

# A Narrative Review of Research Project Opportunities in the United States School of Pharmacy Curricula

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## Background

- Colleges of pharmacy in the United States (US) may offer research projects as a required or elective component of their curricula.
- This poster explores existing studies of student research projects in the US pharmacy curricula.

## Methods

- Searches were conducted using two databases (PubMed, Embase), issues from education journals (Currents in Pharmacy Teaching and Learning, American Journal of Pharmaceutical Education), and Google Scholar.
- Articles were reviewed by two researchers and included if they described or evaluated pharmacy student research projects and were published from 2010 to 2023.

## Outcomes

- Many students reported satisfaction with their research experience but felt that they needed more time to complete their projects.
- Some students reported no plans of pursuing a career that involved research post-graduation.
- Students that had their projects disseminated had higher rates of matching to a residency program.
- Students expressed that their projects improved their research and problem-solving skills.

**Table 1. Characteristics of research projects offered in the pharmacy curriculum**

| First Author, Year             | Required or Elective | Timing in Curriculum | Time Commitment                              | Individual or Teamwork | Deliverables                   |
|--------------------------------|----------------------|----------------------|--|------------------------|--------------------------------|
| Kim, 2010 <sup>1</sup>         | Required             | Years 3-4            | 80 hours; 2 units                            | Either                 | Papers, posters, presentations |
| Kao, 2011 <sup>2</sup>         | Required             | Years 3-4            | 80 hours                                     | Either                 | Papers, posters, presentations |
| Assemi, 2015 <sup>3</sup>      | Required             | Years 3-4            | 120 hours                                    | Either                 | Papers, presentations          |
| Morbitzer, 2020 <sup>4</sup>   | Elective             | Years 2-3            | 16 hours/week<br>6 credit hours              | Individual             | Proposals, written reports     |
| Kim, 2022 <sup>5</sup>         | Elective             | Year 4               | 2014-2017: 4 credit hours<br>2017: no credit | Unspecified            | Posters, presentations         |
| Axon, 2023 <sup>6</sup>        | Required             | Years 3-4            | Unspecified                                  | Either                 | Posters, written reports       |
| Cooley, 2023 <sup>7</sup>      | Required             | Years 3-4            | Unspecified                                  | Either                 | Posters, presentations         |
| Vellurattil, 2014 <sup>8</sup> | Required             | Years 3-4            | Workshops                                    | Unspecified            | Papers, posters                |
| Wuller, 2010 <sup>9</sup>      | Required             | Years 3-4            | 120 hours                                    | Either                 | Papers, posters, presentations |
| McClendon, 2015 <sup>10</sup>  | Required             | Years 1-4            | Unspecified                                  | Individual             | Papers, presentations          |

## Conclusion

- There are similarities and differences in the way that colleges of pharmacy offer research projects to students.
- This information may be useful to colleges of pharmacy seeking to incorporate or revise a research project component in their curriculum.

## References

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