohs micrographic surgery and management of advanced/unresectable basal cell carcinomas and squamous cell carcinomas. She is a co-leader of the Cutaneous Oncology Site Disease Group at the Sylvester Cancer Center. Dr. Tang serves as the main PI on clinical trials for basal cell nevus syndrome patients and advanced non-melanoma skin cancer (NMSC). She has a particular interest in high risk squamous cell carcinoma and the emerging use immunotherapy for non-melanoma skin cancer.

Marjana Tomic-Canic, PhD, is a Professor and Vice Chair for Research at the Department of Dermatology & Cutaneous Surgery, and a member of UM PIBS Graduate Faculty of Human Genetics & Genomics (HGG) and Molecular and Cellular Pharmacology (MCP) Programs. She serves on PIBS Admissions Committee, Education in Basic Science Metrics Committee and Steering Committee at HGG PIBS Program. She is also member of the Council of the National Institutes of Health. In addition, she is the Director of Wound Healing and Regenerative Medicine Research Program and Leads the Residency Research Program at the Department of Dermatology. She has been continuously funded by NIH for the last 15 years and was supported by American Diabetes Association, National Pressure Ulcer and Dermatology Foundations and industry-sponsored research grants. Current research focus of Dr. Tomic-Canic is molecular and cellular mechanisms of wound healing and its inhibition. In the laboratory her work is fully integrated with stem cell biology, carcinogenesis, genomics, tissue engineering, and gene delivery. Her lab has identified molecular markers that may predict clinical outcome of non-healing and guide surgical debridement of chronic ulcers, which are currently being validated in an NIH-sponsored clinical trial. Dr. Tomic-Canic has served in various NIH study sections, served on the Board of the Wound Healing Society, and currently on Executive Committee as President of the WHS. Also, she is a member of the Editorial Board of Journal of Biological Chemistry and Associate Editor of Journal of Investigative Dermatology.

Antonella Tosti, MD, Professor, holds an endowed Brandt Professorship of Dermatology, is a world-renowned dermatologist-scientist who joined the University of Miami in 2010 as Professor of Dermatology and Cutaneous Surgery after many years at the University of Bologna, Italy. She is an internationally recognized expert in hair and nail disorders and contact dermatitis as well as an invited lecturer at major international conferences, including the annual meetings of the European Academy of Dermatology and Venereology and the American Academy of Dermatology. She has been interested in alopecia areata for more than 20 years with more than 600 publications. She is the author of Dermoscopy of Hair and Scalp Disorders, the first hair and scalp dermoscopy atlas ever published. She is also editor of two Textbooks on diagnosis and treatment of Hair Disorders and three Textbooks on Nail Disorders. She is the main author of the chapter on nail disorders in several major textbooks. She is an expert in patch testing for diagnosis of contact allergy. She is a member of numerous dermatological societies including the American Academy of Dermatology, the American Dermatological Association, the European Academy of Dermatology, the Women Dermatological Society, the North American Society for Contact Dermatitis and the International Society of Dermatology. Dr. Tosti serves on the Archives of Dermatology International Advisory Committee and is recipient of several research grants.

Tongyu Cao Wikramanayake, PhD, a Research Associate Professor at the Department of Dermatology & Cutaneous Surgery and the Department of Cell Biology and Anatomy, UMMSM. Dr. Cao Wikramanayake provides academic leadership for the Departmental weekly Grand Rounds/ seminars. In addition, she is a member of Cell Biology and Anatomy PIBS graduate program. Dr. Cao Wikramanayake is trained in developmental biology and cellular differentiation, and has 15 years of hands-on experience in skin biology and mouse models investigating normal skin differentiation and the development of skin disorders. She uses mouse and rat models to study epidermal differentiation, hair development and alopecia, epidermal stem cell interaction with the niche, and non-melanoma skin cancer. Her research is supported by NIH and Dermatology Foundation and Florida Department of Health Bank Coley Research Program.

Dr. Gil Yosipovitch, MD, Professor, holds the endowed Stiefel Laboratories Chair and is an internationally recognized leader in the field of dermatology and itch-related diseases. He is leading the Itch Center, which focuses on chronic itch as a disease state. The center serves as an institutional hub for patient-focused care, research collaborations and interactions among investigative dermatologists, neuro- and other bio-medical scientists. These specialists' efforts will focus on a better understanding of chronic itch that may lead to new therapies for this common affliction. Dr. Yosipovitch investigates the causes and treatments of complex skin diseases – including eczema, psoriasis, and diseases of other organ systems with skin manifestations and chronic itch. Prior to joining the faculty at the University of Miami, Dr. Yosipovitch chaired the Department of Dermatology at Temple University and directed the first translational, clinical and research center dedicated to the study of chronic itch in the US. He has been awarded dozens of grants from the government, industry and private foundations to pursue his investigations into the causes and cures of diseases of the skin. He has published more than 300 articles in books and peer reviewed journals and has edited 3 books. He is the founder and past president of the International Forum for the Study of Itch and serves on the editorial boards of key specialty journals including the Journal of the American Academy of Dermatology and Experimental Dermatology. In addition, he received one of the highest awards in dermatology, the Marion B. Sulzberger lectureship award, at the 2016 AAD meeting for his work on itch. Dr. Yosipovitch was awarded several other prestigious awards for his research including the Heinz Maurer prize by the German Dermatology Society in 1998 and the inaugural Jeff Bernhard award in the World Conference of Itch in Boston in 2013. During his 11 years of tenure at Wake Forest School of Medicine, he received the Clinical Investigator Award and the Friends of Students' Award for Teacher of the Year. Dr. Yosipovitch has given more than 400 invited lectures to dermatology groups and organizations around the world and has mentored more than 30 fellows, PhD students and post-Doc fellows.

Students

Applicant Pool

We expect following applicants will constitute the majority of the applicant pool:

1. Personnel from skincare industries,
2. Undergraduates/graduates with some work experience and/or interest in skin biology and dermatological sciences,
3. Pre- and post-residency medical graduates seeking to advanced training with the purpose of pursuing a career in dermatology,
4. Foreign medical graduates with clinical backgrounds.

Enrollment Projections

We expect 5-10 students for the first year. Up to 20 students will be admitted per year in the second and later years.

2022: 5-10

2023: 10-15

2024: 15-20

Teaching or Research Assistants

Teaching assistants for this program will be drawn from the ranks of master students, postdoctoral fellows or graduate students of the participating faculty. The student undertaking such assistantship will be required to have prior approval of the graduate committee.

Administration

Program Administration

The administration and direction of the new online program will be under the same administration for current hybrid program of Master Graduate Program Director (GPD) and Dermatology Graduate Program Committee (DPC). The DPC will consist of a minimum of 5 members (minimal one clinician and one basic scientist, and Program Director). The DPC will be headed by a tenured Associate or Full Professor, as Master Graduate Program Director (GPD), who will report to the department chair. Additional committee members inclusive of clinicians and basic scientists will be included as needed. The DPC is responsible for recruitment, admission and academic advising of admitted students.

Current DPC administration construction:

Program Director:

Jie Li, MD, PhD, Associate Professor (tenured)

Research faculty:

Dragana Ajdic, PhD, Associate Professor

Tasuku Akiyama, PhD, Associate Professor

Tongyu Cao Wikramanayake, PhD, Associate Professor

Hideki Mochizuki, PhD, Assistant Professor

Irena Pastar, PhD, Associate Professor

Clinical faculty:

Katlein Franca, MD, PhD, Assistant Professor

Natalia Jaimes, MD, Assistant Professor

Keyvan Nouri, MD, Professor (tenured)

Program Manager: Andrea Jimenez, BS, MS candidate

Andrea Jimenez has been the program manager since April 13, 2020. Andrea received her BS degree with major in biology from the University of Miami. Prior to joining our program, she had served as a program coordinator for 2 years for the Residency Program in the Department of Surgery. Our hybrid program has been mostly online since March 2020 due to the covid-19 pandemic. Andrea is proactive and has managed program well. She has excellent communication skills and worked well with students and faculty. Andrea is currently taking a master degree study at the UM in Master of Science in Education (MSEd).

Budget

Program Budget

The proposed online program is planned to be self-sustaining by year 2. The annual costs fall into two main categories: personnel (program administration and teaching efforts) and equipment supplies. As documented in earlier sections, adequate facility, equipment and classroom exist to support this online program. The major cost will be for the maintenance, personnel, teaching efforts, marketing and travel.

Program Expenses

Year 1

Teaching	\$150,000
Personnel	\$100,000
Computers	\$ 5,200
Maintenance and supplies	\$ 8,000

Marketing	\$ 5,000
Travel	\$ 10,000
Sub-Total	\$278,200

Year 2

Teaching	\$150,000
Personnel	\$103,000
Maintenance and supplies	\$ 8,000
Marketing	\$ 5,000
Travel	\$ 10,000
Sub-Total	\$276,000

Year 3

Teaching	\$150,000
Personnel	\$106,090
Maintenance and supplies	\$ 8,000
Marketing	\$ 5,000
Travel	\$ 10,000
Sub-Total	\$279,090

Projected Program Revenue

Program revenue will come from tuition. Students enrolling in the MS program will be charged the university tuition rate currently at \$2,170 per credit. Each student needs 30 credits, tuition for each student would be \$65,100. For the first year with 5 - 10 students, tuition would be \$325,500 - \$651,000. For the 2nd year with 10 - 20 students, tuition would be \$651,000 - \$1,302,000. 70% of which will be allocated by the Dean of the Miller School of Medicine to the Department of Dermatology for program support. The revenue would be \$227,850 - \$455,700 for the first year and \$455,700 - \$911,400 for the 2nd and later years.

In the 2nd year and later, we project having enrolled enough students (10-20) each year for the program to be self-sustaining from tuition revenue. Funds from our current hybrid program will support the online program during the initial first year.

Comparison

Peer Comparisons

This master program is the first and the only non-clinical graduate degree program in the field of skin biology and dermatological sciences in the United States. There is one Master program in dermatology at the Boston University. But it is focused on the clinical training for MDs.

Documents

Attach Supporting Documentation

SBDS-MS_online_support.pdf

For Administrative Use Only

Plan Code

NEW

Reviewer Comments

Patty Murphy (pxm491) (Thu, 08 Apr 2021 19:41:45 GMT): Rollback: We had to reformat and edit some information in the proposal, so I am rolling it back for you to review and edit as needed and then you can resubmit it. Technically, what you are proposing is not a "track." A track is a subcomponent of degree program. The federal governments considers an online version of a program as a completely distinct program. So I changed the wording in the proposal to reflect the fact that this is an online program, not a third track within the existing MS degree. This is required in order to have it approved properly. Please contact me if you have any questions. The deadline for the Graduate Council meeting is Monday. Also, it is too late to get this approved for Fall 2021 because the next Faculty Senate meeting is in August. So you can't start this program in Fall 2021 and you can't advertise it until it has gone through the approval process. Patty Murphy

Patty Murphy (pxm491) (Mon, 02 Aug 2021 20:11:01 GMT): This program is just a repackaging of existing courses to provide an online version of an existing hybrid program. SACSCOC requires notification of each new online program prior to implementation. A letter of notification will be sent to my office after governance approval is completed.

Tiffany Plantan (tplantan) (Fri, 20 Aug 2021 20:21:25 GMT): Proposal presented at the August 17, 2021 meeting of the Graduate Council; 11 approved, 0 abstentions, 0 opposed.

Robyn Hardeman (rhardeman) (Wed, 01 Sep 2021 18:57:57 GMT): Supporting documents include: memo that department faculty and chair approve on 2/17/2021; memo from Dean Ford expressing his support on 4/22/2021, and a memo of support from the Speaker of the MSOM Faculty Council of their approval on 3/23/2021.

18 NEW: Master of Science in Skin Biology & Dermatological Sciences (Online)

Robyn Hardeman (rhardeman) (Wed, 01 Sep 2021 18:59:10 GMT): This proposal will be added to the Consent Agenda for the 9/15/2021 GWC agenda. Additional instructions and information will be sent to the proposers as listed, closer to the meeting date.

Key: 614