# Neuroscience Mission statement

The Neuroscience Program is designed to foster interactions between diverse faculty and students who have a common interest in neuroscience issues. The program provides a formal mechanism for cross-fertilization of research ideas and promotes collaborative research efforts among faculty from a variety of different departments and colleges. The program provides similarly diverse graduate students a cohesive common core of neuroscience foundation courses as the basis for subsequent specialization and research training in pursuit of their career goal. Thus, the following are the Program learning goals.

# Neuroscience Learning Goals

1. Demonstrate comprehensive understanding of scholarly literature in Neuroscience.
2. Form testable hypotheses and articulate research objectives that, when met, will lead to significant contributions to Neuroscience.
3. Conduct qualitative and/or quantitative research via appropriate acquisition, analysis, and reporting of data.
4. Interpret research results appropriately, integrating them into the existing knowledge in Neuroscience.
5. Clearly and accurately communicate research findings orally and in writing, and often through the use images (tables, figures, and other forms of imagery) and electronic or other forms of media.
6. Articulate how the graduate program, including coursework and creative scholarship, fits into life and career goals.
7. Conduct scholarship, in teams or with independence, in ways that consistently demonstrate ethical practice and professionalism.

## Neuroscience Program History and Development

The need for a Neuroscience Program at Iowa State University was recognized in the late 1980s when more than 20 faculty dispersed across three colleges and seven different departments were identified as active in neuroscience research and teaching. Fourteen graduate students with neuroscience interests were also identified. At that time there was no mechanism in place to maintain awareness and foster interactions among these diverse faculty and students with their common interest in neuroscience. Development of a neuroscience program would promote synergistic interactions among faculty and provide students with a cohesive interdisciplinary exposure to neuroscience issues.

The various faculty and students expressed keen interest in the possibility of a neuroscience program. A proposal was framed by Janine Carithers and Srdija Jeftinija (Veterinary Anatomy) with assistance from Phillip Haydon (Zoology), Michael Taylor (Veterinary Physiology and Pharmacology), and Ronald Peters (Psychology). The Neuroscience Program proposal was approved in 1990 with 32 faculty representing the colleges of Agriculture, Sciences and Humanities (now Liberal Arts and Sciences), and Veterinary Medicine. Twelve Ph.D. candidates were enrolled in 1990-1991. By Spring Semester 1996 the faculty had increased to 37 members representing one additional college, Engineering, and 10 departments. Currently, on average 30 faculty span across 8 departments (4 colleges), with an average of 15 graduate candidates in the program. Appendix A lists current faculty, and Appendix B lists current graduate students.

## Governance Structure

## *Supervisory Committee*

Five members from the Neuroscience Faculty constitute the Neuroscience Supervisory Committee. Supervisory Committee members serve a three-year term and normally serve no more than two consecutive terms. Membership should include faculty representation from at least two colleges. Nominations for Supervisory Committee members are made at a general Neuroscience Faculty meeting or may be submitted by e-mail prior to that meeting. If only one nominee is put forth by the faculty, the chair may submit additional nominations. Final approval will be obtained from faculty via an e-mail ballot. A positive vote of more than 50% will indicate faculty approval. In addition, the supervisory committee may recommend and elect a student representative to serve a one-year term on the committee. Current Supervisory Committee Members are listed in Appendix C.

### The responsibilities of the Supervisory Committee will include:

### Examine applicant credentials and submit recommendations for admission to the program.

### Develop and disseminate recruitment materials.

### Review graduate student progress annually at the end of each Spring semester.

### Review governance documents and handbook every three years and propose changes as needed for a faculty vote.

### Review the Program curriculum every three years and propose changes as needed for a faculty vote.

### Review new faculty and faculty renewal applications and make recommendations to the current faculty for voting.

### ***Selection of Chair***

The Neuroscience Supervisory Committee elects a Director of Graduate Education (DOGE) from among its members. The DOGE of the Neuroscience Program serves for a three-year term and may be re-elected.

The responsibilities of the DOGE (including those listed above per the Supervisory Committee) include:

1. Review the budget annually.
2. Arrange faculty for teaching assignments for the program curriculum.
3. Run an annual faculty meeting.
4. Send out and track e-mail ballots for faculty votes.
5. Maintain the Neuroscience net id, email, and list serves.
6. Review the application process annually.
7. Maintain communication with the graduate college, all neuroscience faculty, current graduate students, and program applicants.
8. Maintain the internet web page with up to date information about the Neuroscience Program.

***Administrative Assistant***

The Neuroscience program will have one administrative assistant to aid in running the program.

The responsibilities of the administrative assistant (including helping with items listed above for the DOGE when needed) include:

1. Review and submit the budget to the graduate college annually.
2. Submit gray bars of program courses to the registrar office.
3. Oversee tuition, stipend, and insurance payments for first year graduate students.
4. Send relevant announcement regarding program activities and seminars to faculty and graduate students.
5. Review and the program application process and submit any needed updates to the graduate college.
6. Arrange campus visits for prospective students.

##### ***Admission of New Neuroscience Faculty***

###### Criteria

### In considering an applicant for membership in the Neuroscience Faculty, the applicant’s activities in the following areas during the previous five years are examined.

### The applicant must be dedicated to graduate education and must show evidence of maintaining high standards of scholarship.

### The applicant must be committed to the idea of interdisciplinary training and must be willing to participate actively in the affairs of the Neuroscience Program, attend the Neuroscience seminars and encourage students to do the same.

### The applicant must have an active, high quality, research program. The quality of the research program will be judged on the basis of a complete curriculum vita,

### *Procedure*

### The applicant will provide their curriculum vita with relevant information pertaining to their interests in neuroscience highlighted. This includes, but is not limited to, publications, grants, teaching, service, and mentoring. The applicant will also provide a brief statement to address items 1 and 2 above. This material will be submitted via e-mail to the DOGE. The DOGE will share the information with the Supervisory Committee for review. The Supervisory Committee submits their recommendation to the DOGE. If positive, the DOGE will send the information from the candidate and ballot to the Neuroscience faculty for vote via e-mail. A positive vote of more than 50% indicated faculty acceptance. The DOGE informs the applicant of the decision of the Neuroscience faculty. Election is for a term of five years.

### ***Renewal of Neuroscience Membership***

#### Criteria

While the primary point for exercising quality control is at admission, membership in the program depends on continued evidence of research productivity and graduate student training. Criteria for retention of membership are, therefore, the same as those for the original selection plus evidence of active participation is the affairs of the Neuroscience Program.

#### Procedure

### The faculty whose membership in Neuroscience will expire at the end of the academic year, are notified by the DOGE and asked to review and bring their files up to date to reflect accurately their research and graduate student training activities. The faculty member will submit their curriculum vita with relevant information pertaining to their research interests and involvement in Neuroscience highlighted. This includes, but is not limited to, publications, grants, teaching, service and mentoring. The applicant will also provide a brief statement of their participation in the Neuroscience Program in the last five years. This material will be submitted via e-mail to the DOGE. The DOGE will share the information with the Supervisory Committee for review. The Supervisory Committee will review the credentials of the members under consideration for renewal. The Supervisory Committee submits their recommendation to the DOGE. The DOGE informs the faculty member of the decision. If in the judgment of the Supervisory Committeee a member is not actively participating in the Neuroscience Program and the faculty member still wishes to be renewed, the member may submit additional supporting documentation for membership to be continued. Any member whose renewal application has been denied by the Supervisory Committee may request that the Neuroscience faculty review the application. Election is for a term of five years.

**Yearly Report to the Dean**

Each year a report of the activities of the Neuroscience Program may be submitted to the Dean of the Graduate College upon request. Reports may also be submitted to other administrative units (e.g., College of Agriculture, College of Liberal Arts and Sciences, College of Human Sciences, and College of Veterinary Medicine).

**APPENDIX A**

***Current Faculty***

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Department** | **Year Joined** | **Year Renewed** |
| Ann Smiley | KIN | 2000 | 2021 |
| Baoyu (Stone) Chen | BBMB | 2016 | 2020 |
| Don Sakaguchi | GDCB | 1991 | 2020 |
| Elizabeth McNeil | FSHN | 2018 | 2023 |
| Elizabeth Stegemoller | KIN | 2013 | 2020 |
| Eric Underbakke | BBMB | 2015 | 2020 |
| Heather Greenlee | BMS | 1999 | 2020 |
| Hua Bia | GDCB | 2021 | NA |
| Jacob Meyer | Kin | 2022 | NA |
| Jason Chan | PSYCH | 2008 | 2020 |
| Jinoh Kim | BMS | 2018 | 2023 |
| John Grundy | PSYCH | 2019 | NA |
| Jonathan Kelly | PSYCH | 2017 | 2022 |
| Jonathan Mochel | BMS | 2022 | NA |
| Justin Greenlee | BMS | 2017 | 2022 |
| Lishan Chou | KIN | 2019 | NA |
| Marian Kohut | KIN | 2005 | 2020 |
| Maura McGrail | GDCB | 2011 | 2020 |
| Nicole Hashemi | ME | 2022 | NA |
| Peter Clark | FSHN | 2016 | 2021 |
| Ravindra Singh | BMS | 2008 | 2020 |
| Sarah Bentil | ME | 2018 | 2023 |
| Surya Mallapragada | CHEM ENG | 1999 | 2020 |
| Thimmasettapp Thippeswamy | BMS | 2012 | 2020 |
| Wes Lefferts | KIN | 2020 | NA |

**APPENDIX B**

***Current Students***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Year Entered Program** | **Degree Sought** | **Mentor** | **Home Department** |
| Maddie Brant | Fall 2022 | MS | Elizabeth Stegemoller | Kin |
| Trevor Buhr | Fall 2018 | PhD | Peter Clark | FSHN |
| Brandon Brockshus | Spring 2022 | Minor | Elizabeth Stegemoller | Kin |
| Jessy Brown | Fall 2021 | PhD | Elizabeth Stegemoller | Kin |
| Sydney Cindrich | Spring 2022 | PhD | Jacob Meyer | Kin |
| Anurag Das | Fall 2021 | PhD | Hua Bai | GDCB |
| Pongrat Jaisil | Spring 2015 | PhD | Jacob Meyer | Kin |
| Crystal Jewell | Fall 2018 | PhD | Elizabeth Stegemoller | Kin |
| McKayla Kling | Fall 2022 | PhD | Nicole Hashemi | ME |
| Caelia Marshall | Fall 2023 | PhD | Elizabeth Stegemoller | Kin |
| Aron Nakama | Fall 2021 | PhD | Elizabeth Stegemoller | Kin |
| Beatriz Pereira | Fall 2021 | PhD | Elizabeth McNeill | FSHN |
| Carly Rivers | Fall 2023 | PhD | Sarah Bentil | ME |
| Nesreen Sedeek | Fall 2023 | MS | Don Sakaguchi | GDCB |
| Alicia Taylor | Fall 2021 | PhD | Elizabeth McNeill | FSHN |
| Jason Terrill | Fall 2022 | PhD | Peter Clark | FSHN |
| Lucas Williamson | Fall 2023 | PhD | Peter Clark | FSHN |
| Laura Zinnel | Fall 2022 | PhD | Sarah Bentil | ME |

**APPENDIX C**

***Director of Graduate Education***

Elizabeth Stegemoller, Kinesiology

***Supervisory Committee Members***

Nicole Hashemi, ME

Jinoh Kim. BMS

Peter Clark, FSHN

Elizabeth McNeil, FSHN

***Administrative Assistant***

Brenda Emery