

## DAFTAR PUSTAKA

1. Adhiatmitha KE, Pertiwi NKFR, Susanti DNA. Faktor-faktor yang berkaitan dengan tingkat perilaku pemeliharaan kebersihan gigi tiruan lepasan akrilik pada lansia di Desa Penatahan Kabupaten Tabanan Bali. 2018;2(1):18–18.
2. Kaunang WP, Supit A, Angraeni A. Persepsi Masyarakat Terhadap Pembuatan Gigi Tiruan oleh Tukang Gigi di Desa Treman Kecamatan Kauditan. e-Journal Unsrat. 2013;1(2):1.
3. Anshary M, Cholil, Arya IW. Gambaran Pola Kehilangan Gigi Sebagian Pada Masyarakat Desa Guntung Ujung Kabupaten Banjar. Dentino Jurnal Kedokteran Gigi. 2014;2(2):139.
4. Kementerian Kesehatan RI, Badan Penelitian dan Pengembangan Kesehatan. Laporan Nasional Risdikdas 2018. 2019. 209 p.
5. Rahmayani L, Melisa I, Herwanda. Perilaku pemakai gigi tiruan terhadap pemeliharaan kebersihan gigi tiruan lepasan. Jurnal PDGI. 2013;62(3):83.
6. Ananda N, Dwi Sulistyani L, Winiati Bachtiar E. Pertimbangan Penggunaan Implan Gigi pada Lansia. Insisiva Dental Journal. 2017;6(1).
7. Fitriani CY, Wibawa A. Biokompatibilitas Material Titanium Implan Gigi. Insisiva Dental Journal : Majalah Kedokteran Gigi Insisiva. 2019;8(2).
8. Anna Abraham D, Joseph D, Mathew DT, Susan Thomas D, Elsa Abraham D, Sali D, et al. Different Surface Modifications of Titanium Implant: A Review. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) e-ISSN [Internet]. 2021;20:49–53. Available from: [www.iosrjournals.org](http://www.iosrjournals.org)
9. Utami DP, Indrani DJ, Eriwati YK. Peran metode modifikasi permukaan implan terhadap keberhasilan osseointegrasi. Jurnal Kedokteran Gigi Universitas Padjadjaran. 2019 Aug 31;31(2).
10. Liu Y, Rath B, Tingart M, Eschweiler J. Role of implants surface modification in osseointegration: A systematic review. Vol. 108, Journal of Biomedical Materials Research - Part A. John Wiley and Sons Inc.; 2020. p. 470–84.
11. Parithimarkalaignan S, Padmanabhan T v. Osseointegration: An update. Journal of Indian Prosthodontist Society. 2013 Mar;13(1):2–6.
12. Sarve P, Kulkarni D, Shetty L, Bongulwar R, Alkolkar A, Khandelwal N. Osseointegration In Dental Implants : A Review. Int J Recent Sci Res [Internet]. 2016;7(12):14696–9. Available from: <http://www.recentscientific.com>

13. Rangarajan V, Padmanabhan T. Textbook of Prosthodontics. 2nd ed. New Delhi: Elsevier; 2017.
14. Dewi MS, Poernomo H. The Effect of Zirconia Material for Dental Implant to Osseointegrated Process. *SONDE (Sound of Dentistry)*. 2021;5(2).
15. Velmurugan D, Masilamani Santha A, Gaurishankar Sarate S. DENTAL IMPLANT MATERIALS, IMPLANT DESIGN, AND ROLE OF FEA- A BRIEF REVIEW. *J Evol Med Dent Sci*. 2017 Jun 1;6(44):3487–92.
16. Oza Post graduate student U, Oza U, Parikh H, Duseja S, Agrawal C. Dental Implant Biomaterials: A Comprehensive Review. *International Journal of Dentistry Research [Internet]*. 2020;5(2):87–92. Available from: [www.dentistryscience.com](http://www.dentistryscience.com)
17. Ruppert DS, Harrysson OLA, Marcellin-Little DJ, Dahners LE, Weinhold PS. Improved osseointegration with as-built electron beam melted textured implants and improved peri-implant bone volume with whole body vibration. *Med Eng Phys*. 2018 Aug 1;58:64–71.
18. Veeraiyan DN. Textbook of Prosthodontics. 2nd ed. Bangladesh: Jaypee Brothers Medical Publisher; 2017.
19. Zafar MSohail. Dental implants materials, coatings, surface modifications and interfaces with oral tissues. Duxford: Woodhead Publishing; 2020.
20. Ye C, Zhang C, Zhao J, Dong Y. Effects of Post-processing on the Surface Finish, Porosity, Residual Stresses, and Fatigue Performance of Additive Manufactured Metals: A Review. Vol. 30, *Journal of Materials Engineering and Performance*. Springer; 2021. p. 6407–25.
21. Cohen DJ, Cheng A, Kahn A, Aviram M, Whitehead AJ, Hyzy SL, et al. Novel Osteogenic Ti-6Al-4V Device For Restoration Of Dental Function In Patients With Large Bone Deficiencies: Design, Development And Implementation. *Sci Rep*. 2016 Feb 8;6.
22. Benčina M, Resnik M, Starič P, Junkar I. Use of plasma technologies for antibacterial surface properties of metals. *Molecules*. 2021 Mar 1;26(5).
23. Yan X, Cao W, Li H. Biomedical alloys and physical surface modifications: A mini-review. Vol. 15, *Materials*. MDPI; 2022.
24. Yamagami A, Nagaoka N, Yoshihara K, Nakamura M, Shirai H, Matsumoto T, et al. Ultra-Structural evaluation of an anodic oxidated titanium dental implant. *Dent Mater J*. 2014;33(6):828–34.

25. Jemat A, Ghazali MJ, Razali M, Otsuka Y. Surface modifications and their effects on titanium dental implants. Vol. 2015, BioMed Research International. Hindawi Publishing Corporation; 2015.
26. Yao Y tong, Liu S, Swain M v., Zhang X ping, Zhao K, Jian Y tao. Effects of acid-alkali treatment on bioactivity and osteoinduction of porous titanium: An in vitro study. *Materials Science and Engineering C*. 2019 Jan 1;94:200–10.
27. Kligman S, Ren Z, Chung CH, Perillo MA, Chang YC, Koo H, et al. The impact of dental implant surface modifications on osseointegration and biofilm formation. *J Clin Med*. 2021 Apr 2;10(8).
28. Brogгинi N, Tosatti S, Ferguson SJ, Schuler M, Textor M, Bornstein MM, et al. Evaluation of chemically modified SLA implants (modSLA) biofunctionalized with integrin (RGD)- and heparin (KRSR)-binding peptides. *J Biomed Mater Res A*. 2012 Mar;100 A(3):703–11.
29. Yurttutan ME, Keskin A. Evaluation of the effects of different sand particles that used in dental implant roughened for osseointegration. *BMC Oral Health*. 2018;18(1).
30. Herrero-Climent M, Lázaro P, Vicente Rios J, Lluch S, Marqués-Calvo MS, Guillem-Martí J, et al. Influence of acid-etching after grit-blasted on osseointegration of titanium dental implants: In vitro and in vivo studies. *J Mater Sci Mater Med*. 2013;24(8):2047–55.
31. Ozel GS, Inan O, Acar AS, Iyidogan GA, Dolanmaz D, Yildirim G. Stability of dental implants with sandblasted and acid-etched (SLA) and modified (SLActive) surfaces during the osseointegration period. *J Dent Res Dent Clin Dent Prospects*. 2021;15(4):226–31.
32. Ferreira Soares PB, Moura CCG, Claudino M, Carvalho VF, Rocha FS, Zanetta-Barbosa D. Influence of implant surfaces on osseointegration: A histomorphometric and implant stability study in rabbits. *Braz Dent J*. 2015;26(5):451–7.
33. Yadav A, Yadav R, Gupta A, Baranwal A, Singh V. Effect of Ultraviolet Irradiation on the Osseointegration of a Titanium Alloy with Bone. *Contemp Clin Dent*. 2017;8(4):11–9.
34. Liu Y, Zhou Y, Jiang T, Liang YD, Zhang Z, Wang YN. Evaluation of the osseointegration of dental implants coated with calcium carbonate: An animal study. *Int J Oral Sci*. 2017;9(3):133–8.
35. Ding L, Zhang P, Wang X, Hao J, Aoki K, Kuroda S, et al. Effect of doxycycline-treated hydroxyapatite surface on bone apposition: A

- histomophometric study in murine maxillae. *Dent Mater J*. 2018;37(1):130–8.
36. Lee HJ, Yang IH, Kim SK, Yeo IS, Kwon TK. In vivo comparison between the effects of chemically modified hydrophilic and anodically oxidized titanium surfaces on initial bone healing. *J Periodontal Implant Sci*. 2015;45(3):94–100.
  37. Wang JY, Liu YC, Lin GS, Chang HH, Li YT, Yang YC, et al. Flame-sprayed strontium- and magnesium-doped hydroxyapatite on titanium implants for osseointegration enhancement. *Surf Coat Technol [Internet]*. 2020;386(July 2019):125452. Available from: <https://doi.org/10.1016/j.surfcoat.2020.125452>
  38. Yang DH, Moon SW, Lee DW. Surface modification of titanium with BMP-2/GDF-5 by a heparin linker and its efficacy as a dental implant. *Int J Mol Sci*. 2017;18(1):1–16.
  39. Mei S, Dong F, Rahman Khan MS. Effects of Biomineralization on Osseointegration of Pure Titanium Implants in the Mandible of Beagles. *Journal of Oral and Maxillofacial Surgery*. 2018;76(10):2104.e1–2104.e10.
  40. Cho WT, Kim SY, Jung SI, Kang SS, Kim SE, Hwang SH, et al. Effects of gamma radiation-induced crosslinking of collagen type i coated dental titanium implants on osseointegration and bone regeneration. *Materials*. 2021;14(12).

# LAMPIRAN



**KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN  
UNIVERSITAS HASANUDDIN  
FAKULTAS KEDOKTERAN GIGI  
DEPARTEMEN PROSTODONSIA**

Jl. Perintis Kemerdekaan KM.10, Tamalanrea Indah, Makassar, Sulawesi Selatan, 90245  
Telepon (0411)-586777

**KARTU KONTROL SKRIPSI**

Nama : Andi Muh Rafi Nur Imam  
Stambuk : J011191033  
Dosen Pembimbing : drg. Irfan Dammar, Sp. Pros (K)  
Judul : Modifikasi Permukaan Pada Implan Gigi Berbahan Titanium Untuk Mempercepat Proses Osseointegrasi

No.	Hari/ Tanggal	Materi Konsultasi	Paraf	
			Pembimbing	Mahasiswa
1.	Senin 13/09/2021	Perkenalan kepada dosen pembimbing		
2.	Minggu 19/02/2022	Diskusi judul <i>Literature Review</i>		
3.	Selasa 22/02/2022	ACC judul <i>Literature Review</i>		
4.	Kamis 10/03/2022	Diskusi proposal <i>Literature Review</i>		
5.	Senin 14/03/2022	Pengajuan proposal <i>Literature Review</i>		
6.	Selasa 22/03/2022	Pengajuan revisi <i>Literature Review</i>		

7.	Kamis 05/04/2022	Seminar proposal <i>Literature Review</i>		
8.	Senin 16/05/2022	Diskusi jurnal skripsi <i>Literature Review</i>		
9.	Senin 26/09/2022	Pengajuan skripsi seminar hasil <i>Literature Review</i>		
10.	Selasa 27/09/2022	ACC skripsi seminar hasil <i>Literature Review</i>		
11.	Selasa 4/10/2022	Seminar hasil skripsi <i>Literature Review</i>		
12.	Senin 17/10/2022	Pengajuan revisi seminar hasil skripsi <i>Literature Review</i>		
13.	Sabtu 22/10/2022	ACC revisi skripsi seminar hasil <i>Literature Review</i>		

Makassar, 31 Oktober 2022

Pembimbing,



Irfan Dammar, Sp. Pros (K)

NIP. 197706302009041003

## SURAT PENUGASAN



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
FAKULTAS KEDOKTERAN GIGI  
JL. Perintis Kemerdekaan KM. 10 Makassar 90245  
Telp. (0411) 586012 Fax: (0411) 584641  
Website: [www.dent.unhas.ac.id](http://www.dent.unhas.ac.id), Email : [fdhu@unhas.ac.id](mailto:fdhu@unhas.ac.id)

### SURAT PENUGASAN

No. 2846/UN4.13/TD.06/2021

Dari : Dekan Fakultas Kedokteran Gigi Universitas Hasanuddin  
Kepada : **Irfan Dammar., drg., Sp.Pros(K)**  
Isi : 1. Menugaskan kepada Saudara sebagai Dosen Pembimbing Skripsi mahasiswa pada Program Studi Pendidikan Kedokteran Gigi Fakultas Kedokteran Gigi Universitas Hasanuddin, yakni:

**Angkatan 2019:**

- Andi Muhammad Rafi Nur Imam (J011191033)
- 2. Bahwa Saudara yang namanya tersebut pada surat penugasan ini dipandang cakap dan memenuhi syarat untuk melaksanakan tugas tersebut.
- 3. Agar penugasan ini dilaksanakan dengan sebaik-baiknya dengan penuh rasa tanggung jawab.
- 4. Surat penugasan ini berlaku sejak tanggal ditetapkan, dengan ketentuan bahwa apabila dikemudian hari terdapat kekeliruan dalam surat penugasan ini, akan diadakan perbaikan sebagaimana mestinya

Makassar, 9 September 2021



**Muhammad Ruslin, drg., M.Kes., Ph.D., Sp.BM(K)**

NIP 19730702 200112 1 001

Tembusan Yth:

1. Wakil Dekan Bidang Akademik, Riset dan Inovasi  
FKG Unhas;
2. Kepala Bagian Tata Usaha FKG Unhas.



## SEMINAR PROPOSAL



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
FAKULTAS KEDOKTERAN GIGI  
**DEPARTEMEN PROSTODONSIA**  
Jl. Perintis Kemerdekaan Km. 10, Makassar 90245 Telepon (0411) 586012, Faximile. (0411) 584641  
Website :[www.dent.unhas.ac.id](http://www.dent.unhas.ac.id), Email : [prosto@unhas.ac.id](mailto:prosto@unhas.ac.id)

No : 034/ UN4.13.7.2/TU.00.03/2022  
Lamp : -  
Hal : Undangan Seminar Proposal Skripsi Online

Makassar, 1 April 2022

Yth, - **Dosen Pembimbing Skripsi**  
- **Dosen Penguji Seminar Proposal Skripsi**  
Fakultas Kedokteran Gigi UNHAS  
Di –  
Tempat

Dengan Hormat,  
Sehubungan akan dilaksanakan seminar Ujian Seminar Proposal Skripsi bagi Mahasiswa yang tersebut namanya dibawah ini, maka kami mengundang Bapak/Tbu untuk hadir sebagai *Pembimbing* dan *Tim penguji* pada ujian tersebut yang akan dilaksanakan secara **online by Meeting Zoom** pada :

Hari/Tanggal : Sabtu, 2 April 2022  
Waktu : 10:00 Wita sampai selesai

Dengan Tim Penguji sebagai berikut :

NO	STAMBUK	NAMA	JUDUL	PEMBIMBING	TIM PENGUJI
1	J011191033	ANDI MUHAMMAD RAFI NUR IMAM	METODE MODIFIKASI PERMUKAAN PADA IMPLAN GIGI BERBAHAN TITANIUM UNTUK MEMPERCEPAT PROSES OSSEOINTEGRASI	Irfan Dammar, drg., Sp.Pro (K).	1. Prof.Dr. Edy Machmud, drg., Sp.Pro(K). 2. Dr.drg. Ike Damayanti Habar, Sp.Pro(K).

Demikian penyampaian kami, atas kesediaan dan kehadirannya kami ucapkan banyak terima kasih.



Ketua Departemen,  
**Dr. drg. Ike Damayanti Habar, Sp. Pros (K)**  
NIP. 19750729 200501 2 002

**Catatan : Meeting ID dan Pasword akan diinformasikan 30 menit sebelum rapat dimulai.**

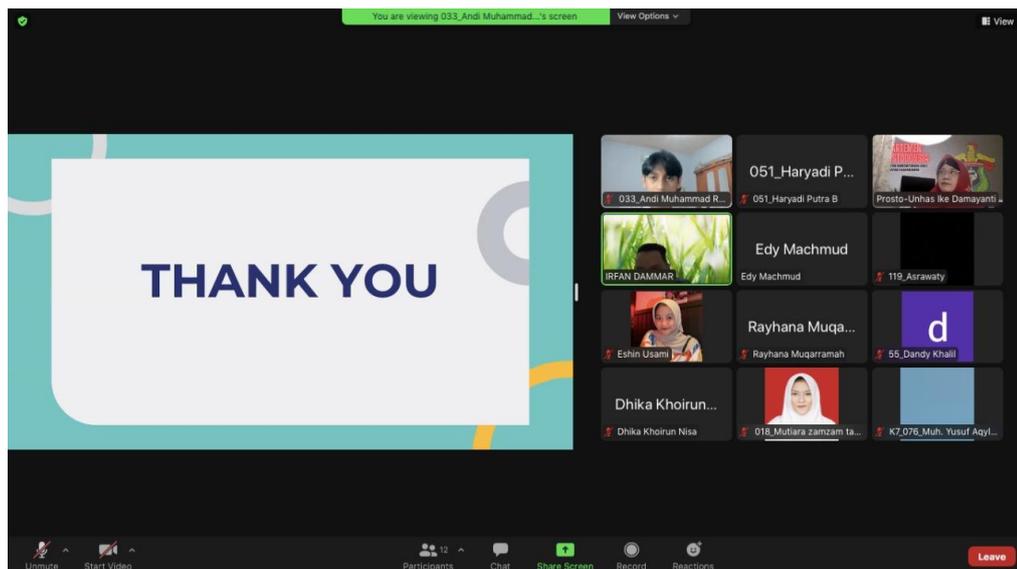


## DAFTAR PRESENSI SEMINAR PROPOSAL SKRIPSI

Nama Mahasiswa : Andi Muh Rafi Nur Imam  
NIM : J011191033  
Hari, tanggal : Kamis, 5 April 2022  
Tempat : Zoom Meeting  
Waktu : 10.00 WITA s/d Selesai

No.	Nama Dosen	Status	Keterangan
1.	drg. Irfan Dammar, Sp. Pros (K)	Dosen Pembimbing	Hadir
2.	Prof. Dr. drg. Edy Machmud, Sp.Pro(K)	Dosen Penguji	Hadir
3.	Dr. drg. Ike Damayanti Habar, Sp.Pro(K)	Dosen Penguji	Hadir

Dokumentasi:



You are viewing 033\_Andi Muhammad...'s screen View Options

## PROSES OSSEOINTEGRASI

(a). Penyerapan protein dan lipid dari bekuan darah. (b). Angiogenesis dan pembentukan tulang woven (c). Osteogenesis berjarak dan osteogenesis kontak. (d). Tulang woven memenuhi celah antara tulang dan implan serta terjadi proses remodeling tulang (e). Tulang woven berubah menjadi tulang lamelar.

033\_Andi Muhammad Rafi Nu... Finka Affah Um...  
Finka Affah Ummiati  
Prosto-Unhas Ika Damayanti Dhika Khoirun Nisa  
Dhika Khoirun Nisa  
018\_Mutiara zamzam takdir Aditya Reynaldi  
Aditya Reynaldi  
Edy Machmud  
Edy Machmud  
051\_Haryadi Putra B  
051\_Haryadi Putra B  
IRFAN DAMMAR  
IRFAN DAMMAR

Unmute Start Video Participants Chat Share Screen Record Reactions Apps Leave

## DAFTAR PRESENSI SEMINAR HASIL SKRIPSI

Nama Mahasiswa : Andi Muh Rafi Nur Imam

NIM : J011191033

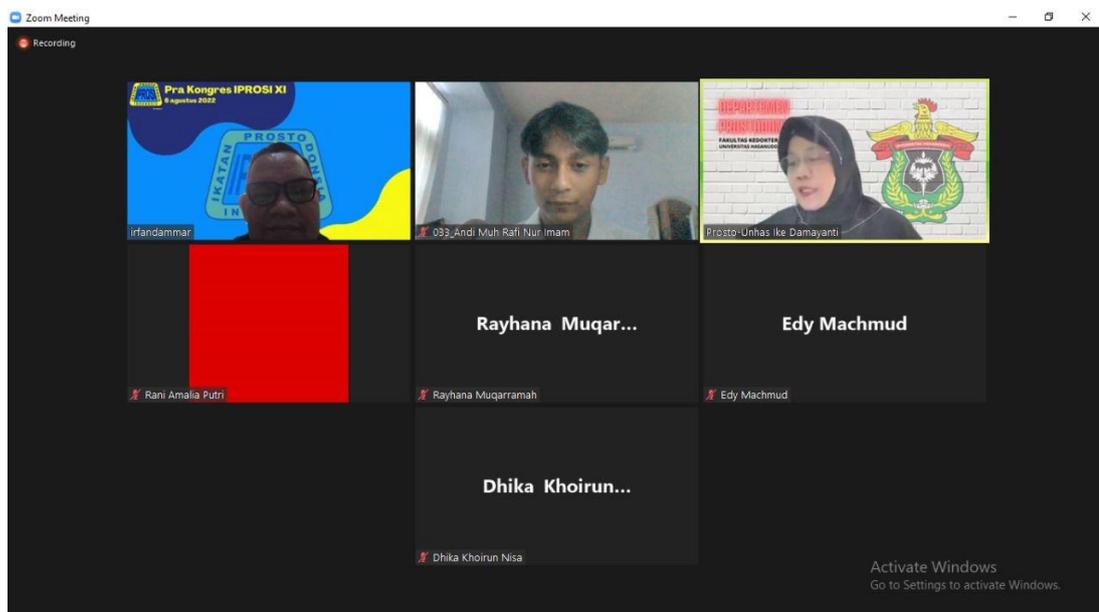
Hari, tanggal : Selasa, 4 Oktober 2022

Tempat : Zoom Meeting

Waktu : 10.00 WITA s/d Selesai

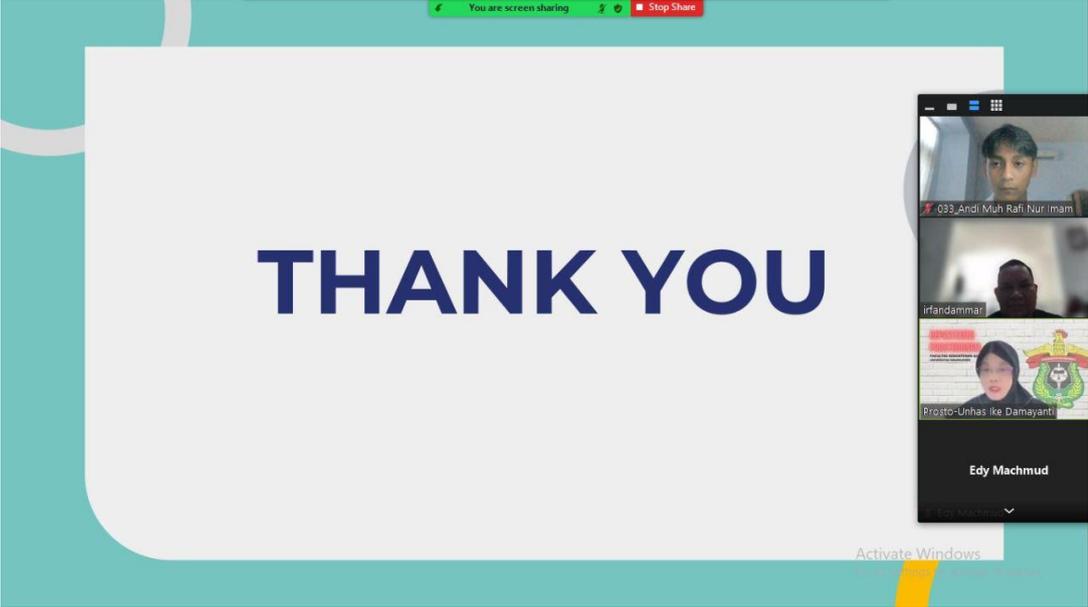
No.	Nama Dosen	Status	Keterangan
1.	drg. Irfan Dammar, Sp. Pros (K)	Dosen Pembimbing	Hadir
2.	Prof. Dr. drg. Edy Machmud, Sp.Pros(K)	Dosen Penguji	Hadir
3.	Dr. drg. Ike Damayanti Habar, Sp.Pros (K)	Dosen Penguji	Hadir

Dokumentasi:



You are screen sharing | Stop Share

# THANK YOU



The image shows a Zoom meeting interface. The main content is a slide with the text "THANK YOU" in large, bold, blue letters on a white background. The slide is set against a teal background with a white border. At the top of the screen, there is a status bar with "You are screen sharing" and a "Stop Share" button. On the right side, there is a gallery view of participants. The gallery includes a large video of a man (Edy Machmur) and three smaller video thumbnails of other participants: "G93\_Andi Muh Rafi Nur Imam", "Irfandamar", and "Prosto-Unhas Ika Damayanti". Below the gallery, the name "Edy Machmur" is displayed. At the bottom right of the screen, there is a watermark that says "Activate Windows".

Activate Windows