

Application Summary

Competition Details

Competition Title:	2019 CTL/BP Junior Faculty Teaching Excellence Award
Category:	Institutional Awards - CTL
Award Cycle:	2019
Submission Deadline:	02/01/2019 at 6:00 PM

Application Information

Submitted By:	Michele Yager
Application ID:	3046
Application Title:	Amit Reddi
Date Submitted:	02/01/2019 at 7:57 AM

Personal Details

Applicant First Name:	Amit
Applicant Last Name:	Reddi
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Primary School or Department

School of Chemistry and Biochemistry

Primary Appointment Title:	Assistant Professor
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Application Details

Proposal Title

Amit Reddi

January 31, 2019

Award Selection Committee
GT Center for the Enhancement of Teaching and Learning

RE: Nomination of Dr. Amit R. Reddi for the 2019 Junior Faculty Teaching Excellence Award

Dear Members of the Award Selection Committee:

As the Chair of the School of Chemistry and Biochemistry, I enthusiastically nominate Assistant Professor Amit Reddi for the CTL/BP Junior Faculty Teaching Excellence Award. Since his arrival in the fall of 2013, Dr. Reddi has established an internationally recognized research program on the cell biology and biochemistry of metals and metalloproteins while greatly enhancing the educational environment in the School and Institute through his excellence in teaching, research mentorship, and curriculum development. Prof. Reddi is an exemplary junior faculty member who teaches and inspires our students with his enthusiasm, clarity, accessibility, and attention to personalized learning.

Dr. Reddi has taught core courses in our biochemistry curriculum to undergraduates (Biochemistry II: Metabolism; CHEM 4512; four semesters) and graduate students (Molecular Biochemistry; CHEM 6573; two semesters). He also co-developed a new course in Bioinorganic Chemistry (CHEM 4803/8853; 1 semester). There are numerous measures of an instructor's effectiveness teaching and their impact on student learning, including evaluation by peer instructors, the numerical metrics of CIOS scores, and other indications such as thank-you letters and other testimonials from students. By all such measures, Dr. Reddi has excelled in all aspects of teaching and mentorship.

Dr. Reddi's CIOS scores have been strong throughout his time at GT. For example, CHEM 4512 (Biochemistry II) is a "service" course taken by a diverse group of chemistry, biochemistry, biology, pre-health and bio-oriented engineering students. His average CIOS score in this demanding setting is 4.53/5.0 (range 4.1–4.7 over 4 semesters), well above the median for similar size courses in the Institute as a whole (4.31), College of Sciences (4.11), and the School of Chemistry and Biochemistry (4.20). An average 15 or 20 students per year ask Dr. Reddi for letters of recommendation for graduate school, medical school, or summer research programs, highlighting the personal connections he makes with many students. He has been praised numerous times through the *Thank a Teacher* program, online discussion forums for GT classes, and by direct e-mails from students. What is most remarkable is the consistent quality of these comments – he is regarded by his students at all levels as demonstrating a consistent combination of stimulating and challenging instruction balanced by genuine respect and care for his students. This is a winning formula to promote student success.

Dr. Reddi is remarkably accessible to his students. He maintains an open invitation for students to chat about class or career/life goals every weekday afternoon. He also strives to create a comfortable and safe learning environment for students, for example, by learning their names right away and by maintaining online discussion forums for anonymous questions to help students sidestep feelings of intimidation or embarrassment. Further, when presenting course material, he openly points out topics that he himself had trouble understanding when he was in college or still does not understand fully, highlighting the important role of continued questioning in the learning process.

Among his most noteworthy qualities as an instructor is Dr. Reddi's desire to personalize education. Through online surveys and in-class discussions, he makes it a point to get to know why each student is taking the course and actively designs assignments and questions to reflect the

intellectual and motivational diversity of the students. This is perhaps best reflected in a research proposal assignment in which he has students identify and tackle any research question related to the overall subject that may also be relevant to their personal interests and goals. As part of this exercise, students peer review each others' proposals, with the top-rated entrants receiving the prize of coffee with Amit to discuss their winning ideas. A description of his strengths as an instructor would not be complete without mention of Dr. Reddi's enthusiasm for the course material, which always attracts the positive attention of his students as reflected in CIOS scores and comments. Finally, as is characteristic of the best teachers, Dr. Reddi is never complacent and continually strives to improve. He has attended numerous workshops to improve his teaching methods, incorporating lessons on flipping the classroom, active learning, and recognizing bias.

Beyond classroom teaching, Prof. Reddi is very much involved in the academic culture of the School. He routinely assists with help sessions for graduate applications and personal statements. He is a faculty advisor to the Molecular Medicine student group and helps to bring in speakers, including MD/PhD students to talk about applications and life at medical school. In addition, he often guest lectures in GT1000 courses, discussing research and various topics in molecular medicine, biochemistry, and metabolism.

Exemplifying the idea that research is an excellent vehicle for teaching, Dr. Reddi includes a large and diverse number of undergraduates in his research program focused on the cell biology and biochemistry of metals and metalloproteins involved in human health. In addition to a current roster of seven graduate students and one postdoc, the Reddi laboratory has included 18 undergraduate researchers over the past five years, twelve of them Georgia Tech undergraduates. Of those, six were awarded Presidential Undergraduate Research Awards and three were awarded Petit Scholarships for Undergraduate Research. It is rare for new research groups to mentor so many undergraduates, but Dr. Reddi and his team have excelled at it, highlighting how much he values developing Georgia Tech's human capital.

Thus, by all measures, Professor Amit Reddi exemplifies excellence in education both in and out of the classroom. He is greatly valued by our students and colleagues, and would be a wonderful choice for a Junior Faculty Teaching Excellence Award.

Sincerely,



M.G. Finn, Ph.D.

Professor and Chair, School of Chemistry & Biochemistry
James A. Carlos Family Chair for Pediatric Technology
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Statement of Teaching Philosophy and Instructional Effectiveness

One Instructor's Quest for Personalized Learning and Education (in Three Acts)

Overview.

The **cornerstone** of my teaching philosophy is to create a personalized learning and educational environment for each of my students. The underlying **premise** for this philosophy stems from the fact that every student has a different educational background and motivation for taking the courses I teach. I believe that a more personalized approach to teaching would enable each student to develop their own individual incentives to excel, beyond grades or external expectations of the instructor. **Implementation** of my teaching philosophy involves: **a.** creating a supportive and nurturing atmosphere to ensure students are comfortable asking and answering questions; **b.** empowering and motivating students to take individual responsibility and ownership over their own learning and education; **c.** emphasizing the connections between foundational biochemical principles and current biomedical challenges; and **d.** instilling the confidence to put forth new ideas. **The following is the three-act story of my journey as a scientist seeking to find my identity and philosophy as an educator.** In addition to describing the evolution of my teaching philosophy, I will discuss how I sought to achieve points **a-d** in order to ultimately meet my goal of creating a sustainable framework for personalized learning and education. Further, I will discuss successes and areas of improvement based upon student feedback and CIOS scores. Lastly, I will discuss how I have been using my research lab as a vehicle to mentor undergraduates and further inspire future scientific leaders. Altogether, I aim to provide a comprehensive picture of the development, evolution, and implementation of my teaching and mentoring philosophy.

Evolution of a Teaching Style and Philosophy.

Prelude. Ultimately, for me, teaching is an expression of my intense love and passion for learning the biochemical rules of life. Every cell in our body, which consists of tens of trillions of cells, is carrying out billions of reactions per second. How do cells control and carry out the reactions that support life in concert? How do cells in complex communities communicate with each other to coordinate metabolism? How do cells, which are stuffed with trillions of biomolecules, including proteins, sugars, lipids, metal complexes, and other metabolites, sort and traffic these molecules to the correct location at the correct time? I approach teaching by first sharing my sense of wonder and curiosity about biology and then giving students a framework for understanding the biochemistry that governs complex life processes. I do this both in the classroom as well as in the research lab. Moreover, I try to tailor the questions and topics towards students' individual interests in the hopes of creating personalized learning and mentoring environments.

Act 1: Young Idealist. I started teaching at Georgia Tech in the Fall of 2013. I taught my first course, an introduction to metabolism for juniors and seniors (CHEM 4512), from the perspective of what **my ideal** class would look like. I dreaded the concept of formal lectures. I dreaded even more teaching course material as hardened facts, rather than as what our accumulated biochemical knowledge truly is: the best malleable models that are consistent with current data. As a consequence, I wanted to teach in a "*Socratic*" style, posing open-ended questions in metabolism and biochemistry, and, as a class, devising and debating ways to address these questions, all the while having students learn biochemistry in the process. To be frank, this approach **failed** miserably for multiple reasons. First, it was arrogant of me to think people learned in a manner consistent with my personal pedagogical ideals. Second, due to the wide disparity in people's background knowledge, the questions I would ask were not understood by or accessible to everyone. Third, I realized that many students require a more structured learning environment in which biochemical "facts" and defined principles are clearly outlined. Fourth, many of our students are hard wired to think about questions as having binary correct or incorrect answers, making it very difficult to have nuanced discussions about conditional answers. While I feel like my style benefited the top 20% of students, many of the students in the middle and bottom tier were lost. My first semester teaching was eye opening and really made me reflect and think hard about how to be an effective instructor.

Act 2: Hardened Pragmatist. The next time I taught CHEM 4512 in the Fall of 2014, I realized that I had to be more structured. This led to information being delivered in a more traditional lecture style where I would highlight key learning concepts and methodically go through course material while emphasizing

which key concept was being covered. I restricted the number of open-ended questions I would ask to make sure I did not lose students. Moreover, I spent more time covering background material and slowed down the pace of my course to ensure that the less prepared students had a better chance of assimilating material. Additionally, I asked more straightforward, less nuanced questions. In total, I succeeded at making the class more structured and accessible to the middle and bottom tiers of the class. However, I did not feel like I truly challenged my students in the same manner as when I first taught CHEM 4512. In effect, I went to the opposite extreme. While I was clearer in emphasizing key concepts, I did not feel that I truly inspired students to appreciate the beauty and inherent messiness of biochemistry. Put simply, my students were too comfortable. Moreover, I did not have as good a time teaching the material in a very “neat” and “tidy” manner. Upon reflection, this style benefited to the middle and bottom tier of students, but not the top 25%.

Act 3: Idealistic Pragmatist. Learning from my past efforts teaching, I worked hard to strike a healthy balance between my natural instincts to teach in a “Socratic” style and delivering formal structured lectures. In my third semester of teaching CHEM 4512 in the Spring of 2015, I planned for the first half of class being a structured lecture, highlighting key concepts and course material. The second half of class would be an inquiry-based approach to teaching in which I posed questions related to the subject matter. These questions were often difficult, requiring the integration of multiple streams of knowledge, and served as vehicles for re-enforcing concepts or delivering new content. For instance, I would ask students to diagnose a metabolic disorder based upon symptoms and clinical lab results. Or I would ask students to propose a strategy to identify the biological factor(s) that initiate(s) bone growth and regeneration or mediate(s) systemic copper or iron homeostasis. The combination of structured lectures and inquiry-based learning did a much better job of engaging the entire class. The middle and bottom tier students benefited from the traditional PowerPoint lectures, whereas the top 25% students stayed actively engaged with the more abstract and application-based questions I would ask. In addition, I handed out more background materials to ensure that the less prepared students had more resources to draw upon. Overall, for the first time, I truly felt like I was heading in the right direction to achieve my ideals of being an effective instructor and had strategies in place to reach the broadest swath of students.

Epilog. Teaching for me has been like what I imagine skydiving is like; both exhilarating and incredibly nerve racking. Through my many positive experiences interacting with students and listening to their feedback, my teaching style has evolved from being one that was relatively unstructured, to one that has a healthy mix of formal instruction and inquiry-based problems. While I am humbled to be nominated for a teaching award, it is by no means a reflection of how great a teacher I am; rather it is recognizing my willingness to grow, improve, and better serve my students.

Personalized Learning.

Over the course of the last five years, I have come to espouse a philosophy that we must personalize learning and education for each individual. I realized quickly that every student has a different educational background and motivation for taking the courses I teach. These differences directly impact how students approach the course and the type of effort that they put in. I now strongly believe that a more personalized approach to teaching would allow students to achieve their highest potential. Below are core strategies I have come to implement over the last five years to achieve my goal of personalized learning and education.

A. Creating a supportive and nurturing atmosphere to ensure students are comfortable asking and answering questions. I have come to realize that many students are deathly afraid of authority figures, *i.e.* their professors, and looking dumb or stupid in front of them. This is a major barrier for students to overcome and can greatly stifle their growth. Recognizing this as a major issue, I now implement a number of strategies to make students comfortable around me and in class. First, I learn students’ names and try to engage in casual conversation before and after class. Second, I maintain an online discussion forum on Piazza/Canvas for students to ask questions anonymously about content. Third, when presenting course material, I try to highlight topics that I find particularly challenging and why I have or had trouble understanding them. Once students recognize I am human, it makes it easier for them to be human around me! Fourth, many students suffer from anxiety, depression, and other mental health issues that prevent them from attending class or submitting assignments. Even without formal academic accommodations, I try to

allow students to turn in late assignments or give extended deadlines. Little things like this can sometimes go along way to make a student feel like someone cares about their wellness. All of these actions collectively create a climate of support for my students.

B. Empowering and motivating students to take individual responsibility and ownership over their own learning and education. When I started teaching, I naturally assumed that every student enrolled in my course is inherently interested in the course material and would work as hard as required to earn an “A”. I off course did not fully appreciate that my course may be just one of many courses my students are taking and that they may only be taking it to fulfill a requirement. Due to variations in what I call the “motivation” gap, I ask every student to tell me why they are taking the course and what they want out of it. I use this information to not only help design homework, quiz, or exam questions to tailor my questions to the interests of the students, but I also use it to motivate students when I notice a dip in their exam grades. When students do not do well on an exam, C or less, or have a negative trend in exam grades, I send follow-up emails asking how students are doing and make reference to their specific motivations for taking the exam. If students do well on an exam, or have a positive trend in their exam grade, I send a supportive email letting them know that I think they are doing a great job and meeting their stated goals. I find that this really personalizes the class and makes students feel as though someone truly cares about their success. Of course, I could also see how this may seem intrusive, but I have not gotten any negative feedback about this yet!

C. Emphasizing the connections between foundational biochemical principles and current biomedical challenges. Students enjoy lectures and doing assignments if the material they are learning is connected to real world problems. As a result, I would often present inquiring-guided modules in which I have students attempt to diagnose a metabolic disorder and enzymatic deficiency based on patient symptoms. Or I would tell students about a problem in contemporary biochemistry, and we would try to solve it as a group. Moreover, I would give “group quizzes” in which teams of 4-6 people would compete to answer difficult questions rooted in current problems in human health and disease. All these tactics helped motivate students and capture their imaginations.

D. Instilling the confidence to put forth new ideas. Despite the fact that many students know a lot of core knowledge and have excellent chemical/biochemical intuition, they lack the confidence to put forth new ideas. My desire to encourage active engagement, inspire creativity, and increase confidence amongst my students motivated me to assign a capstone “original proposal” project in my biochemistry courses. Students are asked to write a 5-page proposal in which they identify a biochemical or biomedical problem or question and devise an approach to solve the problem or answer the question. They must also defend the significance and impact of that problem or question. A mock grant review panel is then held in which the students themselves discuss their own proposals and rate them. Given that only one class period is spent discussing proposals, only a small fraction of the highest scoring proposals from the initial review are discussed, just like a real NIH grant review panel. To reflect current funding rates, only the top 10% of discussed proposals are “awarded”; the award is a \$10 gift certificate to a coffee shop so that the winners can sit and discuss how to actually fund their proposals! This exercise is a lot of fun for the students and myself and I am constantly blown away by their creativity. I am also both surprised and impressed with how critical students can be of each other’s proposals; ironically, much like more senior investigators, the students are more critical of each other than of themselves!

Teaching Assessments.

As an instructor, I have taught both graduate and undergraduate biochemistry courses, including undergraduate Biochemistry II (CHEM 4512/6502) and graduate Molecular Biochemistry (CHEM 6573), as well co-developed a new course in graduate Bioinorganic Chemistry (CHEM 4803/8853) with Prof. Christoph Fahrni. I have excelled in many core aspects of instruction as assessed by both hard and soft metrics.

Hard Metrics. I have achieved much success in engaging and inspiring students, as assessed by the course instructor opinion survey (CIOS) feedback and scores; my CIOS scores for “effective instruction” in Biochemistry II and Molecular Biochemistry span 4.0 – 4.7 (out of 5) and the average score over 6 semesters is 4.4/5.0. My strengths as an instructor have been respecting students (4.8), enthusiasm (4.8),

availability (4.6), clarity (4.3), communicating how to succeed (4.3), stimulating interest (4.1), and helpfulness (4.2).

Fall 2018	CHEM 4512/6502 Biochemistry II: Metabolism Instructor Overall Effectiveness = 4.7 Survey Response: 43/46	46 students
Fall 2016	CHEM 6573: Molecular Biochemistry Instructor Overall Effectiveness = 4.5 Survey Response: 12/18	18 students
Spring 2016	CHEM 4803/8853: Bioinorganic Chemistry* Instructor Overall Effectiveness = 3.5* Survey Response: 6/8	8 students
Fall 2015	CHEM 6573: Molecular Biochemistry Instructor Overall Effectiveness = 4.0 Survey Response: 6/10	10 students
Spring 2015	CHEM 4512/6502 Biochemistry II: Metabolism Instructor Overall Effectiveness = 4.64 Survey Response: 55/62	62 students
Fall 2014	CHEM 4512/6502 Biochemistry II: Metabolism Instructor Overall Effectiveness = 4.11 Survey Response: 32/36	36 students
Fall 2013	CHEM 4512/6502 Biochemistry II: Metabolism Instructor Overall Effectiveness = 4.65 Survey Response: 12/29	29 students

Two areas that I seek to continue to improve upon are the manner in which I design and assess student assignments, including homeworks, quizzes, and exams. For instance, students had mixed feelings about assignments facilitating learning (4.0/5.0) and measuring knowledge (4.0/5.0). This is in large part due to the fairly large disparity in background knowledge between the best- and least-prepared students. The latter group tends not to be vocal and does not answer questions or attend office hours. When the least prepared students do participate in class, they tend to slow the pace of the course. To help address this, I encourage students to anonymously ask questions and make comments and suggestions on online forums like Piazza. Input from students, including on course pace and difficulty, are put to polls so that I can gauge the pulse of the entire class. Another strategy I use is to offer additional points for course feedback throughout the semester on tests or quizzes. In total, these strategies have improved my communication with reluctant students and allowed me to adjust the pace and content of the course. Moreover, I am well known as being approachable and willing to spend many hours of additional time with individuals during the week to cover subject material.

*It is worth noting that I had the good fortune of taking on the additional challenge of co-developing and co-teaching a new course in Bioinorganic Chemistry with my colleague Prof. Christoph Fahrni. This course focused on the cell biology, biochemistry, and inorganic chemistry of metals and drew upon the shared expertise of Prof. Fahrni and myself. The major challenge of co-teaching was to synchronize instructor styles, approaches, and content so that it would be a seamless transition for the students. However, it was clear from my instructor feedback that Prof. Fahrni and I were out-of-sync. Students felt that the difference between our teaching styles was too different and rather jarring. While the content was solid, in future editions of the course, Prof. Fahrni and myself will discuss how to better integrate our styles. For these reasons, I believe this course was scored much worse (3.5/5.0) than all the other courses I have had the privilege of teaching (avg. 4.4/5.0).

Soft Metrics. In addition to CIOS scores, a number of “soft” metrics reflect my impact on students. For instance, I have been thanked by students in online discussion forums, personal emails, and more formally through the *Thank a Teacher* program run by the Center for Teaching and Learning. Moreover, I

am asked to write an average of 15-20 recommendation letters per year for graduate school, medical school, and summer research programs, underscoring my close student relationships. Below are a sampling of notes and messages from students that reflect my strong positive impact on them.

“Dr. Reddi was extremely enthusiastic about the material and made me more eager to learn. His concern for students was also exceptional and he made a clear effort to listen to feedback throughout the course to facilitate our learning and make things a little less stressful.” –Fall 2018, CHEM 4512 Student.

“Dr. Reddi is a GEM of a professor. He was always available for outside consultation and was very accommodating when I got sick during the semester. This class wasn't something I was super pumped about taking, but he really made it enjoyable and I learned a ton.” –Fall 2014, CHEM 4512 Student.

“Professor Reddi was always available to help and answer questions. He also did a good job challenging students and asking them to think about problems in a different way. He was also excited about the material which made learning more interesting.” –Fall 2013, CHEM 4512 Student.

“Dr. Reddi is an exceptional teacher; Biochem 2 was bit daunting to me prior to taking the course because there are so many pathways and it is a big jump in complexity from biochem 1; however Dr. Reddi was very adept at explaining these difficult concepts and pathways to us. He is extremely available to his students and wants his students to succeed; in addition I was dealing with family medical issues and medical issues of my own, and he was very understanding and compassionate. He is a very engaging teacher who kept the class interesting- he tested us on relevant concepts that are very important to students who will go on to pursue medicine and graduate studies in areas of chemistry, chem e, and biology.” –Fall 2018, CHEM 4512 Student.

“Your concern for every student's success was really refreshing. It was also great that you made an effort to learn everyone's names because it made everyone feel like they were important, which made you more easy to approach whenever I had a question.” –Spring 2015, CHEM 4512 Student.

“The best aspects of this course definitely include Dr. Reddi's ability to relate things learned in the classroom to ground-breaking/ intriguing research that currently exists. The material itself is also extremely detailed, however cyclical, meaning that everything is related in some way (and that helps a lot with studying).” –Spring 2015, CHEM 4512 Student

“The proposal was my favorite assignment by far, it actually got me interested in a problem. I think I spent more time doing background research and writing than I spent doing all the homeworks combined” –Fall 2018, CHEM 4512 Student

“Absolutely one of the best courses and instructors I have had at GT.” –Fall 2013, CHEM 4512 Student

“I forgot for a hot minute why I became a biochemistry major. Dr. Reddi reminded me about why I love biochemistry. The original research proposal was the most rewarding assignment I've ever done at GT.” –Fall 2018, CHEM 4512 Student

Impact outside the classroom.

I have had a number of opportunities to positively impact undergraduates outside the classroom. This includes providing undergraduates research opportunities, helping them with personal statements for graduate/medical school, guest lecturing GT1000 courses, or serving as a faculty advisor for the Molecular Medicine student group.

Research Mentorship. Proteins are the molecular workhorses and machines of life, enabling the chemistry that sustains biology. Many proteins require additional prosthetics to function, including metals. Indeed, as much as ~50% of all proteins require a metal for function, making *metallo*-proteins the largest class of proteins in the proteome. The large number of metalloproteins and metal-dependent processes in biology means that virtually every metabolic and signaling pathway of consequence to human health and disease is metal dependent. The ability to specifically control the flow of and access to various metals or the activity of metalloproteins provides a handle with which to control the biochemistry of life and re-wire it to treat disease. By integrating techniques and approaches that span molecular genetics, cell biology, biochemistry, biophysics and inorganic chemistry, the Reddi lab seeks to develop a molecular understanding of the complex mosaic of factors underlying the rules governing the handling and use of metals in biology.

I have made it a point to involve as many undergraduates as possible in my research program. My research team typically consists of 5-7 graduate students and 1-2 postdocs. Over the last 5 years, we have mentored 18 undergraduate researchers, including 12 Georgia Tech undergraduates, 6 of which were awarded the Presidential Undergraduate Research Award (PURA) and 3 of which were awarded Petit Scholarships for Undergraduate Research. All of my undergraduate mentees have contributed to grants and papers, and work closely with graduate students and post-docs on independent projects. My past mentees have gone on to attend both medical school and graduate school in science or engineering.

Other involvement in augmenting the undergraduate experience. I often avail myself of any opportunity to interact and connect with undergraduates. For instance, I regularly participate in formal and informal help sessions on writing personal statements. In addition, I have guest lectured GT1000 courses, talking about contemporary topics in human health and disease. I have also served as a faculty advisor to the Molecular Medicine student group. As part of my role, I have helped with issues ranging from conflict resolution between group officers and bringing in speakers, including current MD/PhD students to talk about applications and life at medical school.

Concluding remarks.

Teaching is both an honor and a privilege. I am here today because I have a host of instructors and mentors that sparked my interest in chemistry and the life sciences. I strive to do the same for others. While I may not be the “best” instructor, I know I am a thoughtful one who works hard to improve upon my deficiencies. This is manifested in my attending numerous teaching workshops, including those on flipping the classroom, active learning, and recognizing bias. I am greatly looking forward to building on my successes and improving in areas I am currently deficient in.

Amit Reddi

CTL/BP Junior Faculty Teaching Excellence Award nomination

Supporting Letters:

- 1 – M. G. Finn (Chair) nominator
- 2 – Jake Soper (colleague)
- 3 – Yoel Cortes-Pena (student)
- 4 – Samantha Gabrielle Morgan (student)
- 5 – Sara Hojjatie (student)

January 30, 2019

Dear Awards Selection Committee,

I am very pleased to be writing in support of Prof. Prof. Amit Reddi's nomination for the CTL/PB Junior Faculty Teaching Excellence Award. During his time as an Assistant Professor, Prof. Reddi has demonstrated an exemplary commitment to student learning and teaching excellence. He excels at engaging his audience and making his students full partners in the learning process.

Since joining our faculty in 2013, Prof. Reddi has taught several different biochemistry courses, ranging from undergraduate courses for majors, with enrollments of *ca.* 30-60, to graduate and special topics classes of his own creation. In my role as the Chair of our Teaching Effectiveness (DOTE) Committee, I've had the pleasure of observing Prof. Reddi's teaching on two separate occasions and coordinating peer evaluations by several of our colleagues. We all came away impressed. I'm frankly envious of Prof. Reddi's (seemingly) natural ability to connect with an audience. In the classroom, he has a friendly, relaxed presentation style, which put students at ease and encourages student contributions without sacrificing rigor. His presentations are uniformly excellent, but guided in-class discussion periods are when Prof. Reddi shines. His knowledge of the material and cogent delivery allow him pursue teaching methods that connect biochemistry fundamentals to their broader biological context. For instance, he has integrated "case studies" into his classes that use real-world problems to teach fundamental concepts in biochemistry. Course Instructor Opinion Survey (CIOS) report data suggest our students hold Prof. Reddi in similarly high regard; his "teaching effectiveness" scores are consistently on par (or even exceed) those of his senior colleagues.

Overall, peer and student evaluations of Prof. Reddi's teaching already place him among the top tier of educators in our School, a group which includes winners of the Institute's most prestigious teaching awards. The CTL/PB Junior Faculty Teaching Excellence Award would be well-deserved recognition of Prof. Reddi's position in that group. I hope he garners strong consideration.

Sincerely,



Jake D. Soper
Director of Teaching Effectiveness

Jake D. Soper
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January 22nd, 2019

Dear Section Committee for the CETL/BP Teaching Award,

It is with great pleasure that I recommend Dr. Amit Reddi for the CETL/BP teaching award. I had the pleasure of taking Biochemistry II with Dr. Amit Reddi as the instructor during Fall 2014, and to work as an undergraduate research assistant in his lab during Fall 2014 and Spring 2015. Dr. Reddi is an attentive and dedicated professor who is always looking to facilitate learning and guide students professionally. The skills I have learned from Dr. Reddi have opened invaluable opportunities for my career.

Biochemistry II is a difficult class that relies on understanding how long biochemical pathways come together within the cell. I remember how Dr. Reddi would make fun power point animations of long biochemical pathways that helped me imagine how the reactions are taking place. Dr. Reddi was always open for questions and took his time answering questions inside and outside of class. Students felt comfortable asking both simple and complex questions that kept the class engaging.

The most memorable part of his class, however, was the final project. Dr. Reddi had us prepare NSF-style proposals with our own unique hypothesis. Initially I was worried about how I would complete the project, but he guided the whole class through the process. Dr. Reddi talked about his personal philosophy of a good proposal, sent us examples, opened time slots for us to meet with him, and allowed us to submit a draft for review before it was due. This experience gave me the confidence to apply for the NSF graduate student fellowship and ultimately win the award.

I also enjoyed my experience as an undergraduate research assistant in Dr. Reddi's lab. For my work, I mostly measured cytosolic heme availability of mutant yeast using a fluorescent heme biosensor. Dr. Reddi took care of training me in the lab, showed me the procedures to prepare and plan out my experiments, and made it clear that both him and his students are happy to help with anything. I met directly with Dr. Reddi to discuss the results of my experiments and he left it up to me to decide what direction should I take next. Dr Reddi and his students showed me that working in a lab can be fun and personally rewarding. This experience also motivated me to seek a career in academia and become a professor myself.

Dr. Reddi has also offered me good guidance even after I graduated. About a year after I graduated, I asked him for a recommendation for the NSF fellowship by email. In his reply, he encouraged me to also try applying for a large set of other fellowships he listed. I feel lucky to have had the chance to work with a professor that is so thoughtful and dedicated to his students. I believe Dr. Reddi's passionate and wholehearted investment to his students has allowed them to succeed and become outstanding members of their community. I am happy to recommend Dr. Reddi for the CETL/BP teaching award and I hope he receives your full consideration.

Sincerely,



Yoel Rene Cortes-Pena
Graduate Research Assistant
Department of Environmental and Civil Engineering
University of Illinois at Urbana-Champaign

January 19, 2019

Attn: CETL Teaching Excellence Award Committee

Dear Committee Member,

I am writing to you to recommend Dr. Amit Reddi for your 2019 award. I took Dr. Reddi's Biochemistry 2 class (CHEM 4512) in the Fall of 2018. I enjoyed every one of Dr. Reddi's lectures, and he taught biochemistry in such a way that I nearly changed my major as a junior in college to continue studying the class material. Dr. Reddi came to class every day prepared and knowledgeable about the day's lecture, and he took the time to learn the names of every student so that he could call them by name when they raised their hand to ask a question. It was clear to me that his goal was student education, not a bell curve. He made the class quizzes group based and allowed us to work together to talk through the questions, which provided us the opportunity to work through more application and in-depth questions. Our class was nearly evenly split between engineers and scientists, and he took the different backgrounds and thought-processes in stride. Instead of a traditional final exam, Dr. Reddi elected to have us write mock research grant proposals and discuss some of them in class. This gave us the opportunity to practice a practical skill and share ideas with each other about unanswered questions that we find interesting in science. I went to Dr. Reddi's office to get further clarification on the grant proposal assignment, and he was respectful, engaged, and clear. He also took time to get to know a little bit about me and my interests going forward in school.

Dr. Reddi is easily one of my favorite professors at Georgia Tech, and I recommend him highly to all of my friends as they work through their chemistry classes. We continue to keep in touch as I work through the last year and a half of my college education, and I am honored to have been asked to write you on his behalf. I hope that Dr. Amit Reddi is strongly considered for this award.

Sincerely,

Samantha Gabrielle Morgan

To Whom It May Concern;

My name is Sara Hojjatie and I am currently a third year medical student at Emory University School of Medicine. I have been asked to write a letter in support of Dr. Amit Reddi, Assistant Professor of Chemistry and Biochemistry at Georgia Tech, in his nomination for a CETL/BP Junior Faculty Teaching Excellence Award, and I am honored to do so.

I had the pleasure of being in Dr. Reddi's Biochemistry II course back when I was in my third year of obtaining my undergraduate degree at Georgia Tech, majoring in Biochemistry. This was Dr. Reddi's first semester teaching and very early in his time at Georgia Tech, and he was a very energetic and motivated to begin teaching us. He started off the semester by showing us the entire metabolic pathway diagram, and assuring us that though it looked like a daunting task, we would all feel confident enough to understand this pathway by the end of his course. He was not wrong and I felt very prepared to tackle any biochemistry topics at the end of my time in his course.

Dr. Reddi was very compassionate as a professor one-on-one. He would always take the time after class to answer students' questions, no matter how long it would take. During office hours, he would also very patiently explain concepts that students needed help with, and was always very caring towards his students' understanding of biochemistry.

One of my favorite memories of Dr. Reddi's class is the proposal-writing exercise that he conducted at the end of the semester. This was meant to enhance our skills as students to come up with our own research project and write a proposal for a grant to get it (hypothetically) funded. Though I did not pursue research after my undergraduate degree, proposal-writing still is a great skill to have and will help me during my fourth year of medical school, when I am expected to conduct research. Thus, Dr. Reddi's exercise prepared his students for what we would encounter after our time at Georgia Tech and helped us think critically to come up with a new idea for a project that was both feasible and innovative. He even took the effort to turn it into a fun competition, where the students would review each other's anonymized proposals and vote on the top three that should get "funded." Dr. Reddi purchased Starbucks gift cards for the top proposal writers, which was a fun and creative way to make the competition engaging. I was excited to be in the top three proposals and it increased my sense of confidence as a scientist.

When I wanted to apply to medical school during my fourth year at Georgia Tech, I was sure to ask Dr. Reddi for a recommendation. He took the time to write me a letter of support and was very timely to respond to my correspondence. The time of applying for graduate school can be very stressful, but Dr. Reddi's prompt submission of my recommendation made the process go very smoothly. I am very grateful for all that he has done for me to reach where I am today.

Dr. Reddi is very deserving of this teaching award and I strongly believe that he upholds the traits of an excellent educator. If there is any additional information that you need, I would be happy to further speak about Dr. Reddi's great impact on me as a student.

Sincerely,

Sara Hojjatie
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