

March 26, 2021

RE: Letter of Response to the Letters of Opposition to the BS in Medicine Program.

Thank you for the comments related to the proposed BS in Medicine Program. We have addresses each of the comments from the four letters that we received.

1) Letter by the Graduate College, ODI, Dr. Fran Tax:

a) The BS in Medicine program will require a 3.0 GPA to be admitted to the program (p.1 of the proposal). This GPA requirement will have a disproportionately negative impact on the success of students from diverse backgrounds.

Response: *We have changed the GPA requirements to 2.20*

b) The BS in medicine will not accept transfer students into the program (p.1) nor readmits.

Response: *We have changed this to allow transfer students and readmits.*

c) The proposal fails to adequately describe program supports recognized as important to foster success in groups under-represented in health sciences (African American, Hispanic and Native American).

Response: *The Colleges of Medicine-Tucson (COM-T) recruit diverse students through several practices: 1) the COM has its own dedicated Deputy Dean and Office dedicated to diversity and inclusion in which we are above the national numbers for medical schools (UACOM-T at 4.6%; Nationwide is at 0.2% (2016-2020)¹, 2) A diverse group of academic advisors and college level faculty and staff interact with students 3) COM-T and all its departments are very proactive about ensuring that students of diverse backgrounds are reflected in relevant materials including for recruitment and marketing. There are student progress committees for retention efforts with members that reflect a diverse population.*

Student Recruitment *of diverse students will include outreach to high schools of all types throughout Arizona by direct emails, advertising using flyers, social media and setting up zoom conferences. At first this may sound overwhelming (approx. 250 high schools in Pima county alone) but we just completed a test-run of this with our new Accelerated Pathway to Medical Education (APME) program in which we recruited high school students from all over the state including schools enriched with American Indian/Native Alaskan and Hispanic/Latinx students. We also will be working with several faculty leads including Dr. Agnes Attaki, Director of INMED, Dr. Athena Ganchorre Executive Director of Curriculum and Integrative Learning, Dr. Francisco Moreno Associate Vice President of Diversity and Inclusion, Dr. Victoria Murrain Vice Dean of Diversity, Equity and Inclusion, Dr. Michelle Ortiz Director of Diversity Equity and Inclusion, Dr. Carlos Gonzales Assistant Dean of Curricular Affairs and several of our current and former URM students of the COM to reach URM enriched high schools. Our Students in programs like Medicine, Physiology, Emergency Medicine and Graduate Programs are tremendous assets in reaching high school URM students. Our new Director of Baccalaureate programs (Zoe Cohen) at COM-T has been involved with recruitment and retention efforts in these other programs and is expected to also be involved with recruitment into the proposed BS in Medicine Program. We will be collaborating with Pre-health Professions Advising, cultural centers, and Thrive Center to recruit diverse students into the program. We have explicit commitment to the values of diversity, equity, and inclusion on our COM-T program's website.*

Student Retention Plans: *All efforts from administration, faculty, staff and senior students will help retain students. When high school or transfer students matriculate to the BS in Medicine Program, a primary goal of the Office of Student Affairs (OSA), Office of Diversity, Equity and Inclusion (ODEI) and the Administration is to ensure that all students have the necessary resources and support to successfully navigate their journey, complete their BS education, and go on to either a productive/successful job and/or advanced education or training for a career. Intentional efforts will extend longitudinally throughout their undergraduate years to support their academic decisions and challenges that occur along the way, via Academic Advisors, Program Directors, peer-to-peer groups, ODEI, and OSA. Academic advisors, the Associate Director and Director of the BS in Medicine Program will be available to provide the needed guidance and mentoring to overcome inevitable challenges that will occur along the way with goal of enabling them to continue to progress to successful completion of the program. Retention we believe entails having the students at the beginning of their journey work with and/or volunteer with faculty in areas of career interest including performing clinical and*

preclinical research. Peer mentoring² will also be incorporated to assist in supporting goals including developing self-efficacy, sense of belonging, and perceived worth or relevance of the curriculum³. The COM-T has between 900 to 1000 faculty with the majority already engaged or wanting to participate in the education of undergraduates. The UAHS and COM-T are dedicated to having a physical common location for the students, and to create groups that include Health Sciences students to enable our undergrads to have more contact with the students of medical and health professions in order to build and nurture a future vision for the undergrads and mentoring relationships with current seniors and professional students on campus. FAQs will be established on the BS in Medicine website that will be answered by staff, administration, and faculty. Each student will have required meetings with academic advisors to discuss and continually update their academic progress and career development. The OSA has learning specialists that will need to expand as the BS in Medicine comes on board and will be available to all students. Knowing many students are independent and may be more on-line (in a virtual learning environment) we will provide an electronic model of longitudinal support and guidance for students that also entails career advising and job opportunities. The University offers multiple workshops and outreach to help retain students and we will engage in all mechanisms used by other BS and BA programs at the UArizona. Our OSA and Academic Advisors (often the contact person) will be made aware of the many programs available to make students feel invited including ethnic/diversity groups, disability groups, hobby groups, community outreach groups, intramural sports, social and techie groups, organized activities, events and wellness programs, etc. The COM office of ODEI provides effective mentoring and networking opportunities to help make students comfortable during training including BNGAP-Building the Next Generation of Physician Leaders <http://bngap.org/about-us/>.

For **Faculty** the COM-T has committees focused on diversity and inclusion; these committees offer professional development opportunities to faculty on topics which advance perspectives on best practices for fostering an inclusive environment on campus. Faculty from diverse backgrounds will continue to be recruited through professional health care- and research-based strategies which search committee members learn at Faculty Recruitment Workshops provided by Dr. Victoria Murrain (Deputy Dean, Diversity and Inclusion) and Dr. Michelle Ortiz (Director of Diversity Equity and Inclusion) as well as by Human Resources. We have current practices that train faculty in creating inclusive classrooms, as well as encourage participation in monthly events hosted by COM-T including forums and lectures hosted by the Office of Diversity, Equity and Inclusion. There is a requirement that all faculty engage in at least six hours of professional development relating to DEI every year.

Our process for **faculty recruitment**: Crafting a job description that motivates URM applicants to apply is important in order to gain a large pool of applicants that will allow for more diversity and inter-personal comparisons. Research has indicated that use of “masculine” words in job descriptions deter women from interest in a position⁴. For example, words like “strong research and writing skills” versus “proficient research and writing skills” will often have women second guessing whether the job fits their personality. Promoting the use of gender decoders⁵ to help create more equitable job descriptions has been utilized by some UArizona colleges and will be implemented across colleges when crafting job descriptions for the BEST-I Excel Cohort. All job advertisements include a UArizona diversity statement that is aspirational and uses a broad perspective of diversity to encourage UBR applicants⁶. We utilize a wide range of targeted advertising for UBRs, including the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), AAMC Group on Diversity and Inclusion listserv, Association for Women in Science, Executive Leadership in Academic Medicine (ELAM), National Hispanic Medical Association, National Medical Association and others. We will utilize Minoritypostdoc.com, and use Twitter, where these positions can be highlighted by identifying hashtags such as #BlackandSTEM, #NativeinSTEM, #NativeScience, #LatinXinSTEM, #MarginSci, and #DiversityinSTEM⁷. Furthermore, using evidence-based studies^{9,10}, we will have faculty actively reach out to promising postdoctoral UBR candidates confirming the institutional support and the cultural building taking place. We currently have and will encourage more faculty and search committee members to attend meetings focused on underrepresented scientists, such as the annual SACNAS meeting and the Annual Biomedical Research Conference for Minority Students. We will have search committee members and the Center Directors for Pain and Aging directly contact postdoctoral fellows that have MOSAIC K99/R00 Awards, are part of the Howard Hughes Medical Institute Hanna H. Gray Fellowship, are part of the Burroughs Welcome Postdoctoral Enrichment Program, as well as contact the diversity and inclusion committees of scientific societies¹¹. We will search databases that act as an interactive platform connecting historically marginalized individuals in STEM to academic and professional opportunities^{7,8}.

Faculty Retention Plans: to provide resources, an inclusive environment, leadership positions and placement on committees that help make future decisions for the institution. Start-up and retention funding will be provided and based

on the faculty applicant's research. The COM-T has recently implemented an incentive plan for research and is now working on incentive for teaching and service that is built to retain faculty and to provide direct resources for their independent mission. The COM-T also provides communication groups, workshops and a faculty lounge that all are methods to make faculty feel supported and respected.

- 1) https://www.aamc.org/system/files/2019-11/2019_FACTS_Table_B-3.pdf
- 2) Vincent Tinto, Through the Eyes of Students *Journal of College Student Retention: Research, Theory & Practice*, First Published December 11, 2015
- 3) Juan I. Venegas-Muggli, Carolina Barrientos, Fernando Álvarez, The Impact of Peer-Mentoring on the Academic Success of Underrepresented College Students, *Journal of College Student Retention: Research, Theory & Practice*, First Published March 4, 2021
- 4). Gaucher D, Friesen J, Kay AC (2011). Evidence that gendered wording in job advertisements exists and sustains gender inequality. *J Pers Soc Psychol* 101, 109–128.e.g.
- 5) <http://gender-decoder.katmatfield.com>
- 6) Molly Carnes, Eve Fine, Jennifer Sheridan, Promises and Pitfalls of Diversity Statements: Proceed With Caution, 2019 *Academic Medicine*, Jan;94(1):20-24. doi: 10.1097/ACM.0000000000002388
- 7) www.caiselist.com
- 8) www.minoritypostdoc.org/index.html
- 9) Peek ME, Kim KE, Johnson JK, Vela MB (2013). "URM candidates are encouraged to apply": a national study to identify effective strategies to enhance racial and ethnic faculty diversity in academic departments of medicine. *Acad Med* 88, 405–412;
- 10) Stewart AJ, Valian V (2018). *An Inclusive Academy: Achieving Diversity and Excellence*, Cambridge, MA: MIT Press.
- 11) https://mighty.citadel.edu/root/images/cti/pdf/resources/teaching_learning_resources/foundations_of_learning/35914-aaf-equity-inclusion.pdf

2) Letter by the Ecology & Evolutionary Biology, College of Science, Dr. Michael Worobey, Department Head:

a) the proposed degree program is misrepresentative and misleading in that it does not provide students with the coursework, training, or credentials needed to enter many healthcare support careers or health professional programs upon completion.

Response: *We have organized the potential for jobs into three categories in our proposal: jobs available after the degree is obtained; jobs/careers available upon further certification; and jobs/careers available after further degree requirements. In order to mitigate against any perception of misrepresenting or misleading students, which is absolutely not our intent, we will provide details for each type of job/career/certificate/advanced degree requirements available on our website and in our offices for academic advisors. We greatly appreciate this comment; in response, our team is actively putting together all credentials for the jobs listed in the proposal as well additional potential career pathways that we will make available to both students and to academic advisors.*

b) The proposed program fails to meet the basic educational requirements set by state licensing boards for careers or jobs such as 'massage practitioner', and falsely suggests that completing the program will qualify students to obtain vocational licenses without additional training or experience. Additionally, there are potential ABOR policy violations associated with this proposal that I would like to bring to the attention of review committees prior to their approval.

Response: *As stated above – careers like 'massage practitioner' are listed on our application under the title "A BS in Medicine along with advanced certification and/or a Master's degree will allow students to enter the following careers:". Thus, we believe that we provide contextual information related to additional requirements set by licensing boards to avoid the perception that completing the proposed BS in Medicine alone would be sufficient without additional training or experience. Thus, we will do everything we can to help our potential students complete this degree and move forward to jobs, as well as to future certifications, and advanced degrees. Our office will work with students to make sure they know what credentials are required for entry into careers of interest, as well as information regarding where advanced training is available and the credentials earned. Our office will do everything to help students graduate and move into jobs, certificate programs and advanced degree programs. We do not believe that our proposal is in violation of any ABOR policies and would welcome elaboration on this point beyond our response.*

3) Letter by Molecular & Cellular Biology, College of Science, Dr. Molly Bolger

a) B.S. in medicine (in particular Emphasis 2) is duplicative to other pre-health majors on campus.

Response: *While there may be some inherent overlap with other pre-health majors on campus, our core courses are unique and not duplicative and will help advance students that select emphasis 2. We have specifically made efforts not to duplicate courses offered by other programs, and we expect that all departments/colleges will share in the student education process. Several of our courses, such as human-pathology, -histology, -advanced medical immunobiology and -pharmacology are not offered under any major and will aid students wanting to pursue medicine, physician assistant, and additional advanced medical related degrees. In addition, our core courses in introduction to medicine, being a healthcare provider and careers in medical health sciences are unique to this degree. Moreover, many faculty teaching in the program will be healthcare providers themselves, thus giving students a direct window in some future careers.*

b) Significant concern that development of this new degree through the College of Medicine is not in students' best interest. Three of the five departments proposing the new major currently have no undergraduate majors. There is concern that these departments are not prepared to meet the challenge of retaining undergraduate students, particularly the diverse students that our university is dedicated to supporting. Further, the curriculum outlined is not well-designed to prepare students for specific health careers that are targeted by the new major.

Response: *We appreciate the comment but we would propose that the premise of the BS in Medicine is in fact to provide students with a different exposure and experience more targeted to a career in the health professions, and thus have the "student's best interest" absolutely in mind. Thus, we specifically disagree with the sentiment that the COM-T development of a BS in Medicine degree is not in students' best interest. We in the COM-T have a large undergraduate physiology program, a new Emergency medicine program, a professional undergraduate program and multiple graduate programs in which the students' interest is put forth as a top priority that continues to grow based on the desire of faculty wanting to teach and mentor undergraduate students. We cannot think of a better group of faculty that practice full- and part-time medicine to teach and mentor future students. Our faculty take on a practice of caring for others and have already demonstrated this desire to care for undergraduates based on the faculty wanting to create new courses, teach in courses and mentor students. As detailed in the response above to Dr. Fran Tax, we have extensive programs in place to foster success in DEI students. Also as stated above, we have recruited a new Director of Baccalaureate Programs who will be focused on our undergraduate students.*

c) The new major will not allow transfer students

Response: *We will allow transfer students; the application has been changed to reflect this.*

d) Proposers suggest without evidence that there is an insufficient inflow of prepared undergraduates into medical school. This is loosely tied in the proposal to a national need for more health care professionals. Elsewhere in the proposal, it is stated that the COM receives 10,000 applications per year. The acceptance rate for the UA medical school is about 7%. It is unclear how increasing the capacity for training undergraduate students for medical school will address this problem. Would not an increase in the capacity for training of physicians better meet this need?

Response: *We are proposing an alternate pathway to the health professions, including but not limited to medicine, physician assistant, nursing, etc. Many of these professions are experiencing national shortages. Our proposed pathway is more focused to these professions, and in many cases will be taught by healthcare providers. Statistics about COM-T admissions, as well as those of other UArizona health-related training programs only represent a very small component of our ultimate premise, which is to prepare students at UArizona for training in these health professions here and elsewhere. Thus, we are hoping to attract students to begin their healthcare education here with a pluripotent differentiation here and elsewhere. In general, the basic sciences in the medical school are being pushed to the undergraduate campuses due to increased time for clinical training in medical schools and a corresponding decrease in time devoted to teaching basic sciences. There are topics that lack depth and are best taught by professionals in these fields including topics such as pathology, histology, pharmacology and immunobiology. We agree with the need for increased capacity for training physicians, yet the number of students is controlled by a national accreditation. The proposal of a BS in medicine will not only introduce students to the practice of medicine (FCM 296) but will also present how medicine-related fields may be excellent alternatives to medicine, for example courses such as MED 101, and will also give students a feel for being a health care provider (FCM 201). Clinical reasoning courses will aid in understanding how health care providers make choices in health care management (CMM 459 & 461).*

e) The B.S. in medicine aims to prepare students for multiple careers. However, these careers have wide-ranging requirements and pathways. For example, how does the current degree relate to students within our established pathways in nursing? The focus on “health care” positions in general is confusing and misleading.

Response: *The purpose of the degree is to help students understand and know the multiple career options and to provide them with the necessary background to be able to differentiate into different healthcare professions. Far too often students enter college with a very limited scope of the careers available in medical care. We believe that working with our partners and faculty in the COM-T as well as the CON, COP, COPH and COM-P, we will help provide students with courses that will aid in future jobs and careers.*

f) The proposal states that the major will directly prepare students to enter the workforce as home health aides, physical therapist aids, phlebotomists, etc. These are not careers for which a 4-year degree is required. Why would students pay for a B.S. degree to enter one of these fields?

Response: *Although not all the potential jobs/careers listed in the proposal require a BS degree currently, we believe this trend is changing rapidly in that employers of such jobs are preferring applicants with BS degrees. In addition, the BS degree is desired for promotion in many of these starter jobs and also allows for “job changes or job pivot” when employees seek a change in their career. Also, our proposal allows for students to enter a pathway towards a specific healthcare career while also allowing them to differentiate to a different career. We agree that if a student already knows their career choice, and this does not require a BS, it would make little or no sense for them to apply to this program, and therefore they would be unlikely to enroll in the BS in Medicine program*

g) Emphasis 2, “Basis Medical Sciences” seems to be the pathway intended for pre-medical students. However, the plan listed here does not include all the coursework needed for a student to enter medical school. The major includes only the first semester of introductory biology (leaving out the accompanying lab). The major does not require calculus or genetics. The major does not require or recommend a basic course in cell biology. All of these are either required or recommended by most medical schools and are also important for students to have the required knowledge and skills to succeed on the MCAT exam. Existing pre-health majors are carefully designed so that students completing the major will have what is needed (knowledge, skills, and coursework) to apply for medical school

Response: *The BS in medicine has all the courses that are required for the UArizona colleges of medicine as well as many other schools across the country. The MCAT and many schools do not require calculus or genetics (although a basic genetics course is highly recommended). The necessary chemistry/biochemistry courses, physics, molecular biology and physiology are all required (see general sciences, general eds and electives). We have organized a course load that caters not only to medicine but also to alternative careers in medical related jobs/careers with plenty of options for students to dovetail their education towards the future. Our student advisors will work with students to best fit their future career desires, presenting many options. Our Interim Director, Dr. Zoe Cohen (permanent once the degree is approved), is very knowledgeable of the medical school requirements (currently on the committee for setting requirements), knowledgeable regarding requirements of other medical schools as well as courses that help prepare for the MCAT. Not every course is required under this degree since medical school is not the only option the degree is focused on. However, there are several emphases that require students to do 19 units that will aid in their preparation for the MCAT and prerequisites for advanced degree programs. The BS in Medicine, like the other pre-health majors, will carefully design courses so that students completing the major will have what is needed (knowledge, skills, and coursework) to apply for medical school as well as other jobs, certificates and/or advanced degree programs. Some overlap of courses will be expected given UA policies that dictate UG programs, as well as the course approval process which discourages the creation of duplicative courses. Rather than forcing through new courses that might be duplicative of existing courses, the BS in Medicine program is designed to provide for equitable enrollment opportunities that include existing courses. Rather than draw students away from these fundamental courses, the program seeks to provide additional opportunities to leverage these courses. This is in service to the students, which should be the guiding principle of all those associated and intimately involved in curriculum development. Encouragement of dual degrees would be an advantage to multiple programs.*

h) An examination of the sample 4-year plan reveals a lack of 300 level courses (the last 4 semesters include only 400 level courses in the major). This may be because many of the suggested upper-division courses are currently offered within the COM as dual enrollment for undergraduate and graduate students. This again suggests a lack of emphasis on undergraduate education in the proposing departments.

Response: Although there are fewer 300 level courses, there are some in each of the emphases that are choices to all students. More 300 level courses can be offered and designed as needed.

i) The proposal suggests that a 1.0 FTE director will oversee this large new program. It is not stated who that director will be.

Response: The Interim Director has already been hired, Dr. Zoe Cohen. She is titled interim until we have full approval for this program. Currently Dr. Zoe Cohen is the director of our APME and Honors to Medical School (HEAP) Programs. In addition, the Dean of the COM-T, along with support by the UAHS leadership, will hire an Associate Director for the BS in Medicine program.

j) The Diversity and Inclusion section (page 52) lists some existing structures in the COM to address these needs in general. However, the proposal seems to be lacking any specific plans for support structures to recruit and retain underrepresented students. This is of particular concern given the lack of diversity in medicine and our mission as a Hispanic Serving Institution. Nationally, less than 6% of physicians identify as Hispanic. <https://www.aamc.org/data-reports/workforce/interactive-data/figure-18-percentage-all-active-physicians-race/ethnicity-2018>

Response: Please see response above under Dr. Frans Tax letter.

k) The learning outcomes for the proposed major (page 49) are very broad and do not seem to be designed to ensure that students are prepared for medical school admissions, including the MCAT examination. By examining the MCAT requirements <https://students-residents.aamc.org/applying-medical-school/article/whats-mcat-exam/#cars> one can see that the learning outcomes of the BS in medicine are not well aligned. By contrast the existing major in Molecular and Cellular Biology is well suited to prepare students for this examination. A few sample MCAT requirements and aligned MCB degree learning outcomes are shown below.

Response: We agree that MCB is well in line for preparing students for the MCAT. Our Learning Outcomes are intended to be broad in order to help guide students towards different avenues of health/medical-related careers, including but not limited to medicine. The vast majority of students applying to medical schools do not get in, and it is important that students be aware of and prepared for pursuing alternative training and careers in healthcare professions.

l) In her letter, Dr. Schroeder suggests that the new B.S will likely compete with existing programs for the same pool of students. In his response, Dr. Vanderah states that the goal of the new B.S. is to attract new students to UArizona. Plans are presented to advertise and market the program, but no data are presented in the proposal to suggest that the program will indeed reach a new pool of students.

Response: We have every intention in creating a larger pool of students at the UArizona. It is a unique program in the US, and as such, we believe it will cast a wide net. These students can attend any of our medical and health related BS and BA programs. In working with the UAHS and main campus advertising, we intend to use all of the programs in medicine and health to increase enrollment of students from across the state and the nation. This BS in Medicine program, along with its unique courses, will add to our existing programs, strengthening the UArizona as the destination for gaining an education that can result in medical-related careers. Other universities (ASU, NAU, GCU, Creighton-in 2021) that lack a Medical College and the talented faculty that the UArizona has to offer, have proceeded to offer BS degrees in Medical Sciences. We intend to reach out to the high school programs in Arizona to inform students that the UArizona has multiple medical and health related programs that will prepare them for jobs, advanced degree programs and careers that other universities may lack. Medical and Health related careers is one of the largest growing sectors in the future economy and the UArizona should use this, and its many medical faculty to grow the student population. We have recently been meeting with advertising (main campus, UAHS, College) to organize a state and nationwide plan of advertising. Recently with our APME program (Accelerated Pathway to Medical Education) we reached out to over 140 high schools and setup zoom meetings to inform high school students about our early acceptance into medical school, with tremendous success. This direct contact with high school classrooms, teachers and administrators reached an exciting buzz and application process that we feel can be more broadly applied to our BS and BA programs at the UArizona. Upon approval, marketing will begin immediately with dedicated staff in the Health Sciences and College of Medicine (Tucson and Phoenix) to advertise the major on their College and Department websites as well as social media often used for prospective students, parents, and employers. These include programs on Facebook, Snapchat, Pandora, Google and online channels to generate requests for more information. The College of Medicine-T & -P will reach out to offer this degree nation-wide via the AAMC and other health related professional societies. College advisors will host

online recruitment events in Phoenix, Tucson, Flagstaff and rural areas of the State of Arizona. Live recruitment events will occur in Spring. Recruitment activities will include but are not limited to; 1) high school recruitment events including zoom connections, tabling at college fairs and presenting at high school student leadership conferences, 2) College of Med (T & P) will go to targeted high schools throughout AZ and select out of state colleges to promote UArizona and all majors including the NEW BS in Medicine, 3) advisors attend campus recruitment events (i.e., "Meet your Major Fair"), 4) health professionals will be asked to give Q&A on careers in their field, and 5) events at community colleges across the state of AZ.

4) Letter from Scientists in the College of Science

a) ...damage that it will likely inflict upon our college and most importantly upon the students we serve. As a college we take our role in preparing pre-health students very seriously. Several of our departments directly prepare majors for careers in health care and the majority of our units play a role in educating students for careers in this area. We have appended a modified list of these careers to this letter#. We have spent decades refining our curricula, teaching methods and support structures to meet the needs of these students. We have great concern that the proposed B.S in Medicine will undermine the efforts by directly competing for enrollment with College of Science, as the CoS currently has 5814 students self-identifying as Pre-health. At a time in which we and our students are struggling to recover from a pandemic, we would like to see UArizona colleges work together, rather than creating redundant programs that work against each other.

Response: *We appreciate that the other programs have refined their curricula and teaching methods to prepare pre-health students. This does not preclude the creation of new programs that offer new curricula and teaching from additional faculty. The BS in Medicine will utilize many of these courses as a shared curriculum and shared students with a goal of increasing enrollment and options for achieving a bachelor's degree at the UArizona. The addition of the BS in Medicine would attract a greater pool of students to the UArizona and therefore provide a larger enrollment pool that all departments would inevitably benefit from. Even if students were to significantly enroll in the BS in Medicine program, the design of the program is such that these students will interface and interact with the Colleges and Departments earlier in their academic journey, thus these departments will still be able to engage in their teaching missions and the charge of the land grant institution as a whole. Moreover, the BS in Medicine will offer students an alternate pathway to a career in the health/medical professions taught in large part by medical and health providers in an environment and with role models in those professions.*

c) We also share a concern that the proposed B.S. in Medicine major is not well-designed to meet students' needs. There are numerous issues that have been pointed out to you in other letters. Chief among these are a lack of coherence in a program attempting to serve diverse career paths and a lack of a demonstrated preparation to support the needs of diverse undergraduate students. Another concern raised by members of our community, but not included in previous letters, is that the proposed B.S. in Medicine does not represent good value for students and parents.

Response: *These concerns are addressed above in responses to other letters. Moreover, we believe that students and their parents will be the ultimate judges as to whether this program provides good value or not. While we can all speculate, whether the program is successful or not will ultimately depend on its merits and on whether students and parents will perceive its differentiating value.*

Sincerely,



Todd W. Vanderah, Ph.D.

Professor & Head of Pharmacology, COM University of Arizona